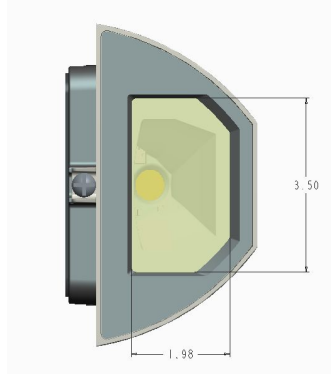


ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINATION

Values based on 10 foot mounting height.



REPORT NUMBER: RAB02344
 ISSUE DATE: 08/16/16 PAGE: 1 OF 9
 DATE SAMPLE TESTED: 08/16/16
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: SLIM26Y/D10, SLIM26Y
 LUMINAIRE: CAST BROWN PAINTED FINNED METAL HOUSING, 1 CIRCUIT BOARD WITH 1 LED, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, CLEAR FLAT GLASS LENS IN CAST BROWN PAINTED METAL LENS FRAME.

LAMP: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED), AIMED 20-DEGREES FROM VERTICAL BASE-UP POSITION.

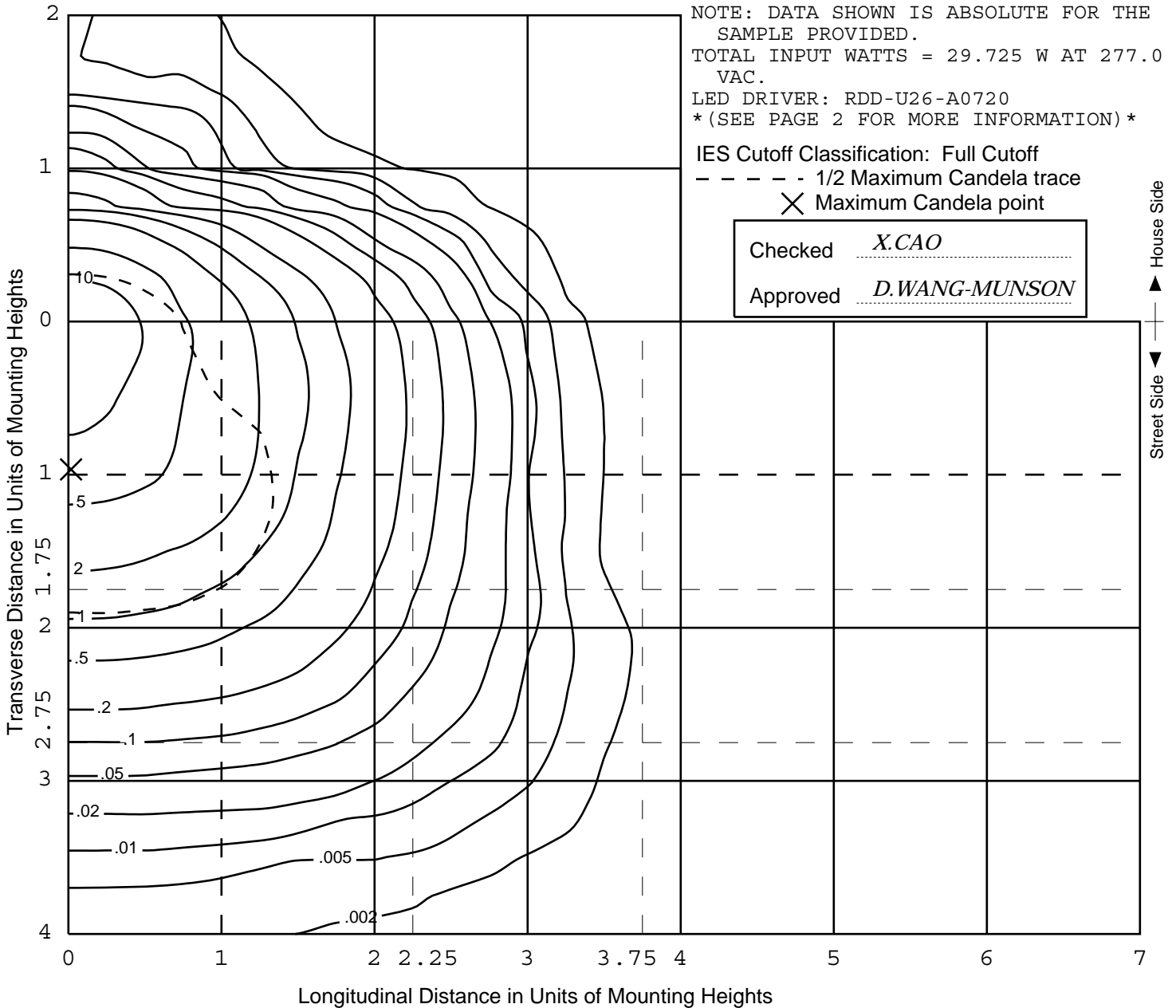
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
 TOTAL INPUT WATTS = 29.725 W AT 277.0 VAC.

