

REPORT NUMBER: RAB01466
 ISSUE DATE: 11/25/15
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: FFLED18 - FFLED18/D10

PAGE: 1 OF 7
 DATE SAMPLE TESTED: 11/25/15

LUMINAIRE: TWO-PIECE CAST METAL LED DRIVER HOUSING, CAST FINNED METAL HEAT SINK, FORMED SEMI-SPECULAR METAL REFLECTOR, THREE CIRCUIT BOARDS EACH WITH ONE LED, CLEAR GLASS LENS IN CAST WHITE PAINTED METAL DOOR FRAME.

LAMPS: THREE WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDS) EACH CONTAINING LEDES ARRANGED IN ONE LINEAR ROW AIMED 17-DEGREES ABOVE THE HORIZON, TWO LEDES CANTED 15-DEGREES FROM STRAIGHT AHEAD.

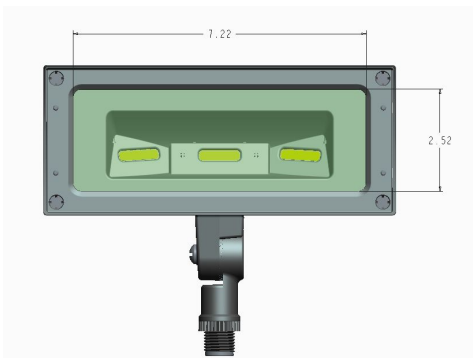
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

TOTAL INPUT WATTS = 23.122 W AT 277.0 VAC.

(SEE PAGE 2 FOR MORE INFORMATION)

FLOODLIGHT CHARACTERISTICS

IES TYPE	7H X 6V				
MAXIMUM CANDLEPOWER	1383. AT	1.0 H,	25.5 V		
HORIZONTAL BEAM ANGLE (50%)	103.8 deg			AXIAL CANDLEPOWER	
VERTICAL BEAM ANGLE (50%)	73.0 deg				
HORIZONTAL FIELD ANGLE (10%)	151.7 deg		DEG	HORIZ.	DEG VERT.
VERTICAL FIELD ANGLE (10%)	109.5 deg				
BEAM LUMENS (% FIXTURE)	1413. (61.1 %)	90.0	0.	90.0	0.
FIELD LUMENS (% FIXTURE)	2236. (96.8 %)	85.0	4.	85.0	0.
TOTAL LUMENS (% FIXTURE)	2310. (100.0 %)	75.0	132.	75.0	0.
TOTAL INPUT WATTS = 23.1		65.0	281.	65.0	9.
EFFICACY = 100.0 Lm/W		55.0	449.	55.0	563.
		47.5	583.	47.5	784.
		42.5	662.	42.5	862.
		37.5	736.	37.5	943.
		33.0	783.	33.0	1066.
		29.0	819.	29.0	1257.
		25.5	844.	25.5	1381.
		22.5	869.	22.5	1299.
		19.5	885.	19.5	1252.
		17.0	899.	17.0	1233.
		15.0	909.	15.0	1201.
		13.0	920.	13.0	1149.
		11.0	926.	11.0	1103.
		9.0	933.	9.0	1066.
		7.0	938.	7.0	1035.
		5.0	944.	5.0	1006.
		3.0	948.	3.0	982.
		1.0	949.	1.0	958.
		0.0	948.	0.0	948.
		-1.0	949.	-1.0	937.
		-3.0	948.	-3.0	917.
		-5.0	944.	-5.0	897.
		-7.0	938.	-7.0	875.
		-9.0	933.	-9.0	856.
		-11.0	926.	-11.0	834.
		-13.0	920.	-13.0	814.
		-15.0	909.	-15.0	790.
		-17.0	899.	-17.0	763.
		-19.5	885.	-19.5	732.
		-22.5	869.	-22.5	690.
		-25.5	844.	-25.5	648.
		-29.0	819.	-29.0	601.
		-33.0	783.	-33.0	543.
		-37.5	736.	-37.5	475.
		-42.5	662.	-42.5	252.
		-47.5	583.	-47.5	120.
		-55.0	449.	-55.0	90.
		-65.0	281.	-65.0	32.
		-75.0	132.	-75.0	9.
		-85.0	4.	-85.0	1.
		-90.0	0.	-90.0	0.



