

REPORT NUMBER: RAB01900  
 ISSUE DATE: 04/26/16  
 PREPARED FOR: RAB LIGHTING INC.  
 CATALOG NUMBER: BULLET12Y

PAGE: 1 OF 7  
 DATE SAMPLE TESTED: 04/26/16

LUMINAIRE: CAST FINNED METAL HEAT SINK, MOLDED TEXTURED PLASTIC REFLECTOR WITH SEMI-DIFFUSE FINISH, 1 CIRCUIT BOARD WITH 24 LEDs, CLEAR MICRO-PRISMATIC GLASS LENS IN CAST BROWN PAINTED METAL FRAME, LENS PRISMS OUT.

LAMPS: TWENTY-FOUR WHITE LIGHT EMITTING DIODES (LEDS), AIMED AT THE HORIZON.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

TOTAL INPUT WATTS =13.598 AT 120.0 VAC.

LED DRIVER: INTEGRAL

TEST PROCEDURE: IESNA LM-79-08

\*(SEE PAGE 2 FOR MORE INFORMATION)\*

FLOODLIGHT CHARACTERISTICS

IES TYPE	6H X 6V				
MAXIMUM CANDLEPOWER	710. AT	0.0 H,	-5.0 V		
HORIZONTAL BEAM ANGLE (50%)	88.0 deg			AXIAL CANDLEPOWER	
VERTICAL BEAM ANGLE (50%)	83.5 deg				
HORIZONTAL FIELD ANGLE (10%)	124.1 deg		DEG	HORIZ.	DEG VERT.
VERTICAL FIELD ANGLE (10%)	124.3 deg				
BEAM LUMENS (% FIXTURE)	932. ( 74.5 % )	90.0	0.	90.0	0.
FIELD LUMENS (% FIXTURE)	1197. ( 95.7 % )	85.0	2.	85.0	0.
TOTAL LUMENS (% FIXTURE)	1251. (100.0 % )	75.0	13.	75.0	11.
TOTAL INPUT WATTS = 13.6		65.0	47.	65.0	46.
EFFICACY = 92.0 Lm/W		55.0	129.	55.0	131.
		47.5	232.	47.5	235.
		42.5	317.	42.5	320.
		37.5	412.	37.5	415.
		33.0	498.	33.0	500.
		29.0	563.	29.0	566.
		25.5	611.	25.5	614.
		22.5	641.	22.5	645.
		19.5	662.	19.5	669.
		17.0	676.	17.0	681.
		15.0	683.	15.0	689.
		13.0	688.	13.0	690.
		11.0	693.	11.0	692.
		9.0	697.	9.0	695.
		7.0	700.	7.0	695.
		5.0	701.	5.0	697.
		3.0	704.	3.0	699.
		1.0	704.	1.0	703.
		0.0	705.	0.0	705.
		-1.0	704.	-1.0	705.
		-3.0	704.	-3.0	709.
		-5.0	701.	-5.0	710.
		-7.0	700.	-7.0	709.
		-9.0	697.	-9.0	707.
		-11.0	693.	-11.0	707.
		-13.0	688.	-13.0	703.
		-15.0	683.	-15.0	696.
		-17.0	676.	-17.0	686.
		-19.5	662.	-19.5	671.
		-22.5	641.	-22.5	646.
		-25.5	611.	-25.5	614.
		-29.0	563.	-29.0	564.
		-33.0	498.	-33.0	496.
		-37.5	412.	-37.5	414.
		-42.5	317.	-42.5	322.
		-47.5	232.	-47.5	242.
		-55.0	129.	-55.0	133.
		-65.0	47.	-65.0	46.
		-75.0	13.	-75.0	12.
		-85.0	2.	-85.0	1.
		-90.0	0.	-90.0	0.



Checked X.CAO  
 Approved D.WANG-MUNSON

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ADDITIONAL INFORMATION

ACCREDITED LABORATORY CODE 201058-0  
TEST DISTANCE : 28.25 FEET

NOTE: THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY  
THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR  
ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL  
GOVERNMENT.