LED DRIVER: RDD-U26-A0720
 (SEE PAGE 2 FOR MORE INFORMATION)

IES Cutoff Classification: Full Cutoff

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

Checked	<i>X.CAO</i>
Approved	<i>D.WANG-MUNSON</i>



House Side ▲
 Street Side ▼

REPORT NUMBER: RAB02344
ISSUE DATE: 08/16/16
PREPARED FOR: RAB LIGHTING INC.

PAGE: 2 OF 9
DATE SAMPLE TESTED: 08/16/16

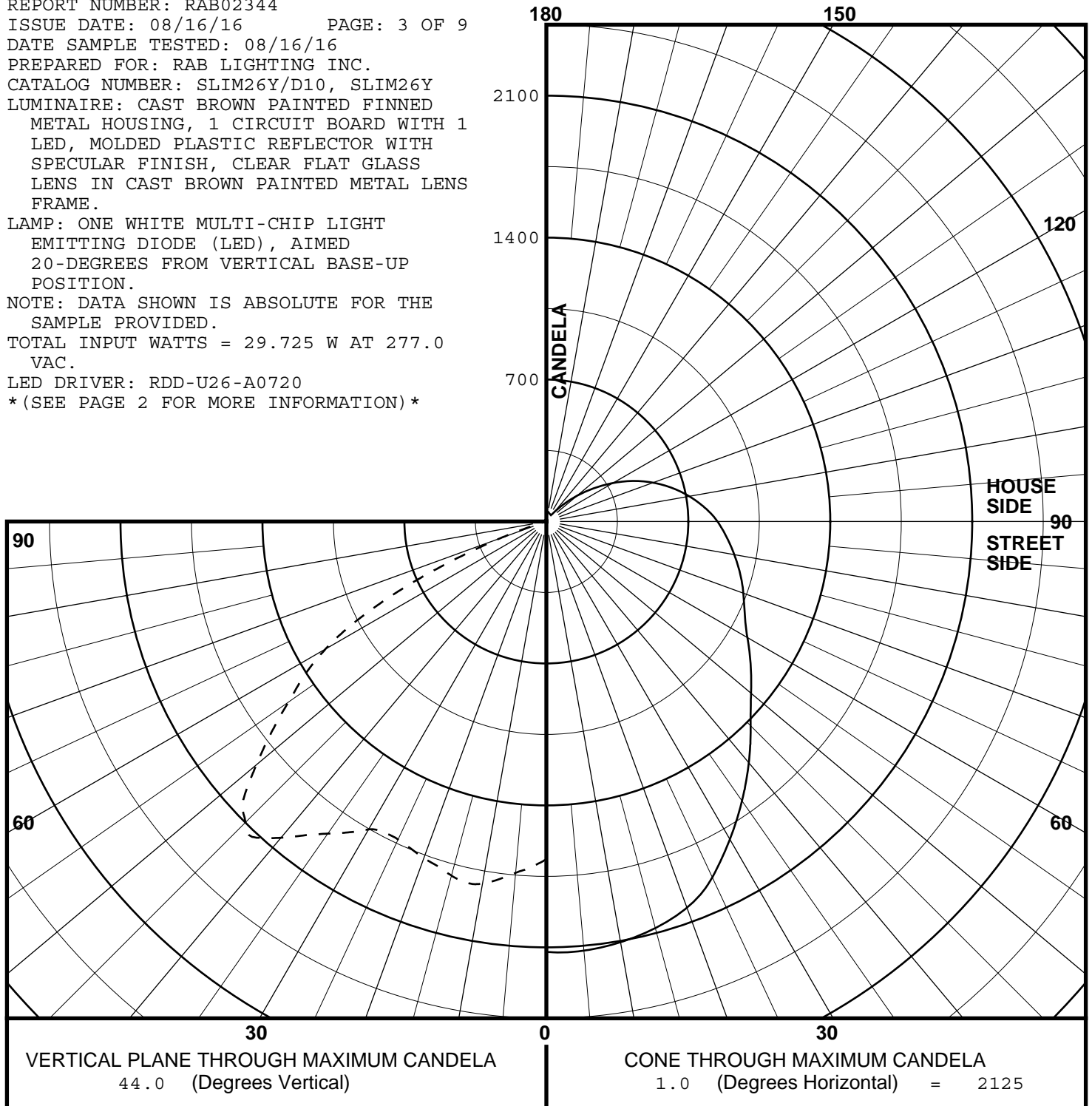
ADDITIONAL INFORMATION

TEST PROCEDURE: IESNA LM-79-08
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

