

REPORT NUMBER: RAB04724

PAGE: 1 OF 10

ISSUE DATE: 12/11/18

DATE SAMPLE TESTED: 12/11/18

PREPARED FOR: RAB LIGHTING INC.

CATALOG NUMBER: W34-55L-830-480

LUMINAIRE: WALLPACK WITH ALUMINUM PRECISION DIE CAST CONSTRUCTION, CLEAR GLASS LENS AND SPECULAR ALUMINUM REFLECTOR.

LAMPS: ONE HUNDRED AND TEN WHITE LIGHT EMITTING DIODES (LEDs)

ABSOLUTE: NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.

WATT: TOTAL INPUT WATTS = 51.7 W AT 480.0 VAC.

LED DRIVER: LED DRIVER: XH055C180V054BSY1M

PROCEDURE: TEST PROCEDURE: IESNA LM-79-08

NOTE: LM-80 DATA AVAILABLE FROM MANUFACTURER FOR SOLID STATE SOURCE
AMBIENT: 24.2

NVLAP LAB CODE: ACCREDITED LABORATORY CODE 201058-0



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.

Checked X.CAO

Approved D.WANG-MUNSON

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ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

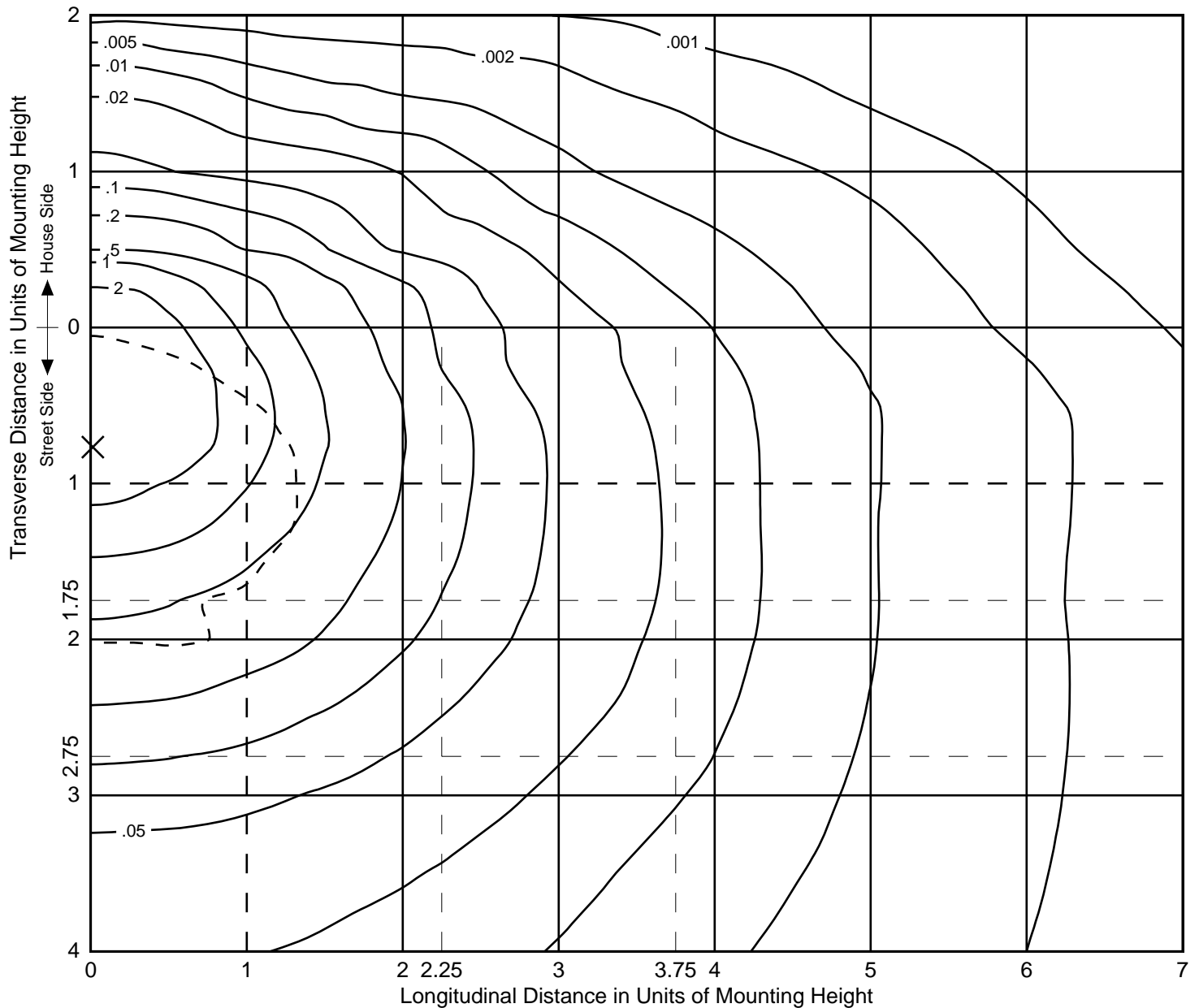
Values based on 20-foot mounting height

IES Classification: (does not classify)