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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.	0.	1.	1.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	2.	0.
75.0	11.	11.	12.	12.	11.	11.	12.	11.	11.	11.	11.	10.	10.	9.	9.	8.	7.	6.	5.	3.	2.	2.	0.
65.0	46.	46.	46.	46.	45.	45.	43.	42.	41.	40.	39.	36.	34.	31.	28.	24.	19.	16.	12.	7.	3.	2.	0.
55.0	131.	131.	132.	131.	129.	127.	123.	120.	116.	113.	107.	100.	92.	83.	71.	59.	47.	36.	23.	11.	5.	2.	0.
47.5	235.	234.	234.	233.	230.	226.	220.	214.	207.	199.	190.	177.	164.	147.	126.	103.	81.	60.	36.	17.	7.	2.	0.
42.5	320.	320.	324.	330.	338.	338.	334.	293.	285.	273.	261.	243.	225.	200.	172.	141.	109.	81.	48.	20.	8.	2.	0.
37.5	415.	412.	411.	407.	401.	395.	385.	376.	415.	471.	456.	375.	321.	262.	225.	184.	141.	104.	60.	24.	9.	2.	0.
33.0	500.	498.	497.	493.	484.	478.	467.	454.	441.	427.	405.	444.	478.	362.	274.	225.	171.	127.	71.	28.	10.	2.	0.
29.0	566.	565.	564.	560.	552.	543.	532.	519.	505.	491.	466.	437.	401.	435.	373.	282.	200.	147.	83.	32.	11.	2.	0.
25.5	614.	612.	609.	604.	599.	590.	580.	566.	551.	535.	512.	482.	446.	401.	373.	325.	225.	163.	93.	35.	11.	2.	0.
22.5	645.	644.	641.	637.	632.	624.	614.	602.	587.	571.	548.	516.	480.	433.	427.	402.	245.	177.	101.	38.	12.	2.	0.
19.5	669.	667.	664.	660.	656.	649.	640.	629.	615.	600.	577.	547.	510.	463.	403.	433.	263.	191.	108.	40.	12.	2.	0.
17.0	681.	679.	678.	674.	670.	662.	653.	643.	632.	618.	597.	567.	532.	484.	423.	452.	276.	200.	113.	42.	12.	2.	0.
15.0	689.	688.	685.	683.	677.	670.	664.	654.	643.	630.	611.	582.	547.	499.	438.	465.	285.	207.	116.	43.	13.	2.	0.
13.0	690.	689.	689.	687.	682.	676.	669.	660.	650.	639.	623.	595.	563.	513.	451.	476.	293.	213.	120.	44.	13.	2.	0.
11.0	692.	692.	692.	690.	686.	681.	674.	665.	657.	647.	632.	607.	574.	526.	462.	490.	383.	218.	122.	45.	13.	2.	0.
9.0	695.	695.	694.	693.	689.	684.	679.	671.	663.	654.	639.	615.	585.	537.	473.	445.	391.	223.	125.	45.	13.	2.	0.
7.0	695.	695.	694.	693.	690.	686.	684.	677.	668.	660.	646.	623.	593.	546.	482.	451.	397.	226.	126.	46.	13.	2.	0.
5.0	697.	696.	695.	695.	693.	691.	688.	681.	675.	666.	652.	630.	600.	551.	489.	456.	403.	229.	127.	46.	13.	2.	0.
3.0	699.	698.	697.	697.	696.	692.	688.	684.	679.	670.	658.	636.	606.	555.	492.	459.	406.	231.	128.	47.	13.	2.	0.
1.0	703.	702.	703.	700.	699.	696.	690.	686.	682.	675.	661.	640.	610.	562.	497.	462.	407.	232.	129.	47.	13.	2.	0.
0.0	705.	704.	704.	701.	700.	697.	693.	688.	683.	676.	662.	641.	611.	563.	498.	412.	317.	232.	129.	47.	13.	2.	0.
-1.0	705.	705.	704.	701.	700.	698.	694.	690.	684.	677.	663.	641.	610.	564.	496.	461.	407.	232.	129.	47.	13.	2.	0.
-3.0	709.	709.	708.	704.	703.	701.	698.	693.	687.	680.	667.	642.	611.	564.	496.	460.	405.	231.	128.	47.	14.	2.	0.
-5.0	710.	710.	709.	709.	707.	704.	701.	695.	689.	681.	667.	642.	608.	561.	493.	457.	402.	229.	127.	46.	13.	2.	0.
-7.0	709.	709.	710.	709.	709.	707.	703.	696.	689.	681.	666.	641.	605.	558.	488.	454.	397.	226.	125.	46.	13.	2.	0.