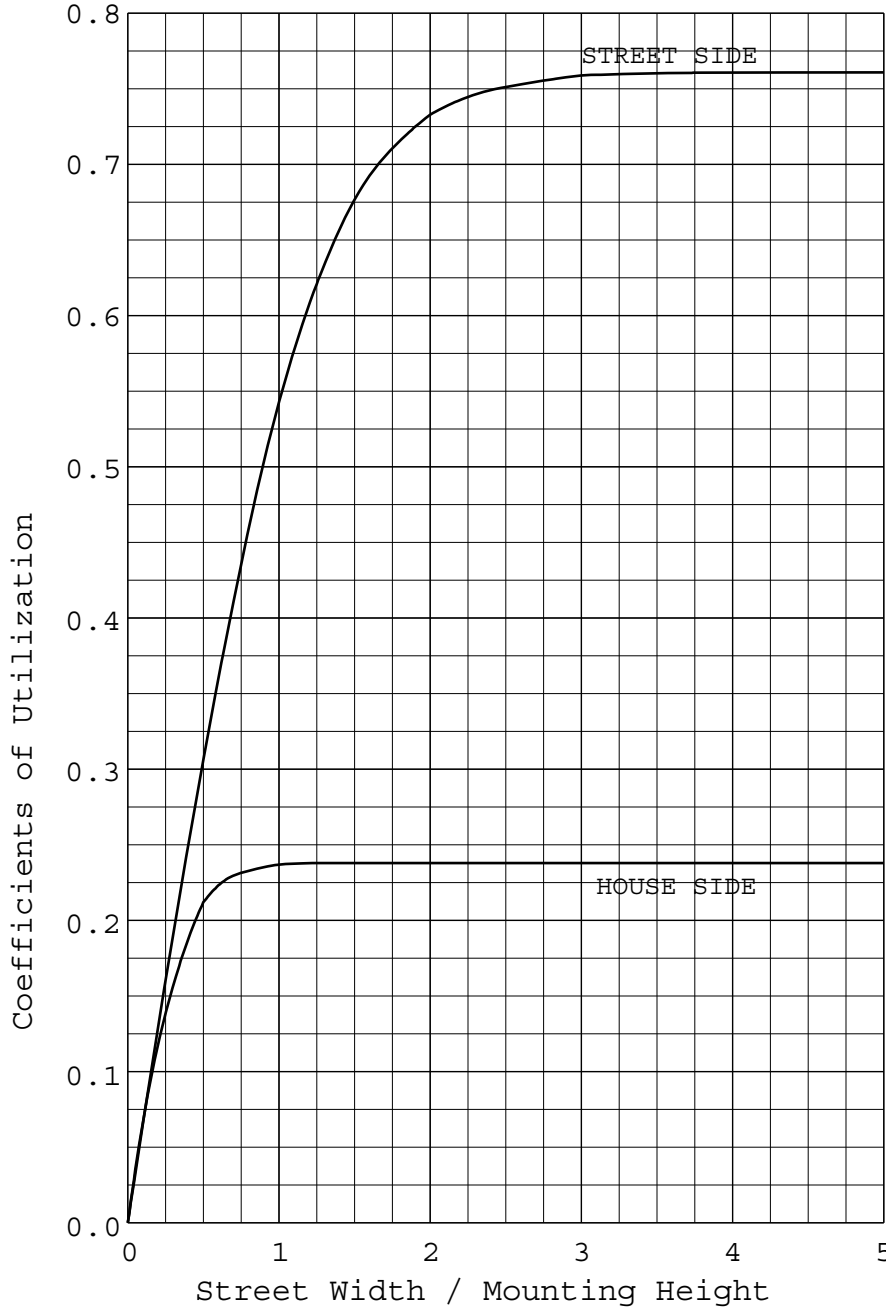
REPORT NUMBER: RAB02344
 ISSUE DATE: 08/16/16 PAGE: 3 OF 9
 DATE SAMPLE TESTED: 08/16/16
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: SLIM26Y/D10, SLIM26Y
 LUMINAIRE: CAST BROWN PAINTED FINNED METAL HOUSING, 1 CIRCUIT BOARD WITH 1 LED, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, CLEAR FLAT GLASS LENS IN CAST BROWN PAINTED METAL LENS FRAME.
 LAMP: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED), AIMED 20-DEGREES FROM VERTICAL BASE-UP POSITION.
 NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
 TOTAL INPUT WATTS = 29.725 W AT 277.0 VAC.
 LED DRIVER: RDD-U26-A0720
 (SEE PAGE 2 FOR MORE INFORMATION)



REPORT NUMBER: RAB02344
 ISSUE DATE: 08/16/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 4 OF 9
 DATE SAMPLE TESTED: 08/16/16

COEFFICIENTS OF UTILIZATION AND FLUX DISTRIBUTION



	LUMENS	PERCENT OF FIXTURE
DOWNWARD STREET SIDE	2627.	76.1
DOWNWARD HOUSE SIDE	825.	23.9
DOWNWARD TOTAL	3452.	100.0
UPWARD STREET SIDE	0.	0.0
UPWARD HOUSE SIDE	0.	0.0
UPWARD TOTAL	0.	0.0
TOTAL FLUX	3452.	100.0
TOTAL INPUT WATTS = 29.7		
EFFICACY = 116.2 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.

