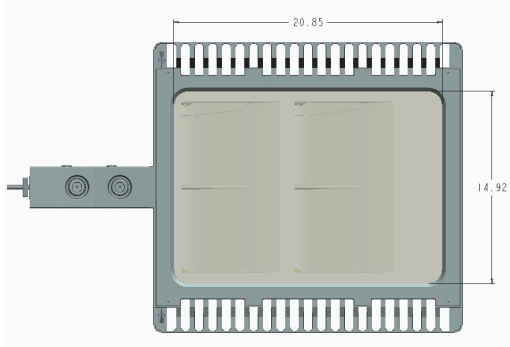


## ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 25 foot mounting height.

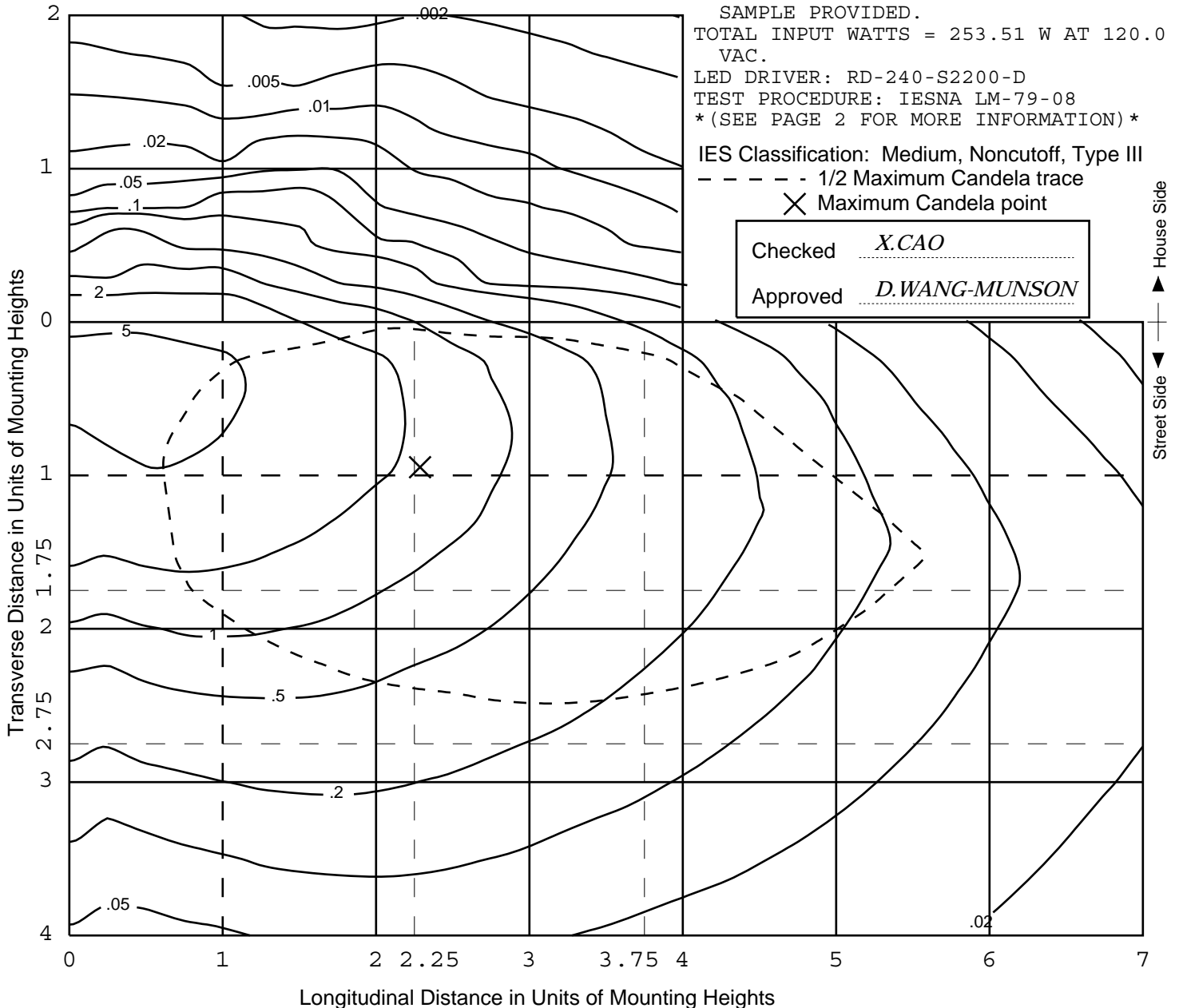


REPORT NUMBER: RAB01819  
 ISSUE DATE: 04/04/16 PAGE: 1 OF 9  
 DATE SAMPLE TESTED: 04/04/16  
 PREPARED FOR: RAB LIGHTING INC.  
 CATALOG NUMBER: ALED3T260N/D10 -  
 ALED3T260SFN/D10 - WPLED3T260N/D10 -  
 WPLED3T260NFX/D10 (TYPE III)  
 LUMINAIRE: CAST FINNED METAL HOUSING, 4  
 CHIP ON BOARD LIGHT EMITTING DIODES,  
 MOLDED PLASTIC REFLECTOR WITH  
 SPECULAR FINISH, CLEAR GLASS LENS IN  
 CAST BRONZE PAINTED METAL FRAME.  
 LAMPS: FOUR WHITE LIGHT EMITTING DIODES  
 (LEDs)