-9.0	707.	708.	710.	709.	708.	706.	703.	695.	686.	679.	663.	635.	601.	551.	481.	447.	391.	221.	123.	45.	13.	2.	0.
-11.0	707.	707.	708.	706.	705.	702.	698.	691.	682.	673.	656.	629.	593.	540.	471.	490.	382.	216.	121.	45.	13.	2.	0.
-13.0	703.	704.	702.	699.	698.	696.	692.	685.	675.	664.	646.	618.	582.	528.	459.	476.	289.	209.	118.	44.	13.	2.	0.
-15.0	696.	696.	696.	693.	689.	688.	684.	676.	666.	653.	635.	606.	567.	514.	447.	464.	280.	202.	115.	43.	13.	2.	0.
-17.0	686.	686.	685.	682.	679.	677.	672.	664.	653.	639.	618.	589.	550.	497.	430.	450.	270.	195.	111.	42.	12.	2.	0.
-19.5	671.	672.	670.	665.	663.	660.	654.	645.	633.	618.	596.	565.	526.	475.	410.	430.	255.	185.	106.	40.	12.	2.	0.
-22.5	646.	648.	645.	641.	638.	632.	624.	613.	600.	585.	562.	529.	491.	442.	381.	399.	237.	171.	99.	38.	12.	2.	0.
-25.5	614.	612.	611.	608.	605.	597.	587.	576.	564.	548.	525.	490.	454.	407.	402.	360.	218.	158.	92.	36.	11.	2.	0.
-29.0	564.	563.	561.	558.	554.	545.	536.	525.	513.	499.	475.	440.	406.	362.	370.	276.	194.	142.	82.	33.	11.	2.	0.
-33.0	496.	496.	493.	490.	486.	478.	469.	458.	446.	430.	408.	379.	417.	445.	266.	216.	166.	124.	71.	29.	10.	2.	0.
-37.5	414.	415.	410.	406.	400.	393.	385.	377.	365.	352.	504.	416.	348.	263.	218.	178.	137.	102.	60.	25.	9.	2.	0.
-42.5	322.	323.	321.	317.	313.	353.	371.	381.	285.	276.	260.	242.	221.	196.	168.	138.	108.	80.	49.	21.	8.	2.	0.
-47.5	242.	243.	242.	239.	236.	232.	225.	218.	212.	203.	192.	177.	163.	146.	125.	103.	81.	61.	37.	18.	7.	2.	0.
-55.0	133.	134.	134.	133.	130.	127.	125.	122.	117.	114.	108.	101.	94.	84.	73.	61.	49.	38.	25.	12.	6.	2.	0.
-65.0	46.	46.	47.	46.	46.	46.	45.	44.	43.	42.	40.	38.	36.	33.	30.	26.	21.	18.	13.	8.	4.	2.	0.
-75.0	12.	12.	12.	13.	13.	13.	13.	13.	13.	13.	13.	12.	12.	11.	10.	10.	9.	8.	6.	4.	2.	2.	0.
-85.0	1.	2.	3.	3.	4.	4.	4.	4.	4.	4.	4.	4.	3.	3.	3.	3.	2.	2.	2.	2.	2.	2.	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 = 355. CP = 50% OF MAX  
 FIELD EDGE = 71. 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	131.	131.	132.	131.	129.	127.	123.	120.	116.	113.	107.	100.	92.	83.	71.									
47.5	235.	234.	234.	233.	230.	226.	220.	214.	207.	199.	190.	177.	164.	147.	126.	103.	81.							
42.5	320.	320.	324.	330.	338.	338.	334.	293.	285.	273.	261.	243.	225.	200.	172.	141.	109.	81.						
37.5	415.	412.	411.	407.	401.	395.	385.	376.	415.	471.	456.	375.	321.	262.	225.	184.	141.	104.						
33.0	500.	498.	497.	493.	484.	478.	467.	454.	441.	427.	405.	444.	478.	362.	274.	225.	171.	127.	71.					
29.0	566.	565.	564.	560.	552.	543.	532.	519.	505.	491.	466.	437.	401.	435.	373.	282.	200.	147.	83.					
25.5	614.	612.	609.	604.	599.	590.	580.	566.	551.	535.	512.	482.	446.	401.	373.	325.	225.	163.	93.					
22.5	645.	644.	641.	637.	632.	624.	614.	602.	587.	571.	548.	516.	480.	433.	427.	402.	245.	177.	101.					
19.5	669.	667.	664.	660.	656.	649.	640.	629.	615.	600.	577.	547.	510.	463.	403.	433.	263.	191.	108.					
17.0	681.	679.	678.	674.	670.	662.	653.	643.	632.	618.	597.	567.	532.	484.	423.	452.	276.	200.	113.					