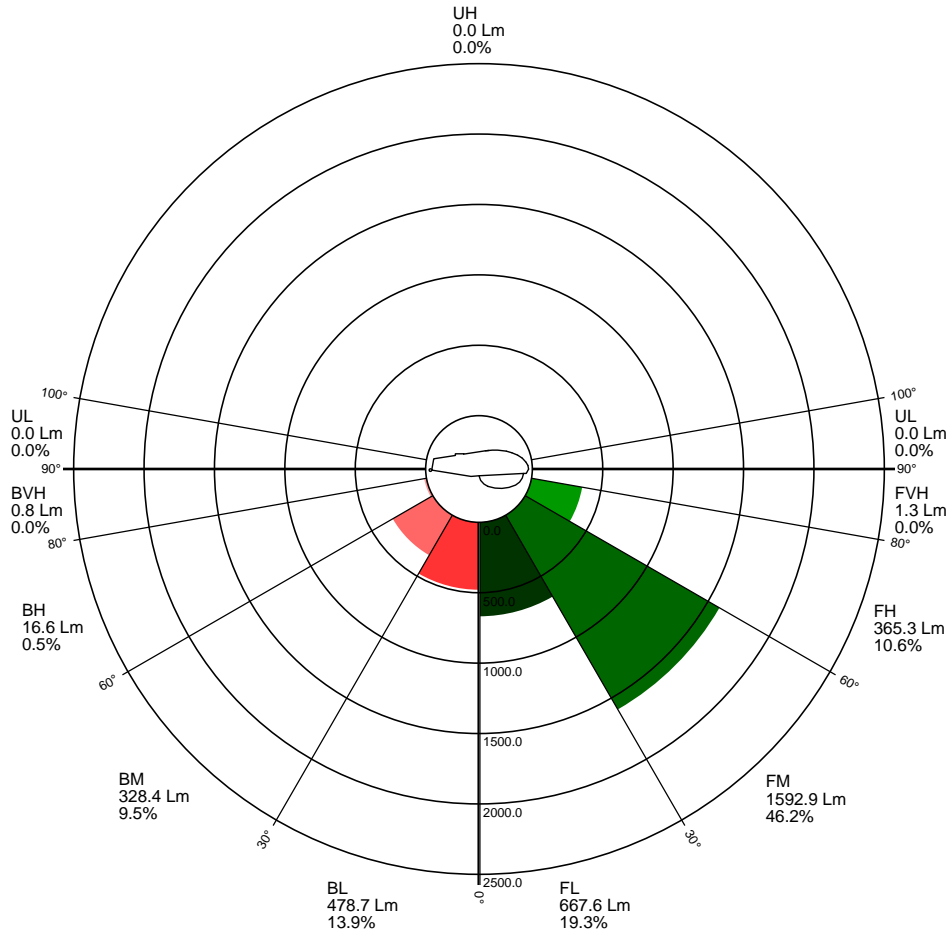
REPORT NUMBER: RAB02344
 ISSUE DATE: 08/16/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 5 OF 9
 DATE SAMPLE TESTED: 08/16/16

BUG Rating:			B1	U0	G0
Zonal Summary		Lumens	Zone Ratings		
			B	U	G
Forward		2627			
FL	(0° - 30°)	667.6			
FM	(30° - 60°)	1592.9			
FH	(60° - 80°)	365.3			G0
FVH	(80° - 90°)	1.3			G0
Backward		825			
BL	(0° - 30°)	478.7	B1		
BM	(30° - 60°)	328.4	B1		
BH	(60° - 80°)	16.6	B0		G0
BVH	(80° - 90°)	0.8			G0
Upward		0			
UL	(90° - 100°)	0.0		U0	
UH	(100° - 180°)	0.0		U0	
Trapped Light		0			
Total Flux		3452			

Zonal Lumen Summary

(Linear scale)