NOTE: DATA SHOWN IS ABSOLUTE FOR THE  
 SAMPLE PROVIDED.  
 TOTAL INPUT WATTS = 253.51 W AT 120.0  
 VAC.  
 LED DRIVER: RD-240-S2200-D  
 TEST PROCEDURE: IESNA LM-79-08  
 \*(SEE PAGE 2 FOR MORE INFORMATION)\*

IES Classification: Medium, Noncutoff, Type III

--- 1/2 Maximum Candela trace  
 X Maximum Candela point



REPORT NUMBER: RAB01819  
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PREPARED FOR: RAB LIGHTING INC.

PAGE: 2 OF 9  
DATE SAMPLE TESTED: 04/04/16

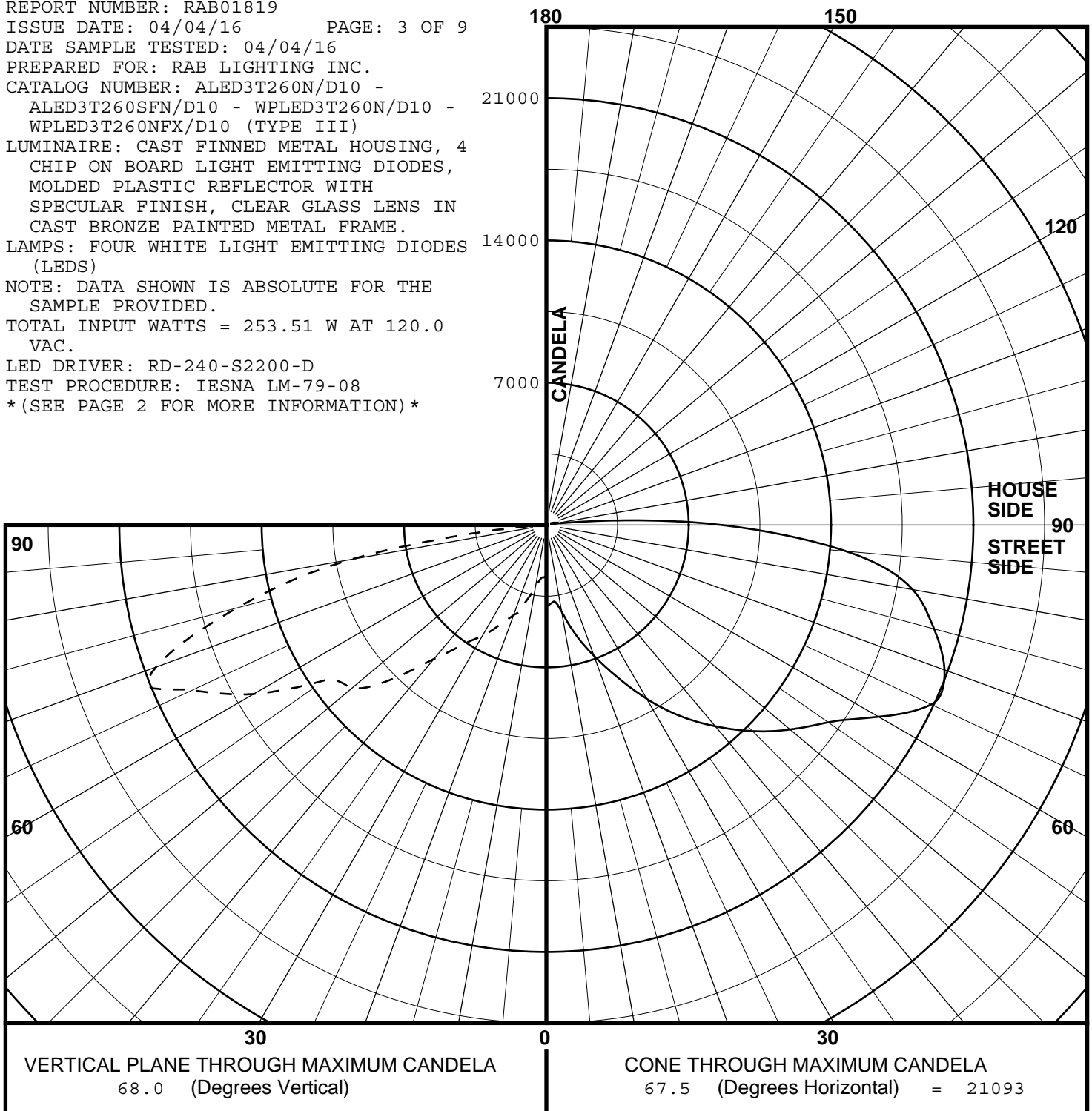
ADDITIONAL INFORMATION

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.