Checked X.CAO
 Approved D.WANG-MUNSON

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ADDITIONAL INFORMATION

LED DRIVER: PLCCE0025U701-39G
TEST PROCEDURE: IESNA LM-79-08
ACCREDITED LABORATORY CODE 201058-0
TEST DISTANCE : 28.25 FEET

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CANDELA TABULATION AVERAGE OF RIGHT AND LEFT SIDES

	0.0	1.0	3.0	5.0	7.0	9.0	11.0	13.0	15.0	17.0	19.5	22.5	25.5	29.0	33.0	37.5	42.5	47.5	55.0	65.0	75.0	85.0	90.0
90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
85.0	0.	1.	1.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	2.	2.	2.	2.	3.	3.	0.
75.0	0.	0.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	3.	2.	3.	2.	3.	3.	3.	0.
65.0	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	9.	8.	9.	11.	15.	9.	3.	0.
55.0	563.	554.	524.	491.	432.	415.	423.	457.	499.	414.	449.	411.	411.	385.	374.	319.	278.	229.	182.	93.	22.	3.	0.
47.5	784.	782.	780.	776.	772.	767.	760.	752.	744.	734.	721.	704.	684.	651.	604.	544.	469.	400.	307.	178.	38.	3.	0.
42.5	862.	860.	861.	857.	850.	842.	835.	825.	817.	807.	792.	772.	755.	723.	675.	613.	524.	480.	345.	222.	65.	3.	0.
37.5	943.	940.	939.	937.	934.	928.	918.	905.	893.	880.	862.	843.	822.	793.	749.	684.	603.	515.	391.	264.	92.	3.	0.
33.0	1066.	1053.	1054.	1053.	1046.	1041.	1035.	1030.	1016.	1006.	979.	951.	927.	901.	849.	783.	697.	605.	454.	321.	113.	3.	0.
29.0	1257.	1254.	1253.	1255.	1246.	1240.	1233.	1222.	1204.	1199.	1172.	1145.	1103.	1069.	1012.	931.	827.	724.	561.	391.	127.	4.	0.
25.5	1381.	1383.	1383.	1381.	1381.	1382.	1380.	1363.	1337.	1309.	1270.	1236.	1223.	1177.	1087.	1027.	908.	810.	608.	396.	139.	4.	0.
22.5	1299.	1302.	1299.	1294.	1289.	1283.	1272.	1263.	1253.	1237.	1216.	1185.	1144.	1092.	1030.	947.	849.	744.	576.	373.	146.	4.	0.
19.5	1252.	1253.	1251.	1245.	1239.	1231.	1220.	1208.	1194.	1177.	1151.	1116.	1076.	1028.	970.	895.	799.	702.	544.	361.	150.	4.	0.
17.0	1233.	1233.	1231.	1227.	1219.	1209.	1196.	1180.	1164.	1145.	1118.	1083.	1046.	1001.	946.	874.	780.	684.	527.	353.	151.	4.	0.
15.0	1201.	1203.	1201.	1196.	1185.	1171.	1157.	1142.	1127.	1112.	1085.	1055.	1019.	978.	924.	855.	762.	669.	521.	346.	151.	4.	0.
13.0	1149.	1151.	1148.	1142.	1134.	1122.	1111.	1099.	1086.	1072.	1050.	1023.	990.	953.	903.	838.	747.	655.	515.	338.	150.	4.	0.
11.0	1103.	1106.	1103.	1100.	1093.	1085.	1076.	1066.	1054.	1042.	1021.	996.	967.	933.	886.	825.	735.	645.	511.	329.	149.	4.	0.
9.0	1066.	1068.	1067.	1062.	1056.	1049.	1041.	1034.	1021.	1011.	992.	970.	943.	912.	868.	812.	724.	634.	501.	321.	147.	4.	0.
7.0	1035.	1038.	1035.	1031.	1024.	1017.	1010.	1002.	991.	981.	964.	944.	918.	888.	848.	796.	711.	622.	502.	310.	145.	4.	0.
5.0	1006.	1008.	1006.	1002.	995.	990.	982.	976.	965.	956.	938.	919.	894.	866.	829.	779.	697.	611.	504.	299.	142.	4.	0.