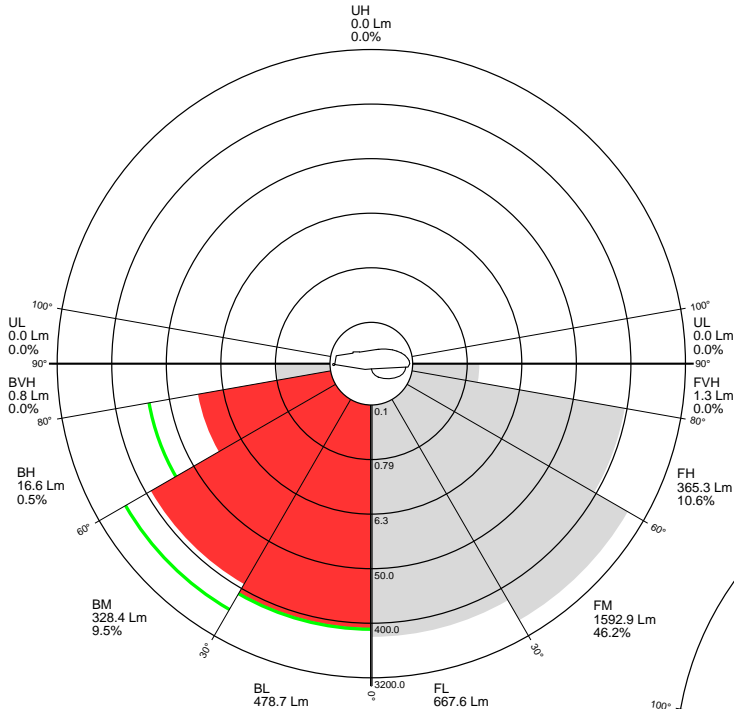


REPORT NUMBER: RAB02344
 ISSUE DATE: 08/16/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 6 OF 9
 DATE SAMPLE TESTED: 08/16/16

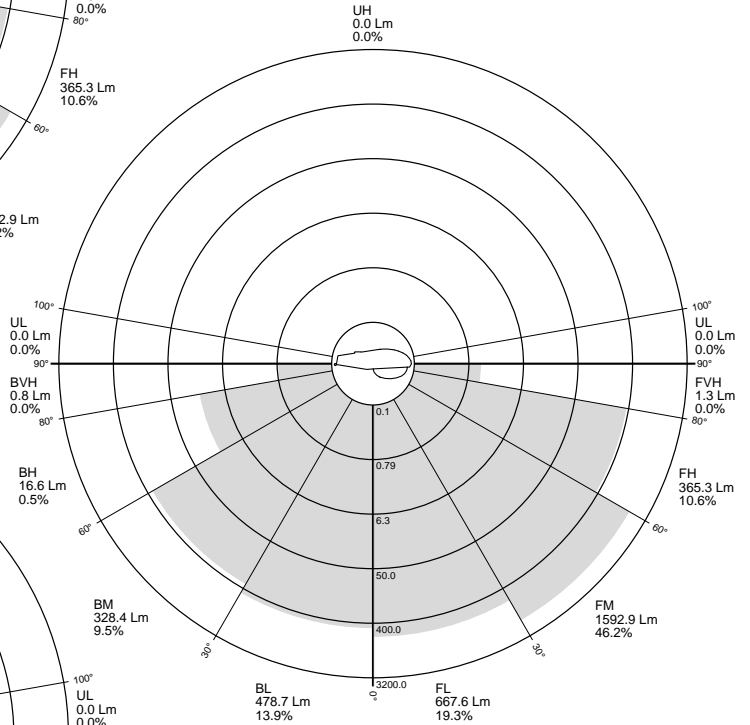
Backlight Rating Details

(Logarithmic scale)



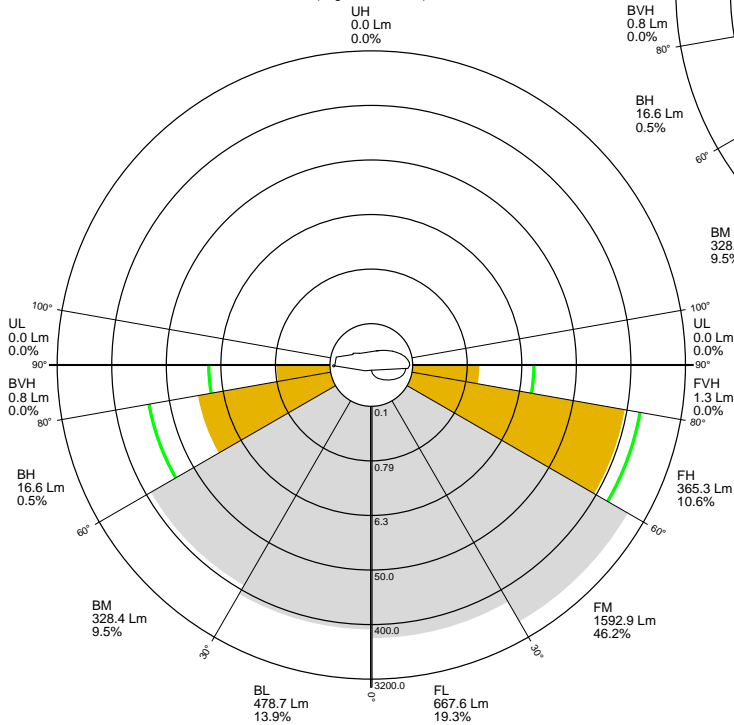
Uplight Rating Details

(Logarithmic scale)