## MAXIMUM PLANE AND MAXIMUM CONE PLOTS OF CANDELA

REPORT NUMBER: RAB01819  
 ISSUE DATE: 04/04/16 PAGE: 3 OF 9  
 DATE SAMPLE TESTED: 04/04/16  
 PREPARED FOR: RAB LIGHTING INC.  
 CATALOG NUMBER: ALED3T260N/D10 -  
 ALED3T260SFN/D10 - WPLED3T260N/D10 -  
 WPLED3T260NFX/D10 (TYPE III)  
 LUMINAIRE: CAST FINNED METAL HOUSING, 4  
 CHIP ON BOARD LIGHT EMITTING DIODES,  
 MOLDED PLASTIC REFLECTOR WITH  
 SPECULAR FINISH, CLEAR GLASS LENS IN  
 CAST BRONZE PAINTED METAL FRAME.  
 LAMPS: FOUR WHITE LIGHT EMITTING DIODES (LEDS)  
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE  
 SAMPLE PROVIDED.  
 TOTAL INPUT WATTS = 253.51 W AT 120.0  
 VAC.  
 LED DRIVER: RD-240-S2200-D  
 TEST PROCEDURE: IESNA LM-79-08  
 \*(SEE PAGE 2 FOR MORE INFORMATION)\*



REPORT NUMBER: RAB01819

ISSUE DATE: 04/04/16

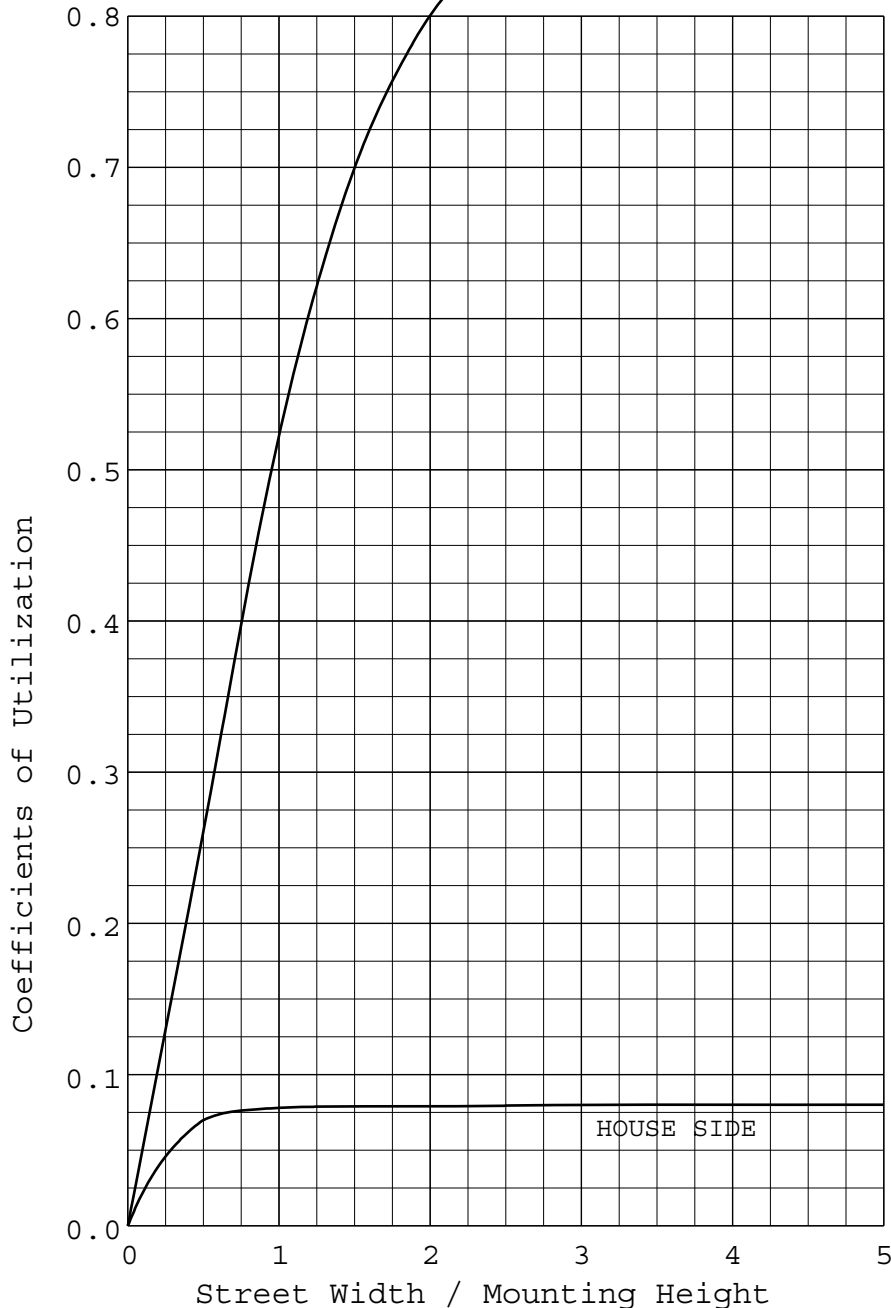
PREPARED FOR: RAB LIGHTING INC.