Cutoff Classification (deprecated): Semicutoff

— — — — — 1/2 Maximum Candela trace

× Maximum Candela point



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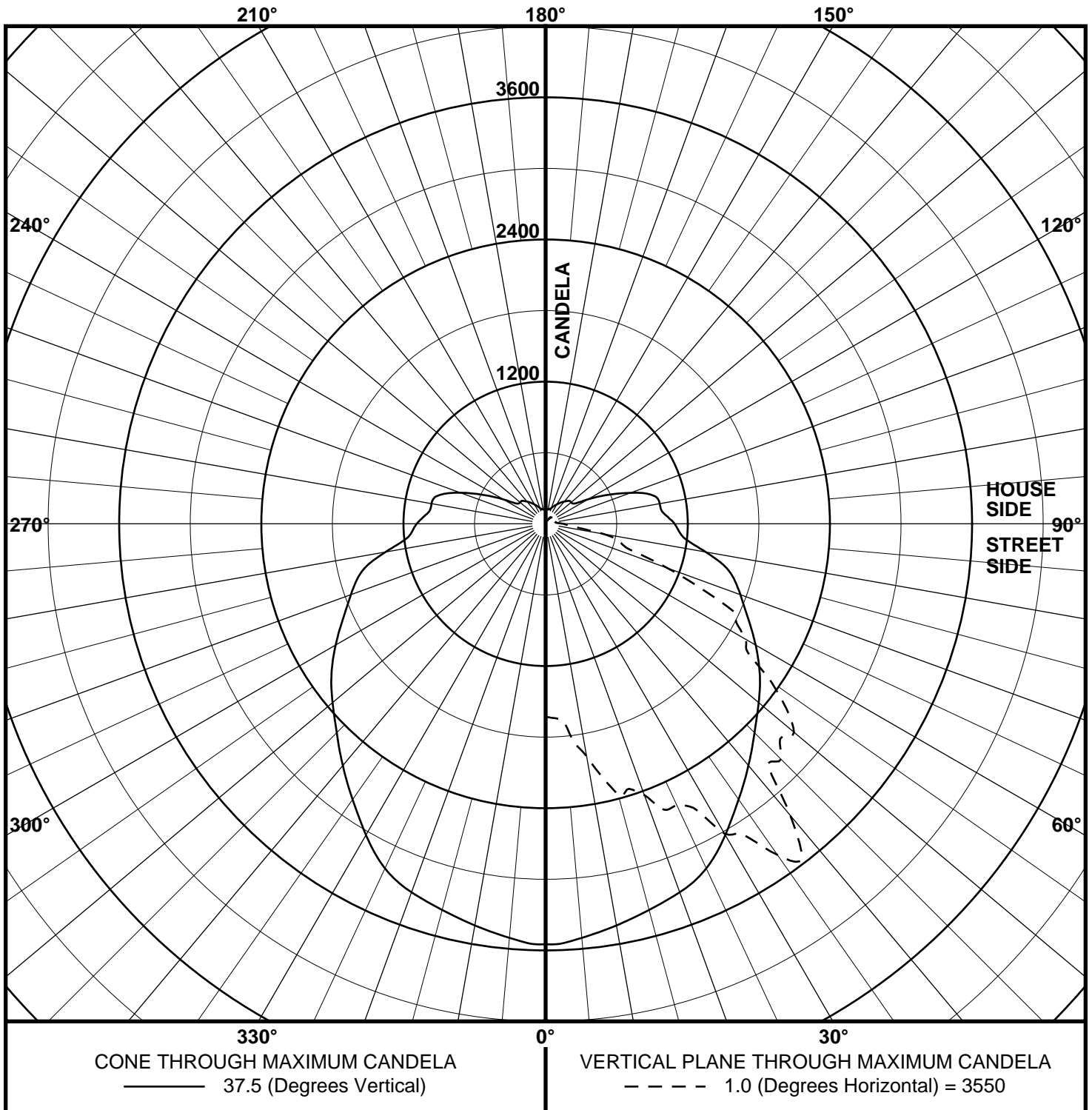