15.0	689.	688.	685.	683.	677.	670.	664.	654.	643.	630.	611.	582.	547.	499.	438.	465.	285.	207.	116.					
13.0	690.	689.	689.	687.	682.	676.	669.	660.	650.	639.	623.	595.	563.	513.	451.	476.	293.	213.	120.					
11.0	692.	692.	692.	690.	686.	681.	674.	665.	657.	647.	632.	607.	574.	526.	462.	490.	383.	218.	122.					
9.0	695.	695.	694.	693.	689.	684.	679.	671.	663.	654.	639.	615.	585.	537.	473.	445.	391.	223.	125.					
7.0	695.	695.	694.	693.	690.	686.	684.	677.	668.	660.	646.	623.	593.	546.	482.	451.	397.	226.	126.					
5.0	697.	696.	695.	695.	693.	691.	688.	681.	675.	666.	652.	630.	600.	551.	489.	456.	403.	229.	127.					
3.0	699.	698.	697.	697.	696.	692.	688.	684.	679.	670.	658.	636.	606.	555.	492.	459.	406.	231.	128.					
1.0	703.	702.	703.	700.	699.	696.	690.	686.	682.	675.	661.	640.	610.	562.	497.	462.	407.	232.	129.					
0.0	705.	704.	704.	701.	700.	697.	693.	688.	683.	676.	662.	641.	611.	563.	498.	412.	317.	232.	129.					
-1.0	705.	705.	704.	701.	700.	698.	694.	690.	684.	677.	663.	641.	610.	564.	496.	461.	407.	232.	129.					
-3.0	709.	709.	708.	704.	703.	701.	698.	693.	687.	680.	667.	642.	611.	564.	496.	460.	405.	231.	128.					
-5.0	710.	710.	709.	709.	707.	704.	701.	695.	689.	681.	667.	642.	608.	561.	493.	457.	402.	229.	127.					
-7.0	709.	709.	710.	709.	709.	707.	703.	696.	689.	681.	666.	641.	605.	558.	488.	454.	397.	226.	125.					
-9.0	707.	708.	710.	709.	708.	706.	703.	695.	686.	679.	663.	635.	601.	551.	481.	447.	391.	221.	123.					
-11.0	707.	707.	708.	706.	705.	702.	698.	691.	682.	673.	656.	629.	593.	540.	471.	490.	382.	216.	121.					
-13.0	703.	704.	702.	699.	698.	696.	692.	685.	675.	664.	646.	618.	582.	528.	459.	476.	289.	209.	118.					
-15.0	696.	696.	696.	693.	689.	688.	684.	676.	666.	653.	635.	606.	567.	514.	447.	464.	280.	202.	115.					
-17.0	686.	686.	685.	682.	679.	677.	672.	664.	653.	639.	618.	589.	550.	497.	430.	450.	270.	195.	111.					
-19.5	671.	672.	670.	665.	663.	660.	654.	645.	633.	618.	596.	565.	526.	475.	410.	430.	255.	185.	106.					
-22.5	646.	648.	645.	641.	638.	632.	624.	613.	600.	585.	562.	529.	491.	442.	381.	399.	237.	171.	99.					
-25.5	614.	612.	611.	608.	605.	597.	587.	576.	564.	548.	525.	490.	454.	407.	402.	360.	218.	158.	92.					
-29.0	564.	563.	561.	558.	554.	545.	536.	525.	513.	499.	475.	440.	406.	362.	370.	276.	194.	142.	82.					
-33.0	496.	496.	493.	490.	486.	478.	469.	458.	446.	430.	408.	379.	417.	445.	266.	216.	166.	124.	71.					
-37.5	414.	415.	410.	406.	400.	393.	385.	377.	365.	352.	504.	416.	348.	263.	218.	178.	137.	102.						
-42.5	322.	323.	321.	317.	313.	353.	371.	381.	285.	276.	260.	242.	221.	196.	168.	138.	108.	80.						
-47.5	242.	243.	242.	239.	236.	232.	225.	218.	212.	203.	192.	177.	163.	146.	125.	103.	81.							
-55.0	133.	134.	134.	133.	130.	127.	125.	122.	117.	114.	108.	101.	94.	84.	73.									
-65.0																								
-75.0																								
-85.0																								
-90.0																								