STREET SIDE

PAGE: 4 OF 9

DATE SAMPLE TESTED: 04/04/16

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	24575.	91.9
DOWNWARD HOUSE SIDE	2159.	8.1
DOWNWARD TOTAL	26734.	100.0
UPWARD STREET SIDE	0.	0.0
UPWARD HOUSE SIDE	0.	0.0
UPWARD TOTAL	0.	0.0
TOTAL FLUX	26734.	100.0
TOTAL INPUT WATTS = 253.5		
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.

REPORT NUMBER: RAB01819  
 ISSUE DATE: 04/04/16  
 PREPARED FOR: RAB LIGHTING INC.

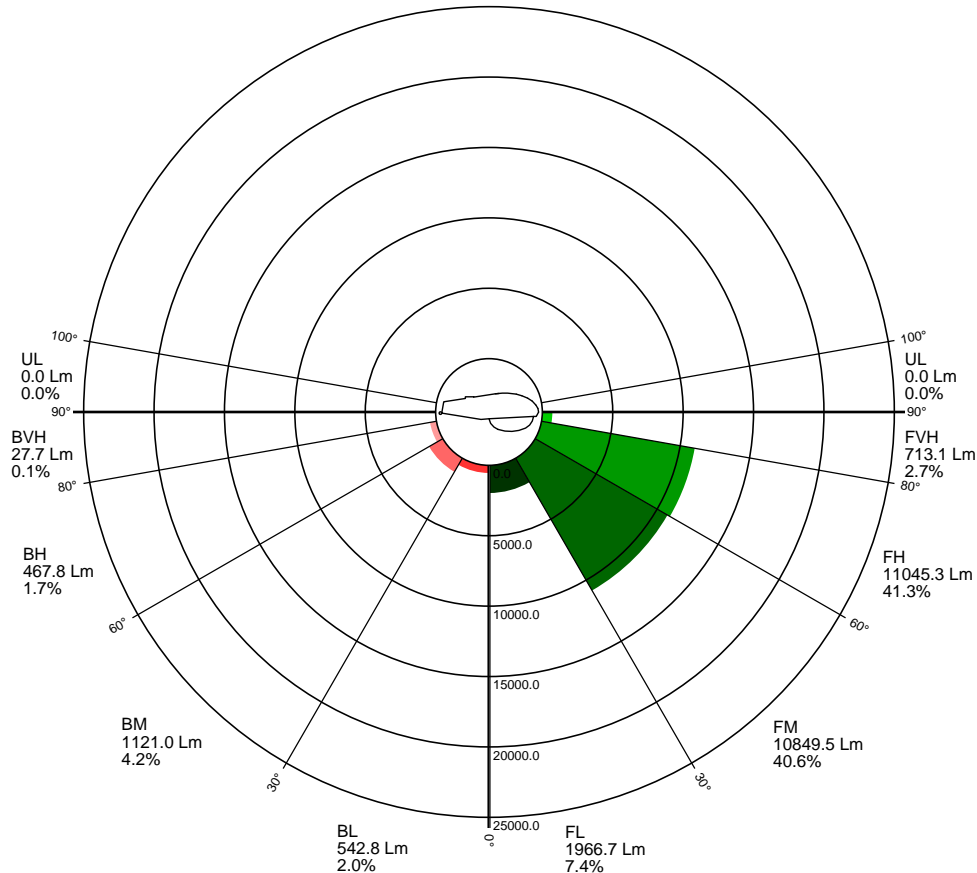
PAGE: 5 OF 9  
 DATE SAMPLE TESTED: 04/04/16

BUG Rating:				B2 U0 G4		
Zonal Summary		Lumens	% of Fixture	Zone Ratings		
				B	U	G
Forward		24575	91.9			
FL	(0° - 30°)	1966.7	7.4			
FM	(30° - 60°)	10849.5	40.6			
FH	(60° - 80°)	11045.3	41.3			G4
FVH	(80° - 90°)	713.1	2.7			G4
Backward		2159	8.1			
BL	(0° - 30°)	542.8	2.0	B2		
BM	(30° - 60°)	1121.0	4.2	B2		
BH	(60° - 80°)	467.8	1.7	B1		G1
BVH	(80° - 90°)	27.7	0.1			G1
Upward		0	0.0			
UL	(90° - 100°)	0.0	0.0		U0	
UH	(100° - 180°)	0.0	0.0		U0	
Trapped Light		0	0.0			
Total Flux		26734	100.0			

### Zonal Lumen Summary

(Linear scale)