3.0	982.	983.	981.	978.	972.	965.	958.	952.	941.	932.	916.	898.	874.	847.	811.	763.	682.	599.	506.	290.	138.	4.	0.
1.0	958.	960.	958.	955.	949.	943.	936.	930.	920.	910.	901.	879.	854.	827.	793.	746.	669.	588.	471.	283.	134.	4.	0.
0.0	948.	949.	948.	944.	938.	933.	926.	920.	909.	899.	885.	869.	844.	819.	783.	736.	662.	583.	449.	281.	132.	4.	0.
-1.0	937.	938.	937.	933.	929.	922.	916.	909.	898.	890.	874.	858.	834.	809.	774.	727.	655.	577.	466.	278.	131.	4.	0.
-3.0	917.	917.	916.	913.	909.	902.	896.	889.	879.	869.	854.	838.	815.	790.	754.	708.	639.	565.	461.	273.	128.	4.	0.
-5.0	897.	898.	896.	893.	889.	883.	876.	869.	859.	850.	834.	817.	795.	770.	735.	691.	624.	551.	456.	268.	126.	4.	0.
-7.0	875.	876.	875.	871.	867.	861.	854.	848.	838.	829.	815.	798.	776.	750.	716.	674.	608.	538.	450.	263.	124.	4.	0.
-9.0	856.	857.	856.	852.	849.	842.	835.	830.	820.	811.	797.	780.	759.	734.	700.	659.	595.	526.	410.	258.	121.	4.	0.
-11.0	834.	835.	835.	832.	828.	822.	815.	809.	800.	792.	778.	761.	741.	716.	683.	641.	578.	510.	399.	252.	118.	4.	0.
-13.0	814.	815.	814.	811.	807.	801.	794.	789.	780.	772.	759.	743.	723.	698.	665.	624.	563.	496.	387.	245.	115.	4.	0.
-15.0	790.	791.	789.	786.	782.	775.	770.	764.	756.	748.	735.	720.	700.	677.	645.	604.	545.	479.	375.	238.	112.	4.	0.
-17.0	763.	765.	763.	759.	755.	749.	743.	738.	730.	722.	710.	696.	677.	655.	624.	583.	525.	472.	361.	231.	108.	4.	0.
-19.5	732.	733.	732.	729.	724.	719.	714.	708.	702.	694.	682.	667.	650.	628.	599.	558.	503.	451.	344.	222.	104.	4.	0.
-22.5	690.	692.	691.	687.	684.	680.	675.	670.	664.	656.	646.	632.	616.	595.	566.	527.	478.	424.	324.	210.	98.	4.	0.
-25.5	648.	650.	648.	645.	642.	640.	636.	630.	624.	616.	608.	595.	581.	561.	534.	495.	457.	392.	303.	198.	92.	4.	0.
-29.0	601.	602.	601.	598.	595.	593.	590.	583.	579.	572.	565.	552.	539.	518.	494.	503.	425.	361.	279.	184.	85.	3.	0.
-33.0	543.	544.	543.	541.	539.	536.	534.	529.	525.	519.	512.	499.	487.	503.	501.	417.	373.	324.	252.	167.	75.	3.	0.
-37.5	475.	477.	475.	475.	472.	468.	463.	472.	474.	477.	486.	456.	431.	409.	376.	347.	310.	269.	214.	142.	61.	3.	0.
-42.5	252.	261.	258.	260.	255.	251.	249.	250.	241.	244.	228.	230.	218.	213.	199.	187.	171.	161.	141.	101.	42.	3.	0.
-47.5	120.	119.	120.	120.	120.	121.	119.	117.	114.	111.	112.	108.	106.	102.	99.	94.	90.	87.	73.	58.	20.	3.	0.
-55.0	90.	90.	90.	89.	88.	88.	87.	87.	86.	85.	83.	81.	78.	75.	73.	71.	69.	64.	53.	32.	8.	3.	0.
-65.0	32.	32.	32.	33.	34.	34.	33.	34.	34.	33.	35.	34.	32.	32.	32.	31.	29.	29.	24.	15.	4.	3.	0.
-75.0	9.	9.	9.	9.	9.	10.	10.	10.	11.	11.	11.	10.	10.	10.	9.	9.	9.	8.	7.	5.	3.	3.	0.
-85.0	1.	1.	2.	4.	5.	6.	6.	6.	6.	6.	5.	5.	5.	4.	4.	4.	3.	3.	3.	3.	3.	3.	0.
-90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