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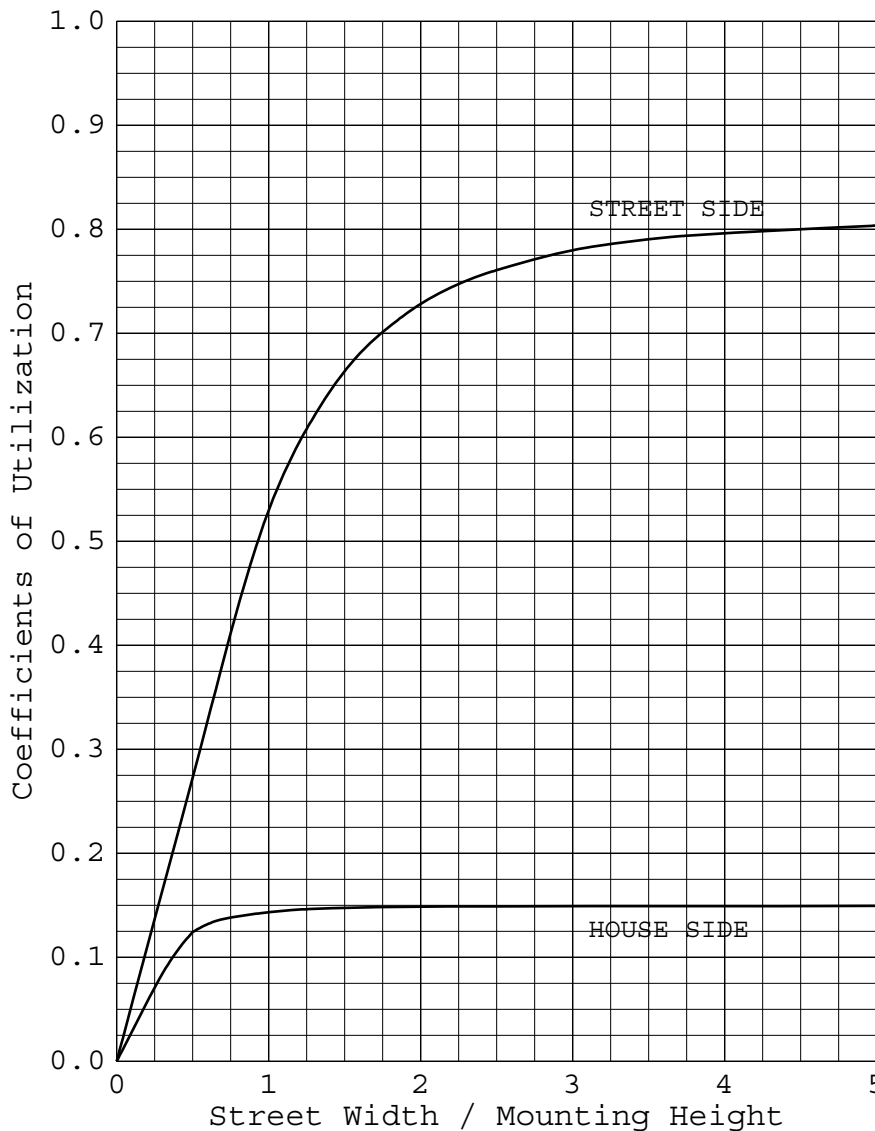
MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA



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COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	4473	82.0
DOWNWARD HOUSE SIDE	815	14.9
DOWNWARD TOTAL	5288	96.9
UPWARD STREET SIDE	148	2.7
UPWARD HOUSE SIDE	19	0.4
UPWARD TOTAL	168	3.1
TOTAL FLUX	5456	100.0

EFFICACY = 105.5 lm/W

ALL CANDELA AND LUMENS IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY.
THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE
LUMEN OUTPUT OF THIS LUMINAIRE SAMPLE.

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BUG Rating			B1 U3 G2		
Zonal Summary			Zone Ratings		
			B	U	G
Forward					
FL	(0° – 30°)	4473			
FM	(30° – 60°)	873.2			
FH	(60° – 80°)	2472.0			G1
FVH	(80° – 90°)	1009.2			G2
		118.6			
Backward					
BL	(0° – 30°)	815			
BM	(30° – 60°)	14.9			
BH	(60° – 80°)	374.1	B1		
BVH	(80° – 90°)	356.5	B1		
		76.8	B0		G0
		7.8			G0
Upward					
UL	(90° – 100°)	168			
UH	(100° – 180°)	43.2			U2
		124.5		U3	
Trapped Light					
Total Flux					
		0			
		5456			
		100.0			

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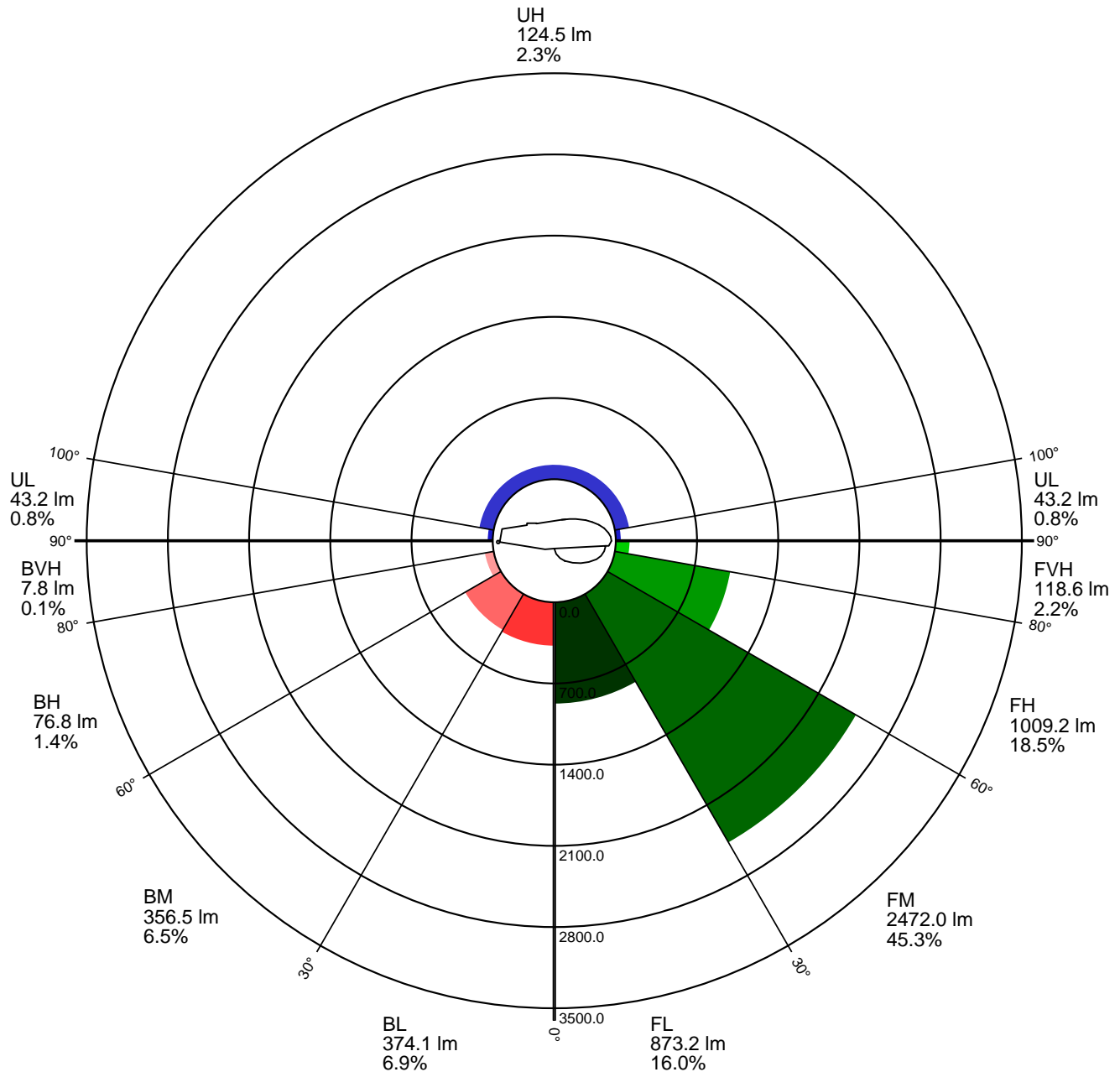
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Zonal Lumen Summary

(Linear scale)