UH  
0.0 Lm  
0.0%

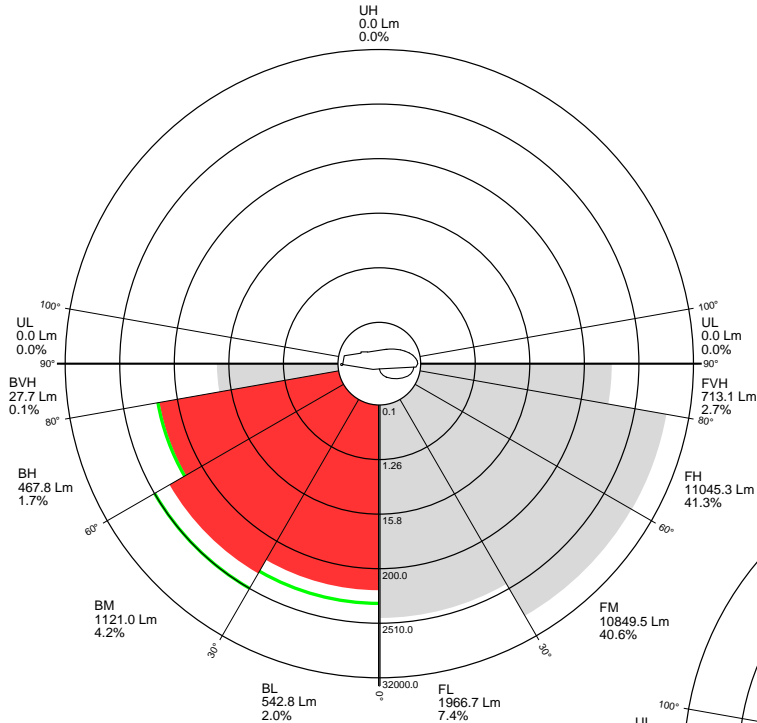


REPORT NUMBER: RAB01819  
 ISSUE DATE: 04/04/16  
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 6 OF 9  
 DATE SAMPLE TESTED: 04/04/16

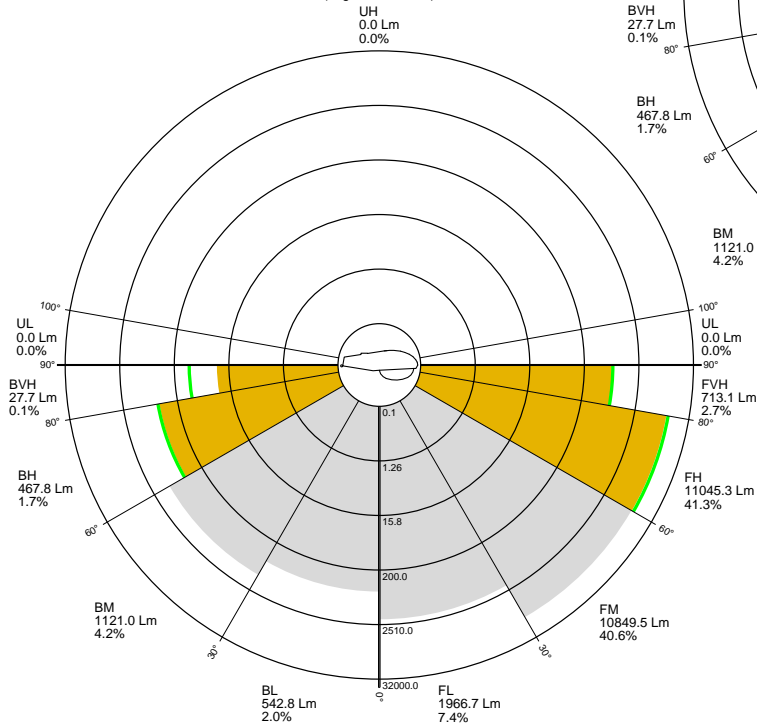
## Backlight Rating Details

(Logarithmic scale)



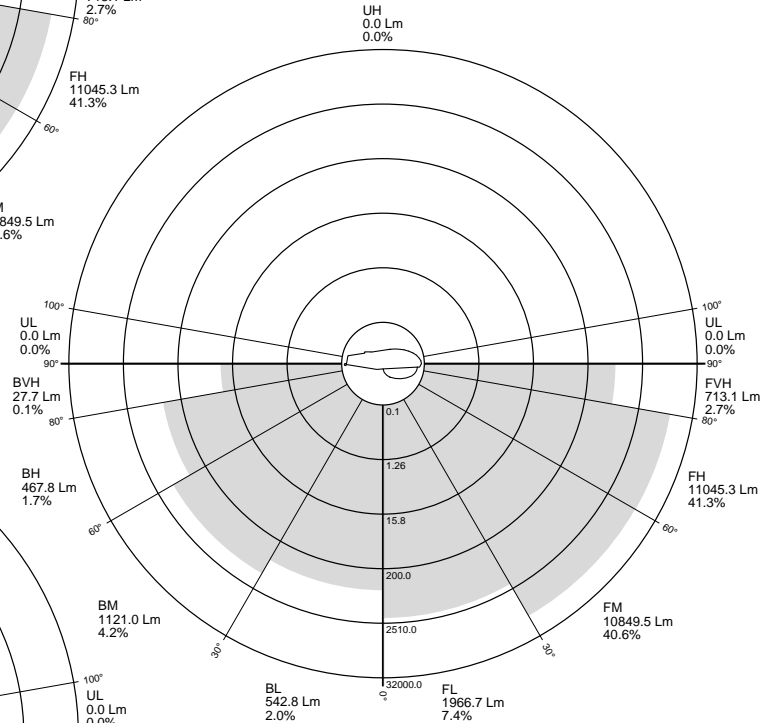
## Glare Rating Details

(Logarithmic scale)



## Uplight Rating Details

(Logarithmic scale)



REPORT NUMBER: RAB01819  
 ISSUE DATE: 04/04/16  
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 7 OF 9  
 DATE SAMPLE TESTED: 04/04/16