BEAM EDGE = 355. CP = 50% OF MAX  
 FIELD EDGE = 71. CP = 10% OF MAX

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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.	1.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.
60	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	13.
50	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	0.	11.
45	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	16.
40	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	22.
35	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	1.	1.	1.	1.	0.	0.	0.	0.	20.
31	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	1.	1.	1.	1.	0.	0.	0.	23.
27	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	19.
24	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	20.
21	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.	0.	0.	0.	21.
18	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	14.
16	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	15.
14	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	15.
12	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	15.
10	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
8	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
6	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
4	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
2	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
-2	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
-4	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
-6	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
-8	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
-10	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
-12	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	15.
-14	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	15.
-16	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	15.
-18	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	15.
-21	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	1.	2.	1.	1.	1.	0.	0.	0.	21.
-24	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	20.
-27	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	19.
-31	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	1.	1.	1.	1.	0.	0.	0.	23.
-35	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.	1.	0.	0.	0.	0.	20.
-40	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	21.
-45	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	16.
-50	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	0.	12.
-60	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.	0.	0.	0.	13.
-70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	5.
-80	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.
-90	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
	36.	36.	35.	35.	35.	34.	33.	32.	31.	45.	42.	38.	45.	37.	41.	28.	17.	17.	5.	1.	0.	625.	

LUMEN TOTAL THIS PAGE = 625.

REPORT NUMBER: RAB01900  
 ISSUE DATE: 04/26/16  
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 6 OF 7  
 DATE SAMPLE TESTED: 04/26/16