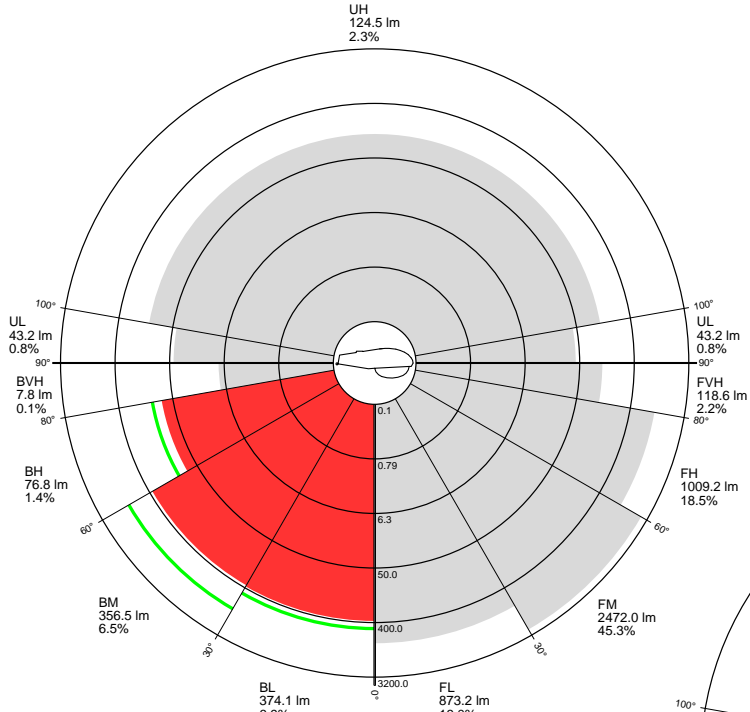


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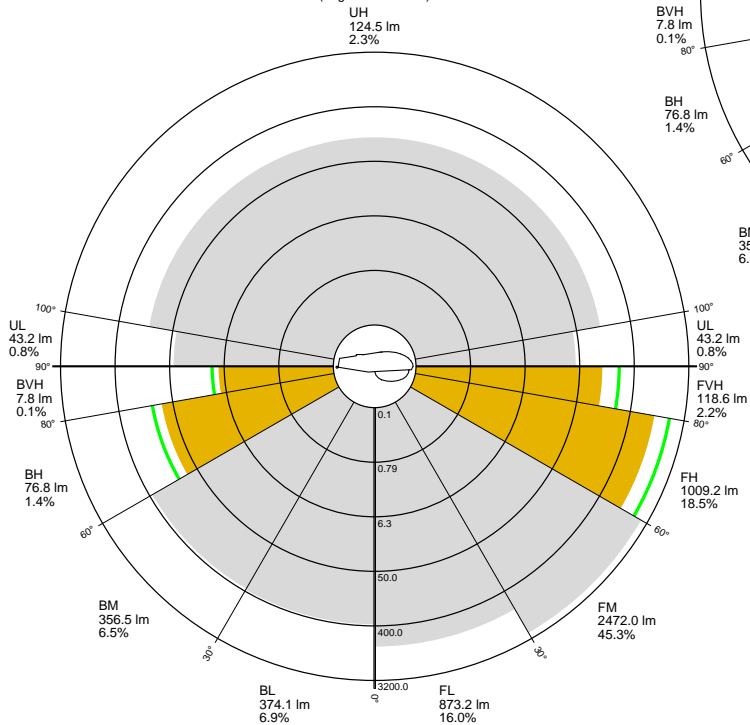
Backlight Rating Details

(Logarithmic scale)



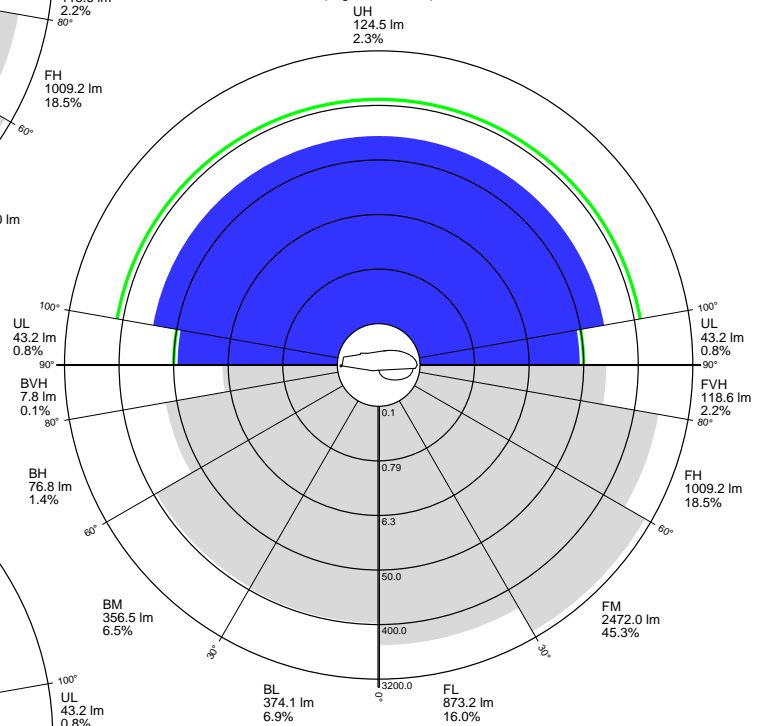
Glare Rating Details

(Logarithmic scale)



Uplight Rating Details

(Logarithmic scale)