### CANDELA TABULATION

	STREET SIDE	LATERAL ANGLE										
		0.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	67.5	75.0	85.0
	180.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	87.5	21.	21.	25.	29.	40.	61.	63.	169.	224.	333.	233.
	85.0	27.	27.	41.	70.	148.	488.	1064.	1425.	1798.	1880.	538.
	82.5	42.	46.	89.	310.	961.	1960.	3806.	4827.	5262.	5991.	1817.
V	80.0	183.	198.	677.	1569.	2949.	4669.	6918.	9364.	9757.	10972.	4941.
E	77.5	1149.	1007.	1772.	3367.	5186.	7079.	9833.	12589.	13060.	14556.	9291.
R	75.0	2418.	1887.	2900.	4688.	6968.	9305.	12775.	15112.	15747.	17016.	13387.
T	72.5	2951.	2464.	3764.	5892.	8726.	11442.	15082.	17927.	18373.	19106.	15310.
I	70.0	3623.	3261.	4764.	7095.	10229.	13327.	16313.	20327.	20421.	19958.	14790.
C	68.0<<	4009.	3792.	5590.	8255.	11466.	14339.	16917.	20880.	21093.	19738.	14806.
A	67.5	4155.	3956.	5827.	8597.	11742.	14520.	16944.	20637.	20971.	19552.	14808.
L	65.0	5407.	4683.	7057.	10020.	12513.	14853.	17128.	19073.	19216.	18813.	15450.
	62.5	6725.	5458.	8150.	10750.	12830.	14852.	16743.	17783.	17966.	17112.	14281.
A	60.0	7967.	6419.	8818.	10814.	12660.	14556.	15942.	16655.	16620.	15687.	12339.
N	57.5	8340.	7180.	8651.	10455.	12461.	14120.	14971.	14782.	14998.	14390.	10857.
G	55.0	8262.	7452.	8202.	10035.	12143.	13384.	13904.	13434.	13328.	13431.	10308.
L	52.5	7992.	7274.	8150.	9710.	11571.	12654.	12962.	12901.	12718.	12492.	9855.
E	50.0	7702.	7017.	8155.	9518.	10900.	11879.	12406.	12504.	12461.	11607.	9059.
	47.5	7331.	6743.	7809.	9649.	10437.	11330.	11874.	11861.	11761.	11005.	8512.
	45.0	7026.	6432.	7396.	9170.	10100.	10912.	11173.	10881.	10709.	9876.	7685.
	42.5	6649.	6039.	6879.	8591.	9656.	10271.	10334.	9839.	9587.	8721.	6878.
	40.0	6063.	5740.	6485.	8077.	9145.	9499.	9333.	8810.	8598.	7875.	6224.
	37.5	5559.	5445.	6143.	7856.	8532.	8730.	8499.	8028.	7850.	7182.	5772.
	35.0	5340.	5207.	5913.	7290.	7886.	8049.	7704.	7334.	7191.	6629.	5372.
	30.0	5447.	5132.	5432.	5961.	6625.	6621.	6586.	6396.	6296.	5737.	4659.
	25.0	5165.	5018.	5073.	5215.	5628.	5744.	5712.	5536.	5409.	4974.	4105.
	20.0	4872.	4875.	4798.	4872.	4935.	5122.	5240.	4834.	4716.	4280.	3624.
	15.0	4612.	4606.	4528.	4508.	4502.	4408.	4197.	3987.	3884.	3623.	3271.
	10.0	4103.	4062.	3948.	3846.	3746.	3590.	3418.	3183.	3087.	2883.	2618.
	5.0	3243.	3220.	3175.	3125.	3027.	2900.	2757.	2626.	2592.	2478.	2332.
	0.0	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.
										PLANE OF MAXIMUM CANDELA		
										CONE OF MAXIMUM CANDELA		

REPORT NUMBER: RAB01819  
 ISSUE DATE: 04/04/16  
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 8 OF 9  
 DATE SAMPLE TESTED: 04/04/16