LUMEN TABULATION - FIELD ONLY  
 AVERAGE OF RIGHT AND LEFT SIDES

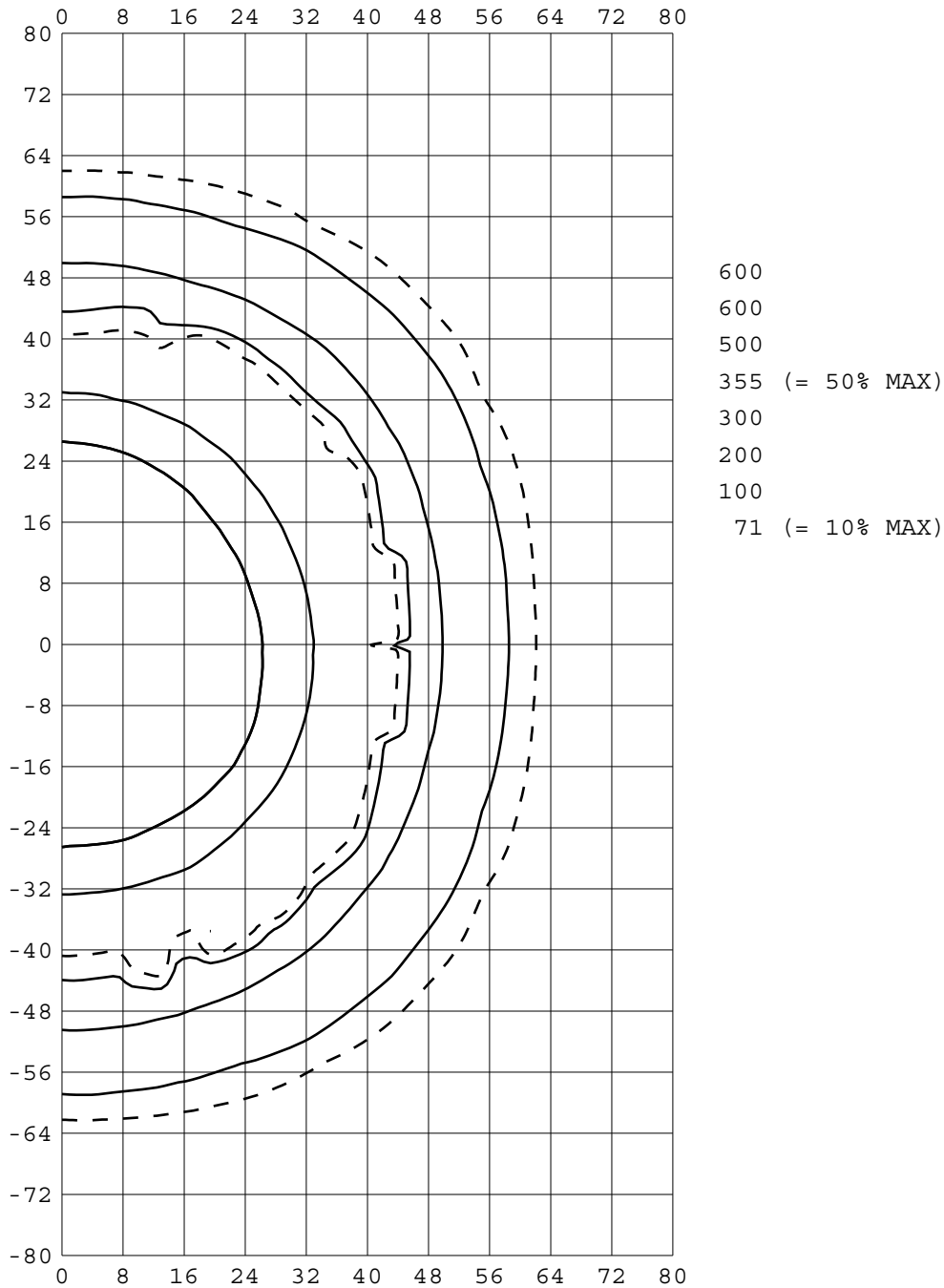
	0	2	4	6	8	10	12	14	16	18	21	24	27	31	35	40	45	50	60	70	80	90	TOTAL
90																							0.
80																							0.
70																							0.
60																							11.
50	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.							11.
45	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.						15.
40	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	1.	1.	1.	1.						21.
35	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	1.	1.	1.	0.					20.
31	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	1.	1.	1.	1.				23.
27	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.				18.
24	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.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.				21.
18	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				14.
16	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
14	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
12	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
10	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
8	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
6	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
4	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
2	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
0	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
-2	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
-4	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
-6	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
-8	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
-10	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
-12	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				16.
-14	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
-16	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
-18	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				15.
-21	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	1.	2.	1.	1.	1.				21.
-24	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.				20.
-27	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.	0.				19.
-31	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	2.	2.	1.	1.	1.	1.				23.
-35	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	1.	1.	1.	1.	0.				20.
-40	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	2.	2.	1.	1.	1.	1.	1.	1.					21.
-45	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.					16.
-50	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	0.						11.
-60	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.								11.
-70																							0.
-80																							0.
-90																							0.
	35.	35.	35.	34.	34.	33.	33.	32.	31.	44.	41.	38.	44.	37.	39.	26.	15.	13.	0.	0.	0.		598.