BEAM EDGE = 692. CP = 50% OF MAX
FIELD EDGE = 138. CP = 10% OF MAX

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CANDELA TABULATION - FIELD ONLY AVERAGE OF RIGHT AND LEFT SIDES

	0.0	1.0	3.0	5.0	7.0	9.0	11.0	13.0	15.0	17.0	19.5	22.5	25.5	29.0	33.0	37.5	42.5	47.5	55.0	65.0	75.0	85.0	90.0
90.0																							
85.0																							
75.0																							
65.0																							
55.0	563.	554.	524.	491.	432.	415.	423.	457.	499.	414.	449.	411.	411.	385.	374.	319.	278.	229.	182.				
47.5	784.	782.	780.	776.	772.	767.	760.	752.	744.	734.	721.	704.	684.	651.	604.	544.	469.	400.	307.	178.			
42.5	862.	860.	861.	857.	850.	842.	835.	825.	817.	807.	792.	772.	755.	723.	675.	613.	524.	480.	345.	222.			
37.5	943.	940.	939.	937.	934.	928.	918.	905.	893.	880.	862.	843.	822.	793.	749.	684.	603.	515.	391.	264.			
33.0	1066.	1053.	1054.	1053.	1046.	1041.	1035.	1030.	1016.	1006.	979.	951.	927.	901.	849.	783.	697.	605.	454.	321.			
29.0	1257.	1254.	1253.	1255.	1246.	1240.	1233.	1222.	1204.	1199.	1172.	1145.	1103.	1069.	1012.	931.	827.	724.	561.	391.			
25.5	1381.	1383.	1383.	1381.	1381.	1382.	1380.	1363.	1337.	1309.	1270.	1236.	1223.	1177.	1087.	1027.	908.	810.	608.	396.	139.		
22.5	1299.	1302.	1299.	1294.	1289.	1283.	1272.	1263.	1253.	1237.	1216.	1185.	1144.	1092.	1030.	947.	849.	744.	576.	373.	146.		
19.5	1252.	1253.	1251.	1245.	1239.	1231.	1220.	1208.	1194.	1177.	1151.	1116.	1076.	1028.	970.	895.	799.	702.	544.	361.	150.		
17.0	1233.	1233.	1231.	1227.	1219.	1209.	1196.	1180.	1164.	1145.	1118.	1083.	1046.	1001.	946.	874.	780.	684.	527.	353.	151.		
15.0	1201.	1203.	1201.	1196.	1185.	1171.	1157.	1142.	1127.	1112.	1085.	1055.	1019.	978.	924.	855.	762.	669.	521.	346.	151.		
13.0	1149.	1151.	1148.	1142.	1134.	1122.	1111.	1099.	1086.	1072.	1050.	1023.	990.	953.	903.	838.	747.	655.	515.	338.	150.		
11.0	1103.	1106.	1103.	1100.	1093.	1085.	1076.	1066.	1054.	1042.	1021.	996.	967.	933.	886.	825.	735.	645.	511.	329.	149.		
9.0	1066.	1068.	1067.	1062.	1056.	1049.	1041.	1034.	1021.	1011.	992.	970.	943.	912.	868.	812.	724.	634.	501.	321.	147.		
7.0	1035.	1038.	1035.	1031.	1024.	1017.	1010.	1002.	991.	981.	964.	944.	918.	888.	848.	796.	711.	622.	502.	310.	145.		
5.0	1006.	1008.	1006.	1002.	995.	990.	982.	976.	965.	956.	938.	919.	894.	866.	829.	779.	697.	611.	504.	299.	142.		
3.0	982.	983.	981.	978.	972.	965.	958.	952.	941.	932.	916.	898.	874.	847.	811.	763.	682.	599.	506.	290.			
1.0	958.	960.	958.	955.	949.	943.	936.	930.	920.	910.	901.	879.	854.	827.	793.	746.	669.	588.	471.	283.			
0.0	948.	949.	948.	944.	938.	933.	926.	920.	909.	899.	885.	869.	844.	819.	783.	736.	662.	583.	449.	281.			
-1.0	937.	938.	937.	933.	929.	922.	916.	909.	898.	890.	874.	858.	834.	809.	774.	727.	655.	577.	466.	278.			
-3.0	917.	917.	916.	913.	909.	902.	896.	889.	879.	869.	854.	838.	815.	790.	754.	708.	639.	565.	461.	273.			
-5.0	897.	898.	896.	893.	889.	883.	876.	869.	859.	850.	834.	817.	795.	770.	735.	691.	624.	551.	456.	268.			
-7.0	875.	876.	875.	871.	867.	861.	854.	848.	838.	829.	815.	798.	776.	750.	716.	674.	608.	538.	450.	263.			
-9.0	856.	857.	856.	852.	849.	842.	835.	830.	820.	811.	797.	780.	759.	734.	700.	659.	595.	526.	410.	258.			
-11.0	834.	835.	835.	832.	828.	822.	815.	809.	800.	792.	778.	761.	741.	716.	683.	641.	578.	510.	399.	252.			
-13.0	814.	815.	814.	811.	807.	801.	794.	789.	780.	772.	759.	743.	723.	698.	665.	624.	563.	496.	387.	245.			
-15.0	790.	791.	789.	786.	782.	775.	770.	764.	756.	748.	735.	720.	700.	677.	645.	604.	545.	479.	375.	238.			
-17.0	763.	765.	763.	759.	755.	749.	743.	738.	730.	722.	710.	696.	677.	655.	624.	583.	525.	472.	361.	231.			
-19.5	732.	733.	732.	729.	724.	719.	714.	708.	702.	694.	682.	667.	650.	628.	599.	558.	503.	451.	344.	222.			
-22.5	690.	692.	691.	687.	684.	680.	675.	670.	664.	656.	646.	632.	616.	595.	566.	527.	478.	424.	324.	210.			
-25.5	648.	650.	648.	645.	642.	640.	636.	630.	624.	616.	608.	595.	581.	561.	534.	495.	457.	392.	303.	198.			
-29.0	601.	602.	601.	598.	595.	593.	590.	583.	579.	572.	565.	552.	539.	518.	494.	503.	425.	361.	279.	184.			
-33.0	543.	544.	543.	541.	539.	536.	534.	529.	525.	519.	512.	499.	487.	503.	501.	417.	373.	324.	252.	167.			
-37.5	475.	477.	475.	475.	472.	468.	463.	472.	474.	477.	486.	456.	431.	409.	376.	347.	310.	269.	214.	142.			
-42.5	252.	261.	258.	260.	255.	251.	249.	250.	241.	244.	228.	230.	218.	213.	199.	187.	171.	161.	141.				
-47.5																							
-55.0																							
-65.0																							
-75.0																							
-85.0																							
-90.0																							