### CANDELA TABULATION

HOUSE SIDE

### LATERAL ANGLE

	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
180.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
175.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
165.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
155.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
145.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
135.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
125.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
115.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
105.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
87.5	135.	37.	35.	35.	32.	30.	29.	29.	28.	28.	28.
85.0	319.	54.	38.	34.	28.	26.	26.	27.	26.	26.	26.
82.5	1068.	117.	56.	36.	25.	23.	23.	24.	25.	24.	24.
V 80.0	2842.	238.	97.	42.	23.	21.	20.	22.	23.	23.	23.
E 77.5	4648.	488.	158.	63.	22.	20.	17.	20.	22.	22.	22.
R 75.0	6296.	871.	247.	95.	37.	19.	16.	19.	20.	21.	21.
T 72.5	7769.	1170.	356.	119.	63.	20.	15.	17.	19.	20.	20.
I 70.0	7916.	1554.	404.	158.	94.	26.	15.	17.	19.	20.	20.
C 68.0<<	8653.	2101.	456.	194.	110.	32.	17.	18.	20.	20.	21.
A 67.5	8915.	2325.	462.	207.	112.	34.	18.	18.	20.	21.	21.
L 65.0	9705.	3362.	525.	354.	118.	42.	21.	22.	22.	22.	23.
62.5	8981.	3666.	685.	636.	150.	61.	26.	25.	25.	25.	26.
A 60.0	7822.	3476.	896.	803.	205.	66.	31.	34.	28.	28.	29.
N 57.5	7505.	3765.	1119.	808.	261.	62.	47.	40.	32.	35.	34.
G 55.0	7294.	4087.	1303.	702.	332.	67.	46.	58.	35.	41.	37.
L 52.5	7244.	4597.	1427.	724.	429.	107.	52.	48.	38.	43.	38.
E 50.0	7037.	5162.	1851.	764.	438.	167.	65.	46.	40.	39.	38.
47.5	6871.	5380.	2308.	925.	436.	184.	93.	58.	44.	39.	39.
45.0	6419.	5081.	2362.	962.	463.	191.	116.	91.	54.	44.	43.
42.5	5813.	4640.	2143.	989.	553.	218.	127.	113.	78.	64.	57.
40.0	5293.	4236.	2098.	1110.	777.	399.	136.	115.	95.	80.	69.
37.5	4873.	3892.	2121.	1076.	761.	496.	176.	126.	102.	91.	75.
35.0	4477.	3624.	2164.	1092.	808.	851.	283.	183.	109.	92.	74.
30.0	3949.	3269.	2128.	1272.	788.	1079.	901.	644.	268.	127.	110.
25.0	3578.	3014.	2075.	1417.	1177.	937.	661.	548.	515.	414.	335.
20.0	3241.	2857.	2143.	1680.	1214.	776.	513.	469.	491.	303.	251.
15.0	3015.	2735.	2164.	1697.	1242.	854.	676.	631.	649.	687.	663.
10.0	2460.	2292.	1933.	1605.	1368.	1180.	1125.	1155.	1201.	1262.	1286.
5.0	2261.	2192.	2055.	1933.	1840.	1774.	1746.	1752.	1758.	1778.	1779.
0.0	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.	2496.

CONE OF MAXIMUM CANDELA



REPORT NUMBER: RAB01819  
 ISSUE DATE: 04/04/16  
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 9 OF 9  
 DATE SAMPLE TESTED: 04/04/16

### 5-DEGREE ZONAL LUMEN SUMMARY

0- 5	58
5- 10	171
10- 15	308
15- 20	470
20- 25	645
25- 30	858
30- 35	1097
35- 40	1397
40- 45	1782
45- 50	2205
50- 55	2546
55- 60	2943
60- 65	3322
65- 70	3361
70- 75	2907
75- 80	1923
80- 85	675
85- 90	66
90- 95	0
95-100	0
100-105	0
105-110	0
110-115	0
115-120	0
120-125	0
125-130	0
130-135	0
135-140	0
140-145	0
145-150	0
150-155	0
155-160	0
160-165	0
165-170	0
170-175	0
175-180	0

### 10-DEGREE ZONAL LUMEN SUMMARY

0- 10	229
0- 20	1007
0- 30	2509
0- 40	5004
0- 50	8991
0- 60	14480
0- 70	21163
0- 80	25993
0- 90	26734
0-100	26734
0-110	26734
0-120	26734
0-130	26734
0-140	26734
0-150	26734
0-160	26734
0-170	26734
0-180	26734

REPORT NUMBER: RAB01820  
DATE: 4/4/2016  
PREPARED FOR: RAB LIGHTING INC.  
CATALOG NUMBER: ALED3T260N/D10 - ALED3T260SFN/D10 - WPLED3T260N/D10 - WPLED3T260NFX/D10 (TYPE III)  
ADDRESS: 170 LUDLOW AVE, NORTHVALE, NJ 07647  
LUMINAIRE: CAST FINNED METAL HOUSING, 4 CHIP ON BOARD LIGHT EMITTING DIODES, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, CLEAR GLASS LENS IN CAST BRONZE PAINTED METAL FRAME.  
LAMP: FOUR WHITE LIGHT EMITTING DIODES (LEDs)  
DRIVER: RD-240-S2200-D  
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: GWINSTEK PROGRAMMABLE AC POWER SOURCE APS-7100  
CHROMA PROGRAMMABLE DIGITAL POWER METER MODEL 66202  
OCEAN OPTICS QE65PRO Spectroradiometer  
RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry  
Calibration Due: N/A  
2/26/17  
3/21/17  
3/21/17  
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 X.CAO

Approved D.WANG-MUNSON  
Lighting Engineer

REPORT NUMBER: RAB01820  
 DATE: 4/4/2016  
 PREPARED FOR: RAB LIGHTING INC.  
 CATALOG NUMBER: ALED3T260N/D10 - ALED3T260SFN/D10 - WPLED3T260N/D10 - WPLED3T260NFX/D10 (TYPE III)