Glare Rating Details

(Logarithmic scale)



REPORT NUMBER: RAB02344
 ISSUE DATE: 08/16/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 7 OF 9
 DATE SAMPLE TESTED: 08/16/16

CANDELA TABULATION

	LATERAL ANGLE											
	STREET SIDE	0.0	1.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	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	0.	0.	0.	1.	1.	1.	2.	2.	2.	2.	2.
	85.0	1.	1.	1.	2.	2.	2.	2.	2.	2.	2.	2.
	82.5	3.	4.	3.	3.	4.	4.	3.	3.	3.	3.	3.
V	80.0	9.	8.	8.	6.	6.	7.	6.	4.	4.	4.	3.
E	77.5	15.	15.	15.	12.	11.	17.	25.	14.	5.	4.	4.
R	75.0	24.	24.	24.	25.	36.	74.	88.	49.	12.	7.	5.
T	72.5	71.	70.	74.	94.	161.	256.	226.	136.	53.	26.	14.
I	70.0	246.	244.	255.	306.	399.	500.	437.	297.	172.	112.	67.
C	67.5	491.	490.	503.	565.	664.	733.	643.	475.	328.	243.	170.
A	65.0	782.	780.	801.	849.	927.	935.	801.	617.	464.	374.	285.
L	62.5	1046.	1046.	1063.	1110.	1151.	1142.	992.	740.	574.	470.	371.
	60.0	1258.	1257.	1263.	1289.	1322.	1346.	1205.	910.	718.	586.	461.
A	57.5	1419.	1417.	1420.	1435.	1481.	1546.	1419.	1084.	874.	710.	563.
N	55.0	1568.	1553.	1565.	1590.	1635.	1636.	1503.	1188.	976.	806.	658.
G	52.5	1699.	1709.	1707.	1740.	1753.	1732.	1466.	1192.	987.	841.	719.
L	50.0	1863.	1867.	1860.	1858.	1890.	1785.	1450.	1192.	1000.	876.	754.
E	47.5	2016.	2026.	2022.	1988.	1976.	1770.	1443.	1208.	1037.	917.	807.
	45.0	2092.	2098.	2095.	2074.	1962.	1710.	1430.	1227.	1069.	970.	869.
	44.0<<	2122.	2125.	2124.	2075.	1936.	1682.	1425.	1230.	1079.	989.	893.
	42.5	2118.	2115.	2116.	2032.	1895.	1646.	1414.	1237.	1100.	1019.	932.
	40.0	2038.	2036.	2043.	1967.	1807.	1611.	1411.	1252.	1139.	1074.	991.
	37.5	1954.	1950.	1951.	1870.	1742.	1582.	1421.	1279.	1191.	1132.	1058.
	35.0	1881.	1879.	1875.	1818.	1705.	1574.	1439.	1316.	1246.	1193.	1125.
	30.0	1755.	1753.	1748.	1719.	1652.	1568.	1471.	1402.	1353.	1301.	1257.
	25.0	1730.	1730.	1721.	1675.	1622.	1569.	1519.	1477.	1437.	1393.	1363.
	20.0	1767.	1767.	1758.	1699.	1642.	1610.	1583.	1553.	1506.	1471.	1447.
	15.0	1807.	1808.	1804.	1775.	1726.	1678.	1631.	1595.	1559.	1541.	1512.
	10.0	1814.	1813.	1811.	1784.	1755.	1721.	1687.	1649.	1617.	1598.	1581.
	5.0	1740.	1739.	1737.	1730.	1723.	1718.	1708.	1699.	1686.	1672.	1654.
	0.0	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.

PLANE OF MAXIMUM CANDELA

CONE OF MAXIMUM CANDELA

REPORT NUMBER: RAB02344
 ISSUE DATE: 08/16/16
 PREPARED FOR: RAB LIGHTING INC.