BEAM EDGE = 692. CP = 50% OF MAX
FIELD EDGE = 138. CP = 10% OF MAX

REPORT NUMBER: RAB01466
 ISSUE DATE: 11/25/15
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 5 OF 7
 DATE SAMPLE TESTED: 11/25/15

LUMEN TABULATION
 AVERAGE OF RIGHT AND LEFT SIDES

	0	2	4	6	8	10	12	14	16	18	21	24	27	31	35	40	45	50	60	70	80	90	TOTAL
90	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.
60	3.	3.	3.	3.	2.	3.	3.	3.	2.	4.	3.	3.	4.	4.	4.	3.	2.	3.	1.	0.	0.	0.	58.
50	2.	2.	2.	2.	2.	2.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	2.	3.	1.	0.	0.	0.	48.
45	3.	3.	3.	3.	3.	2.	2.	2.	2.	3.	3.	3.	4.	3.	4.	3.	2.	3.	1.	0.	0.	0.	54.
40	3.	3.	3.	3.	3.	3.	3.	3.	3.	4.	4.	3.	4.	4.	4.	3.	3.	3.	2.	0.	0.	0.	59.
35	3.	3.	3.	3.	3.	2.	2.	2.	2.	3.	3.	3.	4.	3.	4.	3.	2.	3.	2.	0.	0.	0.	54.
31	3.	3.	3.	3.	3.	3.	3.	3.	3.	4.	4.	4.	5.	4.	4.	4.	3.	4.	2.	0.	0.	0.	64.
27	3.	3.	3.	3.	2.	2.	2.	2.	2.	3.	3.	3.	4.	3.	4.	3.	2.	3.	2.	0.	0.	0.	53.
24	2.	2.	2.	2.	2.	2.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	2.	3.	1.	0.	0.	0.	50.
21	2.	2.	2.	2.	2.	2.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	2.	3.	1.	0.	0.	0.	47.
18	2.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	31.
16	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	30.
14	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	29.
12	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	28.
10	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	28.
8	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	27.
6	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	26.
4	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	2.	2.	2.	2.	1.	2.	1.	0.	0.	26.
2	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	2.	2.	2.	2.	1.	2.	1.	0.	0.	25.
0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	2.	2.	1.	2.	1.	0.	0.	25.
-2	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	2.	1.	1.	2.	1.	0.	0.	24.
-4	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	1.	1.	2.	1.	0.	0.	23.
-6	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	1.	1.	2.	1.	0.	0.	23.
-8	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	2.	1.	1.	2.	1.	0.	0.	22.
-10	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	2.	1.	1.	1.	1.	0.	0.	22.
-12	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.	1.	0.	0.	21.
-14	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	21.
-16	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	20.
-18	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	29.
-21	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	27.
-24	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	2.	2.	2.	2.	1.	2.	1.	0.	0.	25.
-27	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	32.
-31	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	29.
-35	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.	0.	31.
-40	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	17.
-45	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.	1.	1.	1.	0.	1.	0.	0.	0.	8.
-50	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	12.
-60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.
-70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
-80	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
-90	55.	55.	55.	54.	53.	52.	52.	51.	50.	72.	69.	65.	81.	74.	81.	67.	54.	72.	34.	8.	0.	0.	1155.

LUMEN TOTAL THIS PAGE = 1155.

REPORT NUMBER: RAB01466
 ISSUE DATE: 11/25/15
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 6 OF 7
 DATE SAMPLE TESTED: 11/25/15