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### RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	26724 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.3748
Chromaticity Ordinate y	0.3820
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2194
Chromaticity Ordinate v'	0.5030
Correlated Color Temp CCT (K)	4192
ANSI C78.377-2008 Duv	0.004
Total Radiant Flux (milliWatts)	76025 *
ELECTRICAL	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	2.12
Input Power (Watts)	253.5
Input Power Factor (%)	99.8
Input Current THD (%)	4.7
Input Voltage THD (%)	0.2
EFFICACY (Lumens/Watt)	
	105.4
ELECTRICAL AT MAX NONIMAL INPUT	
Input Voltage (Volts AC)	277.0
Input Current (Amps AC)	0.929
Input Power (Watts)	248.3
Input Power Factor (%)	96.5
Input Current THD (%)	7.0
Input Voltage THD (%)	0.2
Off-State Power (Watts)	
	0.0

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	71
R1 Light greyish red	67
R2 Dark greyish yellow	76
R3 Strong yellowish green	84
R4 Moderate yellowish green	71
R5 Light bluish green	67
R6 Light blue	67
R7 Light violet	81
R8 Light reddish purple	52
R9 Strong red	-37
R10 Strong yellow	44
R11 Strong green	67
R12 Strong blue	41
R13 Light yellowish pink (skin)	68
R14 Moderate olive green (leaf)	91

### \*NOTE:

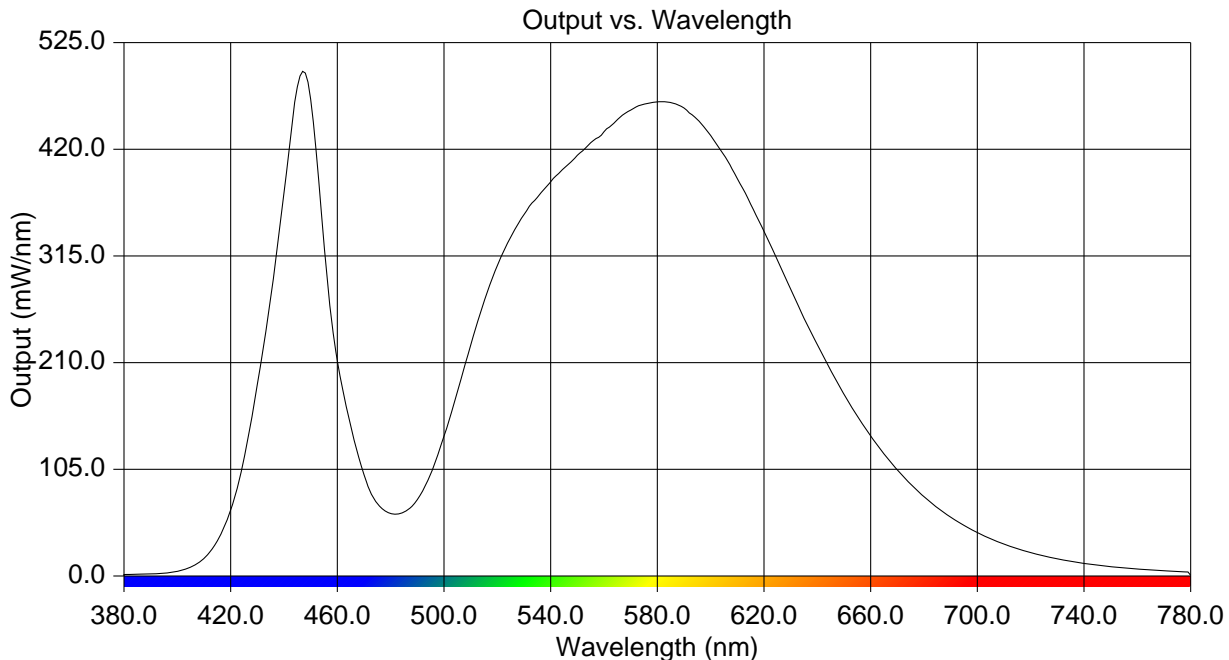
Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even 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: RAB01820  
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 PREPARED FOR: RAB LIGHTING INC.  
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 (TYPE III)

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### RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	1.425	515	269.446	650	178.962
385	1.620	520	306.252	655	157.449
390	1.995	525	333.301	660	137.593
395	2.795	530	355.763	665	120.053
400	4.588	535	372.676	670	104.439
405	8.668	540	387.973	675	90.436
410	17.388	545	401.319	680	78.108
415	34.543	550	414.125	685	67.323
420	64.389	555	426.476	690	57.788
425	115.669	560	437.332	695	49.833
430	188.679	565	449.248	700	42.676
435	273.481	570	458.590	705	36.502
440	377.082	575	464.312	710	31.362
445	481.477	580	466.920	715	26.841
450	469.314	585	465.869	720	23.130
455	327.037	590	460.704	725	19.707
460	211.742	595	449.453	730	16.881
465	147.585	600	433.636	735	14.466
470	99.759	605	414.552	740	12.430
475	71.273	610	391.131	745	10.644
480	61.467	615	365.983	750	9.227
485	62.850	620	339.173	755	7.986
490	75.179	625	311.919	760	6.916
495	100.211	630	281.946	765	5.881
500	137.724	635	253.699	770	5.104
505	181.034	640	227.788	775	4.407
510	227.122	645	202.613	780	0.671



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## CIE Chromaticity Diagram