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CANDELA TABULATION

	STREET SIDE		LATERAL ANGLE								
	0.0	1.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0
180.0	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.
175.0	1.	1.	1.	2.	2.	3.	3.	4.	4.	5.	5.
165.0	9.	9.	9.	9.	8.	7.	6.	5.	4.	5.	5.
155.0	26.	26.	26.	25.	21.	18.	14.	10.	7.	5.	5.
145.0	57.	57.	56.	54.	49.	39.	29.	21.	12.	9.	7.
135.0	81.	81.	81.	79.	74.	63.	47.	32.	21.	12.	10.
125.0	92.	93.	92.	89.	78.	65.	51.	38.	25.	14.	12.
115.0	82.	82.	82.	78.	70.	59.	46.	38.	30.	23.	19.
105.0	99.	97.	95.	89.	76.	63.	49.	41.	35.	27.	22.
95.0	93.	93.	92.	91.	86.	80.	68.	62.	58.	40.	26.
92.5	113.	113.	111.	112.	106.	96.	82.	81.	74.	48.	29.
90.0	147.	148.	146.	145.	134.	119.	110.	110.	93.	61.	38.
87.5	178.	179.	178.	174.	163.	157.	153.	147.	129.	83.	59.
85.0	226.	230.	227.	230.	219.	219.	217.	231.	181.	116.	99.
V 82.5	297.	300.	295.	312.	327.	369.	356.	302.	240.	178.	162.
E 80.0	495.	492.	498.	531.	526.	508.	425.	395.	337.	264.	239.
R 77.5	630.	635.	631.	621.	575.	527.	513.	534.	470.	365.	318.
T 75.0	669.	670.	666.	649.	640.	676.	697.	721.	619.	474.	352.
I 72.5	792.	792.	784.	823.	861.	942.	965.	922.	748.	591.	378.
C 70.0	1079.	1096.	1079.	1133.	1191.	1242.	1223.	1084.	892.	728.	444.
A 67.5	1403.	1406.	1397.	1446.	1490.	1592.	1358.	1188.	1041.	841.	509.
L 65.0	1759.	1748.	1721.	1829.	1743.	1584.	1503.	1372.	1166.	958.	577.
62.5	1807.	1817.	1839.	1797.	1736.	1781.	1638.	1545.	1326.	1073.	661.
A 60.0	1963.	1948.	1928.	1932.	1951.	1897.	1883.	1657.	1482.	1118.	740.
N 57.5	2020.	2025.	1977.	2031.	2070.	2178.	2040.	1772.	1608.	1159.	803.
G 55.0	2329.	2323.	2273.	2347.	2375.	2315.	2138.	1909.	1693.	1214.	860.
L 52.5	2569.	2560.	2521.	2581.	2558.	2372.	2249.	2064.	1743.	1291.	903.
E 50.0	2726.	2736.	2722.	2581.	2559.	2486.	2442.	2111.	1777.	1369.	940.
47.5	2697.	2686.	2689.	2719.	2627.	2647.	2634.	2192.	1805.	1415.	971.
45.0	2808.	2810.	2773.	2725.	2715.	2889.	2654.	2211.	1839.	1486.	1004.
42.5	2818.	2787.	2752.	2916.	3049.	3074.	2571.	2190.	1799.	1497.	1032.
40.0	3205.	3212.	3167.	3263.	3276.	2935.	2556.	2172.	1884.	1550.	1100.
37.5<<	3549.	3550.	3508.	3374.	3209.	2841.	2494.	2207.	1885.	1619.	1154.
35.0	3358.	3413.	3433.	3211.	2962.	2791.	2452.	2262.	1978.	1648.	1227.
32.5	3109.	3115.	3112.	3017.	2914.	2590.	2443.	2141.	1989.	1694.	1267.
30.0	3013.	3019.	3000.	2821.	2651.	2519.	2350.	2129.	1958.	1714.	1302.
25.0	2613.	2622.	2597.	2684.	2528.	2334.	2192.	2068.	1986.	1770.	1428.
20.0	2410.	2437.	2397.	2521.	2409.	2286.	2131.	2011.	1936.	1607.	1488.
15.0	2357.	2368.	2344.	2323.	2111.	2193.	2013.	2069.	1969.	1682.	1515.
10.0	1975.	1995.	1980.	2023.	2130.	2043.	1834.	1892.	1625.	1673.	1540.
5.0	1659.	1669.	1676.	1619.	1614.	1679.	1735.	1718.	1602.	1524.	1531.
0.0	1629.	1629.	1629.	1629.	1629.	1629.	1629.	1629.	1629.	1629.	1629.