LUMEN TABULATION - FIELD ONLY
 AVERAGE OF RIGHT AND LEFT SIDES

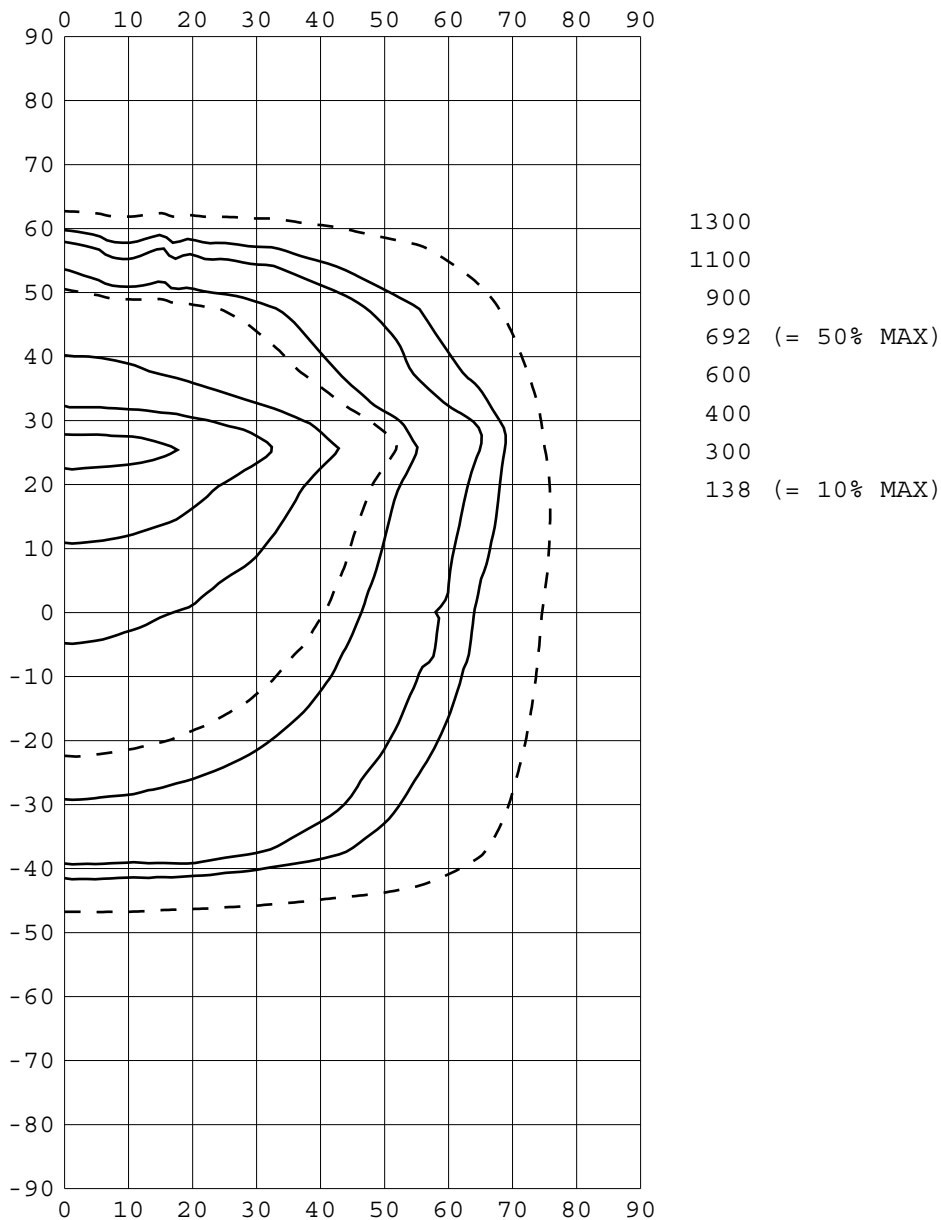
	0	2	4	6	8	10	12	14	16	18	21	24	27	31	35	40	45	50	60	70	80	90	TOTAL	
90																							0.	
80																								0.
70																								0.
60																								56.
50		3.	3.	3.	3.	2.	3.	3.	3.	2.	4.	3.	3.	4.	4.	4.	3.	2.	3.					56.
45		2.	2.	2.	2.	2.	2.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	2.	3.	1.				48.
40		3.	3.	3.	3.	3.	2.	2.	2.	2.	3.	3.	3.	4.	3.	4.	3.	2.	3.	1.				53.
35		3.	3.	3.	3.	3.	3.	3.	3.	3.	4.	4.	3.	4.	4.	4.	3.	3.	3.	2.				59.
31		3.	3.	3.	3.	3.	2.	2.	2.	2.	3.	3.	3.	4.	3.	4.	3.	2.	3.	2.				54.
27		3.	3.	3.	3.	3.	3.	3.	3.	3.	4.	4.	4.	5.	4.	4.	4.	3.	4.	2.				64.
24		3.	3.	3.	3.	2.	2.	2.	2.	2.	3.	3.	3.	4.	3.	4.	3.	2.	3.	2.	0.			53.
21		2.	2.	2.	2.	2.	2.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	2.	3.	1.	0.			50.
18		2.	2.	2.	2.	2.	2.	2.	2.	2.	3.	3.	3.	3.	3.	3.	3.	2.	3.	1.	0.			47.
16		2.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.			31.
14		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.			30.
12		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.			29.
10		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.			28.
8		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.			28.
6		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.	0.			27.
4		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	2.	2.	2.	2.	1.	2.	1.	0.			26.
2		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	2.	2.	2.	2.	1.	2.	1.				26.
0		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	2.	2.	1.	2.	1.				25.
-2		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	2.	1.	1.	2.	1.				24.
-4		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	1.	1.	2.	1.				24.
-6		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	1.	1.	2.	1.				23.
-8		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	2.	1.	1.	2.	1.				23.
-10		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	2.	1.	1.	1.	1.				22.
-12		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	2.	1.	1.	1.	1.				22.
-14		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.	1.				21.
-16		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.				20.
-18		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.				20.
-21		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.				28.
-24		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.				27.
-27		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	2.	2.	2.	2.	1.	2.	1.				25.
-31		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.				31.
-35		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.				28.
-40		1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	1.	2.	1.				31.
-45		1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.					16.
-50																								0.
-60																								0.
-70																								0.
-80																								0.
-90																								0.
	54.	54.	53.	52.	52.	51.	51.	50.	48.	70.	67.	64.	79.	72.	79.	65.	52.	69.	31.	3.	0.		1118.	