LUMEN TOTAL THIS PAGE = 598.

REPORT NUMBER: RAB01900  
ISSUE DATE: 04/26/16  
PREPARED FOR: RAB LIGHTING INC.

PAGE: 7 OF 7  
DATE SAMPLE TESTED: 04/26/16

ISOCANDELA CURVES  
AVERAGE OF RIGHT AND LEFT SIDES



REPORT NUMBER: RAB01903  
DATE: 4/26/2016  
PREPARED FOR: RAB LIGHTING INC.  
CATALOG NUMBER: BULLET12Y

ADDRESS: 170 LUDLOW AVE, NORTHVALE, NI 07647

LUMINAIRE: CAST FINNED METAL HEAT SINK, MOLDED TEXTURED PLASTIC REFLECTOR WITH SEMI-DIFFUSE FINISH, 1 CIRCUIT BOARD WITH 24 LEDS, CLEAR MICRO-PRISMATIC GLASS LENS IN CAST BROWN PAINTED METAL FRAME, LENS PRISMS OUT.

LAMP: TWENTY-FOUR WHITE LIGHT EMITTING DIODES (LEDS), AIMED AT THE HORIZON.

DRIVER: INTEGRAL

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120.0 , 60Hz) TO THE TEST SAMPLE.

INSTRUMENTS:	GWINSTEK PROGRAMMABLE AC POWER SOURCE APS-7100	Calibration Due:
	CHROMA PROGRAMMABLE DIGITAL POWER METER MODEL 66202	N/A
	OCEAN OPTICS QE65PRO Spectroradiometer	2/26/17
	RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry	4/4/17

OBJECT OF TEST: Measure the 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. Report Off-State Power.

PROCEDURE: The test sample was provided by the customer and had an unknown number of burn hours. The test sample was mounted inside the integrating sphere 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 120.0 input in a 25 +/-1 degree Celsius free air ambient and in accordance with IESNA LM-79-08. 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: RAB01903  
 DATE: 4/26/2016  
 PREPARED FOR: RAB LIGHTING INC.  
 CATALOG NUMBER: BULLET12Y

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RESULTS:

<b>SPECTRORADIOMETRIC</b>	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4383
Chromaticity Ordinate y	0.4085
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2496
Chromaticity Ordinate v'	0.5233
Correlated Color Temp CCT (K)	3012
Color Rendering Index (CRIa)	83
Color Rendering Index 1 (Light greyish red)	81
Color Rendering Index 2 (Dark greyish yellow)	90
Color Rendering Index 3 (Strong yellowish green)	97
Color Rendering Index 4 (Moderate yellowish green)	82
Color Rendering Index 5 (Light bluish green)	81
Color Rendering Index 6 (Light blue)	88
Color Rendering Index 7 (Light violet)	85
Color Rendering Index 8 (Light reddish purple)	61
Color Rendering Index 9 (Strong red)	11
Color Rendering Index 10 (Strong yellow)	77
Color Rendering Index 11 (Strong green)	80
Color Rendering Index 12 (Strong blue)	71
Color Rendering Index 13 (Light yellowish pink (skin))	82
Color Rendering Index 14 (Moderate olive green (leaf))	99
ANSI C78.377-2008 Duv	0.002
Total Radiant Flux (milliWatts)	3839 *
<b>ELECTRICAL FOR SPECTRORADIOMETRIC TEST</b>	
Input Voltage (Volts AC )	120.0
Input Current (Amps AC )	0.114
Input Power (Watts)	13.6
Input Power Factor (%)	99.3
Input Current THD (%)	11.9
Input Voltage THD (%)	0.2
Off-State Power (Watts)	0.0

\*NOTE:

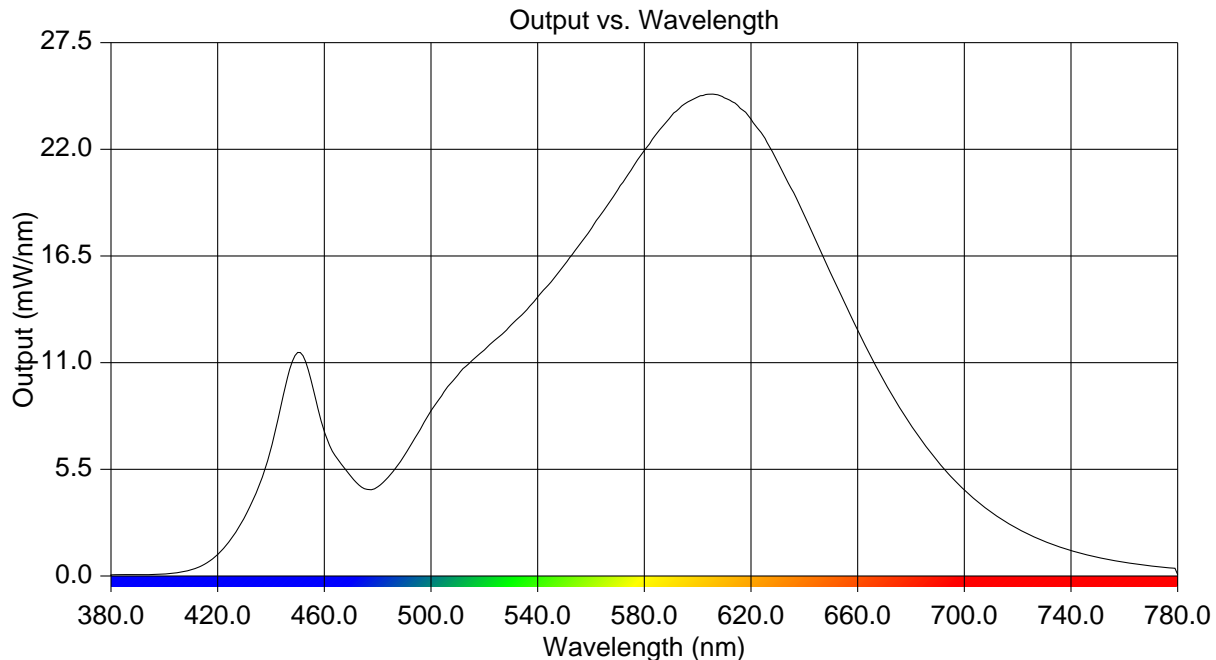
Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even 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: RAB01903  
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 PREPARED FOR: RAB LIGHTING INC.  
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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.057	515	11.053	650	15.581
385	0.063	520	11.652	655	14.122
390	0.068	525	12.288	660	12.682
395	0.076	530	12.938	665	11.312
400	0.107	535	13.592	670	10.028
405	0.170	540	14.392	675	8.849
410	0.314	545	15.155	680	7.779
415	0.600	550	16.022	685	6.797
420	1.111	555	16.958	690	5.914
425	1.909	560	17.888	695	5.123
430	3.007	565	18.891	700	4.435
435	4.481	570	19.903	705	3.833
440	6.549	575	20.920	710	3.299
445	9.558	580	21.945	715	2.840
450	11.525	585	22.879	720	2.431
455	10.108	590	23.713	725	2.085
460	7.455	595	24.331	730	1.782
465	6.028	600	24.706	735	1.536
470	5.130	605	24.844	740	1.309
475	4.502	610	24.655	745	1.125
480	4.596	615	24.268	750	0.964
485	5.251	620	23.557	755	0.822
490	6.212	625	22.612	760	0.705
495	7.337	630	21.341	765	0.606
500	8.514	635	20.003	770	0.519
505	9.501	640	18.592	775	0.444
510	10.348	645	17.108	780	0.067



REPORT NUMBER: RAB01903  
DATE: 4/26/2016  
PREPARED FOR: RAB LIGHTING INC.  
CATALOG NUMBER: BULLET12Y

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## CIE Chromaticity Diagram