||
PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA

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CANDELA TABULATION

	LATERAL ANGLE										
	HOUSE SIDE	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0 180.0
	180.0	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.
	175.0	5.	5.	5.	5.	4.	4.	4.	3.	3.	3.
	165.0	5.	5.	5.	5.	5.	5.	5.	5.	5.	5.
	155.0	5.	6.	6.	6.	5.	5.	6.	6.	6.	6.
	145.0	6.	6.	6.	6.	6.	6.	6.	6.	6.	6.
	135.0	8.	7.	6.	6.	6.	6.	6.	6.	6.	6.
	125.0	10.	8.	7.	6.	5.	5.	5.	5.	5.	5.
	115.0	18.	12.	7.	6.	5.	5.	4.	4.	4.	4.
	105.0	21.	16.	9.	6.	5.	4.	4.	4.	4.	4.
	95.0	17.	16.	12.	8.	6.	4.	4.	3.	3.	3.
	92.5	20.	17.	14.	9.	6.	4.	3.	3.	3.	3.
	90.0	29.	19.	17.	10.	6.	4.	3.	3.	3.	3.
	87.5	52.	27.	21.	12.	6.	4.	3.	3.	2.	3.
	85.0	90.	40.	28.	14.	7.	4.	3.	3.	2.	2.
V	82.5	120.	72.	39.	18.	8.	4.	3.	2.	2.	2.
E	80.0	165.	122.	54.	24.	10.	4.	3.	2.	2.	2.
R	77.5	235.	177.	69.	30.	12.	5.	3.	2.	2.	1.
T	75.0	299.	202.	85.	40.	16.	5.	3.	2.	2.	1.
I	72.5	360.	238.	108.	57.	23.	6.	3.	2.	1.	1.
C	70.0	422.	323.	131.	79.	33.	10.	3.	2.	1.	1.
A	67.5	486.	439.	149.	106.	45.	21.	4.	2.	1.	1.
L	65.0	550.	550.	167.	134.	58.	30.	16.	5.	1.	0.
	62.5	632.	638.	195.	160.	75.	39.	26.	20.	12.	9.
A	60.0	701.	697.	242.	184.	93.	49.	36.	32.	26.	25.
N	57.5	747.	759.	318.	204.	113.	59.	44.	42.	39.	39.
G	55.0	793.	843.	398.	220.	138.	72.	54.	50.	51.	50.
L	52.5	828.	887.	483.	241.	166.	83.	63.	59.	58.	60.
E	50.0	883.	912.	584.	259.	193.	102.	70.	64.	66.	69.
	47.5	927.	924.	695.	280.	216.	132.	80.	69.	67.	69.
	45.0	955.	947.	761.	311.	240.	168.	101.	74.	70.	70.
	42.5	996.	958.	808.	363.	261.	207.	134.	90.	73.	72.
	40.0	1044.	961.	890.	430.	276.	246.	174.	124.	94.	84.
	37.5<<	1088.	1002.	935.	577.	298.	274.	216.	163.	128.	120.
	35.0	1153.	1053.	1043.	658.	325.	290.	261.	214.	176.	157.
	32.5	1193.	1090.	1133.	811.	373.	310.	283.	264.	234.	217.
	30.0	1248.	1122.	1154.	855.	580.	332.	299.	280.	270.	258.
	25.0	1358.	1177.	1159.	1048.	845.	608.	359.	330.	318.	300.
	20.0	1436.	1267.	1096.	1253.	1067.	934.	738.	659.	441.	399.
	15.0	1517.	1396.	1218.	1283.	1335.	1096.	985.	1004.	936.	885.
	10.0	1574.	1527.	1315.	1155.	1303.	1163.	1241.	1354.	1135.	1099.
	5.0	1601.	1661.	1430.	1319.	1370.	1515.	1288.	1154.	1064.	1079.
	0.0	1629.	1629.	1629.	1629.	1629.	1629.	1629.	1629.	1629.	1629.

CONE OF MAXIMUM CANDELA

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5-DEGREE ZONAL LUMEN SUMMARY

0- 5	36
5- 10	109
10- 15	187
15- 20	250
20- 25	307
25- 30	359
30- 35	424
35- 40	479
40- 45	493
45- 50	498
50- 55	489
55- 60	446
60- 65	395
65- 70	326
70- 75	221
75- 80	145
80- 85	84
85- 90	42
90- 95	25
95-100	18
100-105	17
105-110	15
110-115	14
115-120	14
120-125	13
125-130	12
130-135	11
135-140	9
140-145	7
145-150	5
150-155	3
155-160	2
160-165	1
165-170	1
170-175	0
175-180	0

10-DEGREE ZONAL LUMEN SUMMARY

0- 10	145
0- 20	581
0- 30	1247
0- 40	2150
0- 50	3141
0- 60	4076
0- 70	4796
0- 80	5162
0- 90	5288
0-100	5332
0-110	5364
0-120	5392
0-130	5417
0-140	5437
0-150	5449
0-160	5454
0-170	5456
0-180	5456

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CATALOG NUMBER: W34-55L-830-480

ADDRESS: 170 LUDLOW AVE, NORTHVALE, NJ 07647

LUMINAIRE: WALLPACK WITH ALUMINUM PRECISION DIE CAST CONSTRUCTION, CLEAR GLASS LENS AND SPECULAR ALUMINUM REFLECTOR.

LAMP: ONE HUNDRED AND TEN WHITE LIGHT EMITTING DIODES (LEDs)

DRIVER: XH055C180V054BSY1M

NOTE: LM-80 DATA AVAILABLE FROM MANUFACTURER FOR SOLID STATE SOURCE

INSTRUMENTS:	GWINSTEK PROGRAMMABLE AC POWER SOURCE APS-7100	Calibration Due:
	CHROMA PROGRAMMABLE DIGITAL POWER METER MODEL 66202	N/A
	OCEAN OPTICS QE65PRO Spectroradiometer	3/08/19
	RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry	12/11/19

OBJECT OF TEST: Measure the Total Radiant Flux*, Spectral Power Distribution (SPD), Correlated Color Temperature (CCT), Color Rendering Indices (CRI_a, 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 480.0 VAC 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 X.CAO

Approved D.WANG-MUNSON
Lighting Engineer

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RESULTS:

SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4272
Chromaticity Ordinate y	0.4011
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2455
Chromaticity Ordinate v'	0.5188
Correlated Color Temp CCT (K)	3147
Color Rendering Index (CRIa)	82
Color Rendering Index 1 (Light greyish red)	80
Color Rendering Index 2 (Dark greyish yellow)	90
Color Rendering Index 3 (Strong yellowish green)	97
Color Rendering Index 4 (Moderate yellowish green)	80
Color Rendering Index 5 (Light bluish green)	81
Color Rendering Index 6 (Light blue)	88
Color Rendering Index 7 (Light violet)	84
Color Rendering Index 8 (Light reddish purple)	60
Color Rendering Index 9 (Strong red)	8
Color Rendering Index 10 (Strong yellow)	77
Color Rendering Index 11 (Strong green)	79
Color Rendering Index 12 (Strong blue)	69
Color Rendering Index 13 (Light yellowish pink (skin))	82
Color Rendering Index 14 (Moderate olive green (leaf))	99
ANSI C78.377-2008 Duv	0.000
Total Radiant Flux (milliWatts)	16607 *
ELECTRICAL FOR SPECTRORADIOMETRIC TEST	
Input Voltage (Volts AC)	480.0
Input Current (Amps AC)	0.111
Input Power (Watts)	51.7
Input Power Factor (%)	97.4
Input Current THD (%)	10.8
Input Voltage THD (%)	0.2
Off-State Power (Watts)	0.0

*NOTE:

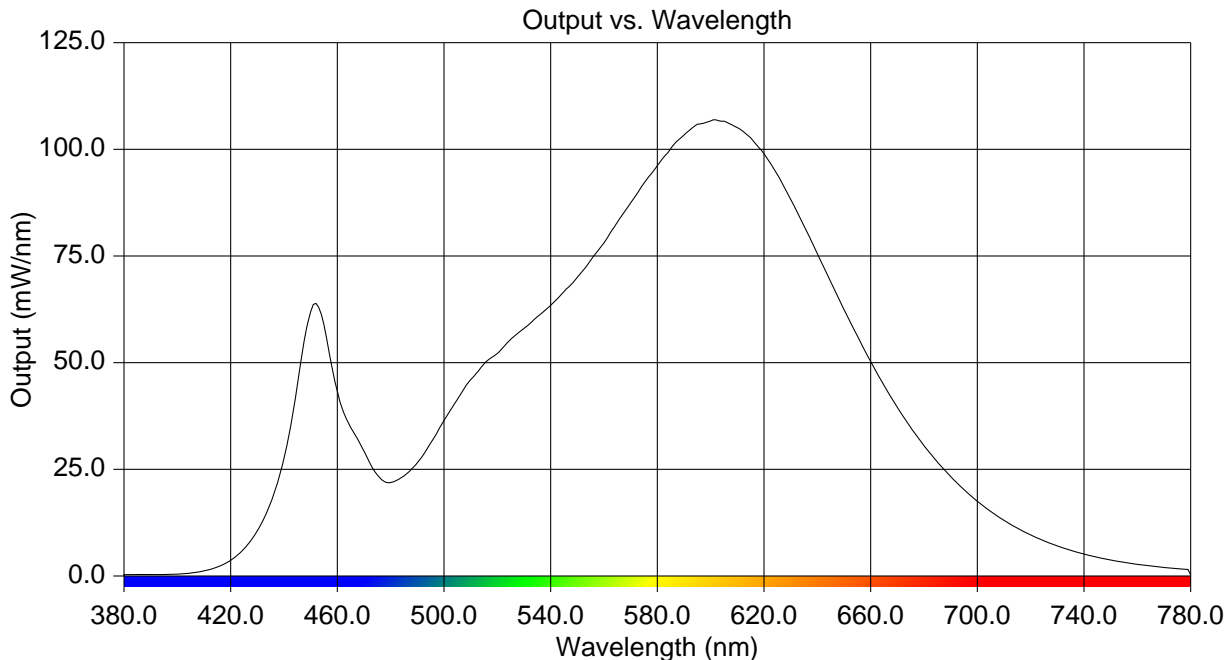
Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even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

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RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.293	515	49.697	650	62.427
385	0.330	520	52.121	655	56.289
390	0.316	525	55.483	660	50.303
395	0.354	530	58.033	665	44.666
400	0.451	535	60.770	670	39.529
405	0.669	540	63.425	675	34.860
410	1.181	545	66.664	680	30.481
415	2.110	550	70.009	685	26.714
420	3.710	555	74.011	690	23.309
425	6.313	560	78.072	695	20.254
430	10.586	565	82.824	700	17.504
435	17.234	570	87.371	705	15.141
440	27.619	575	92.066	710	13.053
445	44.672	580	96.202	715	11.239
450	61.950	585	100.132	720	9.612
455	58.839	590	103.354	725	8.235
460	43.200	595	105.891	730	7.003
465	34.819	600	106.684	735	5.991
470	29.286	605	106.607	740	5.120
475	23.686	610	105.100	745	4.389
480	21.901	615	102.695	750	3.749
485	23.465	620	98.874	755	3.194
490	26.540	625	94.171	760	2.734
495	31.154	630	88.254	765	2.347
500	36.489	635	82.045	770	2.004
505	41.367	640	75.453	775	1.710
510	46.001	645	69.020	780	0.258



REPORT NUMBER: RAB04725
DATE: 12/11/2018
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: W34-55L-830-480

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CIE Chromaticity Diagram