LUMEN TOTAL THIS PAGE = 1118.

REPORT NUMBER: RAB01466
ISSUE DATE: 11/25/15
PREPARED FOR: RAB LIGHTING INC.

PAGE: 7 OF 7
DATE SAMPLE TESTED: 11/25/15

ISOCANDELA CURVES
AVERAGE OF RIGHT AND LEFT SIDES



REPORT NUMBER: RAB01468
DATE: 11/25/2015
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: FFLED18

Page 1 of 4

ADDRESS: 170 LUDLOW AVE, NORTHVALE, NJ 07647

LUMINAIRE: TWO-PIECE CAST METAL LED DRIVER HOUSING, CAST FINNED METAL HEAT SINK, FORMED SEMI-SPECULAR METAL REFLECTOR, THREE CIRCUIT BOARDS EACH WITH ONE LED, CLEAR GLASS LENS IN CAST WHITE PAINTED METAL DOOR FRAME.

LAMP: THREE WHITE MULTI-CHIP LIGHT EMITTING DIODES (LEDS) EACH CONTAINING LEDES ARRANGED IN ONE LINEAR ROW AIMED 17-DEGREES ABOVE THE HORIZON, TWO LEDES CANTED 15-DEGREES FROM STRAIGHT AHEAD.

DRIVER: PLCCE0025U701-39G

OBJECT OF TEST: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT THE RATED INPUT VOLTAGES (120.0 AND 277.0 VAC, 60Hz) TO THE TEST SAMPLE.

INSTRUMENTS:	CHROMA PROGRAMMABLE AC POWER SOURCE MODEL 61602	Calibration Due: N/A
	CHROMA PROGRAMMABLE DIGITAL POWER METER MODEL 66202	3/9/16
	OCEAN OPTICS QE65PRO Spectroradiometer	11/10/16
	RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry	11/10/16

OBJECT OF TEST: Measure the Absolute Flux in lumens*, Total Radiant Flux*, Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRIa,1-14), Chromaticity Coordinates (x,y; u'v'), ANSI C78.377 Duv, and electrical data including ANSI C82.77-2002 Power Factor (PF), and Total Harmonic Distortion (THD) to the test sample. Measure electrical data including Total Harmonic Distortion (THD) at maximum nominal rated input voltage. Report Off-State Power.

PROCEDURE: The test sample was mounted inside the integrating sphere, energized, and allowed to stabilize. After stabilization occurred, measurements were taken. In order to measure mean performance, multiple data sets were recorded and averaged. Readings were taken with the test sample operating at 60 HZ input in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. Electrical data was also recorded at maximum nominal rated input voltage (277.0 VAC). All data are traceable to the National Institute of Standards and Technology. Off-State Power was reported with no voltage applied to the sample.

*NOTE: Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results.

RESULTS: (continued subsequent pages)

Checked	<u>X.CAO</u>
Approved	<u>D.WANG-MUNSON</u> Lighting Engineer

REPORT NUMBER: RAB01468
 DATE: 11/25/2015
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: FFLED18

RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	2310 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3455
Chromaticity Ordinate y	0.3591
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2088
Chromaticity Ordinate v'	0.4883
Correlated Color Temp CCT (K)	5011
ANSI C78.377-2008 Duv	0.004
Total Radiant Flux (milliWatts)	6849 *
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.188
Input Power (Watts)	22.5
Input Power Factor (%)	99.4
Input Current THD (%)	9.5
Input Voltage THD (%)	0.2
EFFICACY (Lumens/Watt)	
102.7	
ELECTRICAL AT MAX NONIMAL INPUT	
Input Voltage (Volts AC)	277.0
Input Current (Amps AC)	0.087
Input Power (Watts)	23.1
Input Power Factor (%)	96.2
Input Current THD (%)	9.9
Input Voltage THD (%)	0.2
Off-State Power (Watts)	
0.0	

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	72
R1 Light greyish red	69
R2 Dark greyish yellow	76
R3 Strong yellowish green	81
R4 Moderate yellowish green	73
R5 Light bluish green	70
R6 Light blue	68
R7 Light violet	80
R8 Light reddish purple	57
R9 Strong red	-31
R10 Strong yellow	43
R11 Strong green	71
R12 Strong blue	44
R13 Light yellowish pink (skin)	70
R14 Moderate olive green (leaf)	89

*NOTE:

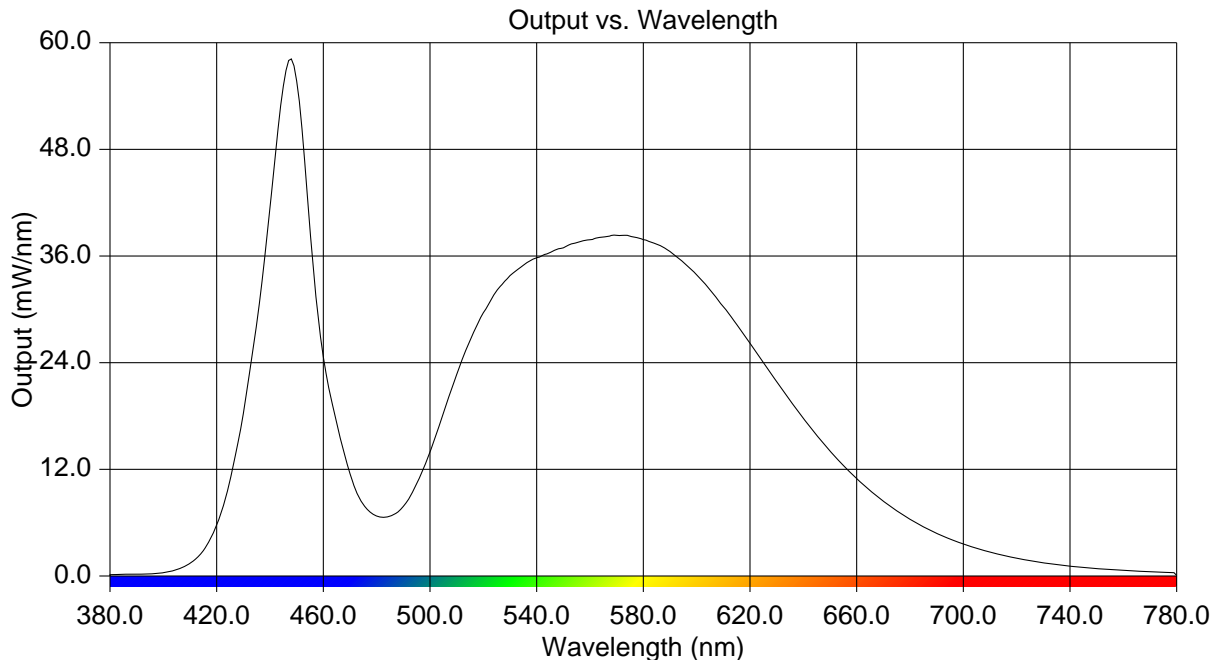
Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even when these effects are compensated for, are likely to have a greater variation in results compared to the flux output calculated from a goniophotometric exploration since these artifacts do not affect the goniophotometric results.

REPORT NUMBER: RAB01468
 DATE: 11/25/2015
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: FFLED18

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.141	515	26.509	650	14.057
385	0.160	520	29.616	655	12.440
390	0.189	525	32.079	660	10.975
395	0.253	530	33.795	665	9.619
400	0.387	535	34.957	670	8.424
405	0.699	540	35.833	675	7.334
410	1.410	545	36.377	680	6.388
415	2.851	550	36.916	685	5.545
420	5.712	555	37.521	690	4.806
425	10.740	560	37.830	695	4.159
430	18.266	565	38.150	700	3.599
435	28.384	570	38.325	705	3.100
440	41.456	575	38.219	710	2.686
445	55.112	580	37.840	715	2.317
450	55.688	585	37.357	720	2.006
455	39.001	590	36.506	725	1.730
460	24.637	595	35.266	730	1.489
465	17.195	600	33.898	735	1.285
470	11.511	605	32.200	740	1.109
475	8.030	610	30.298	745	0.965
480	6.738	615	28.304	750	0.833
485	6.725	620	26.221	755	0.723
490	7.833	625	24.005	760	0.628
495	10.336	630	21.841	765	0.551
500	13.986	635	19.749	770	0.475
505	18.276	640	17.757	775	0.417
510	22.661	645	15.845	780	0.063



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CIE Chromaticity Diagram