PAGE: 8 OF 9
 DATE SAMPLE TESTED: 08/16/16

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	2.	2.	2.	2.	2.	2.	1.	1.	1.	0.	0.
85.0	2.	2.	2.	2.	2.	2.	1.	1.	1.	1.	1.
82.5	3.	3.	2.	2.	2.	2.	1.	1.	1.	1.	0.
V 80.0	3.	3.	3.	2.	2.	2.	2.	1.	1.	1.	1.
E 77.5	4.	4.	3.	3.	2.	2.	2.	2.	2.	2.	2.
R 75.0	5.	4.	3.	3.	2.	2.	2.	2.	3.	4.	3.
T 72.5	11.	7.	4.	3.	2.	2.	2.	3.	5.	5.	5.
I 70.0	51.	22.	6.	3.	2.	2.	2.	3.	5.	6.	6.
C 67.5	139.	90.	9.	3.	2.	2.	2.	3.	5.	5.	5.
A 65.0	241.	183.	33.	4.	2.	2.	2.	3.	4.	6.	6.
L 62.5	327.	264.	90.	6.	3.	3.	3.	3.	3.	6.	6.
60.0	413.	349.	161.	15.	3.	4.	5.	4.	3.	4.	4.
A 57.5	506.	437.	238.	55.	5.	5.	7.	6.	3.	3.	4.
N 55.0	594.	512.	314.	117.	10.	6.	9.	8.	5.	4.	5.
G 52.5	656.	571.	391.	193.	36.	8.	10.	10.	11.	11.	11.
L 50.0	697.	629.	466.	275.	89.	14.	11.	14.	19.	24.	24.
E 47.5	753.	692.	540.	362.	162.	33.	15.	20.	28.	34.	35.
45.0	818.	757.	611.	438.	248.	86.	28.	32.	38.	47.	47.
44.0<<	844.	784.	641.	473.	285.	119.	38.	38.	44.	53.	53.
42.5	884.	825.	689.	525.	347.	173.	65.	50.	53.	62.	62.
40.0	952.	900.	771.	617.	452.	280.	143.	87.	76.	84.	83.
37.5	1024.	979.	852.	715.	564.	401.	251.	165.	124.	119.	116.
35.0	1099.	1057.	941.	810.	674.	523.	375.	279.	216.	195.	188.
30.0	1242.	1204.	1101.	992.	873.	771.	645.	548.	465.	441.	431.
25.0	1350.	1323.	1238.	1145.	1045.	962.	879.	825.	759.	738.	727.
20.0	1432.	1410.	1345.	1282.	1198.	1135.	1067.	1030.	989.	973.	965.
15.0	1496.	1478.	1428.	1374.	1324.	1274.	1228.	1204.	1177.	1168.	1160.
10.0	1567.	1550.	1513.	1475.	1438.	1409.	1379.	1359.	1342.	1338.	1330.
5.0	1646.	1635.	1610.	1587.	1562.	1547.	1528.	1521.	1509.	1511.	1506.
0.0	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.	1666.

CONE OF MAXIMUM CANDELA

REPORT NUMBER: RAB02344
ISSUE DATE: 08/16/16
PREPARED FOR: RAB LIGHTING INC.

PAGE: 9 OF 9
DATE SAMPLE TESTED: 08/16/16

5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	39
5- 10	114
10- 15	180
15- 20	234
20- 25	276
25- 30	303
30- 35	318
35- 40	324
40- 45	333
45- 50	337
50- 55	323
55- 60	287
60- 65	215
65- 70	125
70- 75	37
75- 80	5
80- 85	1
85- 90	1
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	153
0- 20	567
0- 30	1146
0- 40	1788
0- 50	2457
0- 60	3068
0- 70	3408
0- 80	3450
0- 90	3452
0-100	3452
0-110	3452
0-120	3452
0-130	3452
0-140	3452
0-150	3452
0-160	3452
0-170	3452
0-180	3452

REPORT NUMBER: RAB02345
DATE: 8/16/2016
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: SLIM26Y/D10, SLIM26Y

ADDRESS: 170 LUDLOW AVE, NORTHVALE, NJ 07647

LUMINAIRE: CAST BROWN PAINTED FINNED METAL HOUSING, 1 CIRCUIT BOARD WITH 1 LED, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH, CLEAR FLAT GLASS LENS IN CAST BROWN PAINTED METAL LENS FRAME.

LAMP: ONE WHITE MULTI-CHIP LIGHT EMITTING DIODE (LED), AIMED 20-DEGREES FROM VERTICAL BASE-UP POSITION.

DRIVER: RDD-U26-A0720

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

INSTRUMENTS: GWINSTEK PROGRAMMABLE AC POWER SOURCE APS-7100 N/A
CHROMA PROGRAMMABLE DIGITAL POWER METER MODEL 66202 2/26/17
OCEAN OPTICS QE65PRO Spectroradiometer 8/11/17
RAB 2.0 meter Diameter Integrating Sphere, 4PI Geometry 8/11/17

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 (120.0 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: RAB02345
 DATE: 8/16/2016
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: SLIM26Y/D10, SLIM26Y

RESULTS:

PHOTOMETRIC	
Total Integrated Flux (lumens)	3452 *
SPECTRORADIOMETRIC	
Observer	CIE 1931 2 degree
Chromaticity Ordinate x	0.4311
Chromaticity Ordinate y	0.4039
Observer	CIE 1976 2 degree
Chromaticity Ordinate u'	0.2469
Chromaticity Ordinate v'	0.5204
Correlated Color Temp CCT (K)	3099
ANSI C78.377-2008 Duv	0.001
Total Radiant Flux (milliWatts)	9739 *
ELECTRICAL	
Input Voltage (Volts AC)	277.0
Input Current (Amps AC)	0.118
Input Power (Watts)	29.7
Input Power Factor (%)	90.8
Input Current THD (%)	16.5
Input Voltage THD (%)	0.2
EFFICACY (Lumens/Watt)	
116.2	
ELECTRICAL AT MAX NONIMAL INPUT	
Input Voltage (Volts AC)	120.0
Input Current (Amps AC)	0.248
Input Power (Watts)	29.5
Input Power Factor (%)	99.2
Input Current THD (%)	7.2
Input Voltage THD (%)	0.2
Off-State Power (Watts)	
0.0	

COLOR RENDERING INDICES	CRI
Ra (Average 1-8)	70
R1 Light greyish red	67
R2 Dark greyish yellow	80
R3 Strong yellowish green	91
R4 Moderate yellowish green	67
R5 Light bluish green	66
R6 Light blue	72
R7 Light violet	78
R8 Light reddish purple	44
R9 Strong red	-34
R10 Strong yellow	53
R11 Strong green	60
R12 Strong blue	42
R13 Light yellowish pink (skin)	69
R14 Moderate olive green (leaf)	95

*NOTE:

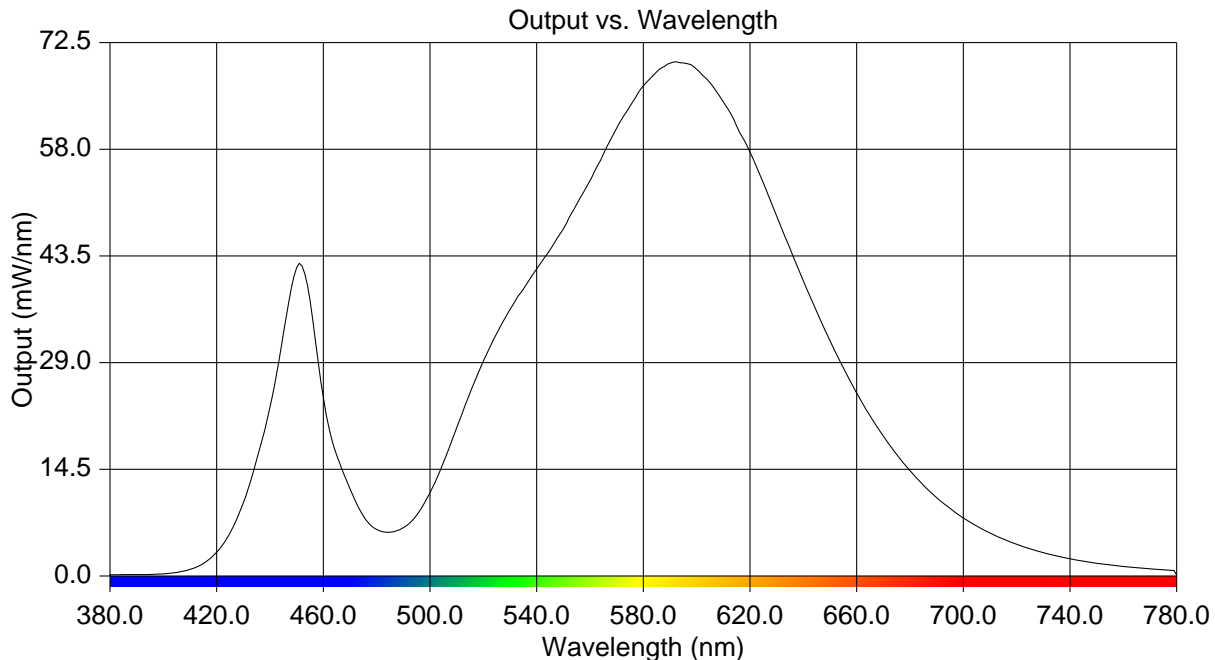
Proper calibration of integrating spheres for measuring total flux output of non-directional samples will produce reliable, repeatable results within the calibration tolerances of the equipment used. However, measurement of test samples with significant self absorption and/or directional output, even 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: RAB02345
 DATE: 8/16/2016
 PREPARED FOR: RAB LIGHTING INC.
 CATALOG NUMBER: SLIM26Y/D10, SLIM26Y

Page 3 of 4

RESULTS:

Wavelength	mW per nm	Wavelength	mW per nm	Wavelength	mW per nm
380	0.158	515	24.833	650	31.977
385	0.175	520	29.240	655	28.306
390	0.184	525	32.939	660	24.896
395	0.217	530	36.222	665	21.773
400	0.294	535	38.989	670	19.034
405	0.472	540	41.753	675	16.538
410	0.884	545	44.320	680	14.326
415	1.687	550	47.152	685	12.376
420	3.226	555	50.530	690	10.633
425	5.837	560	53.758	695	9.204
430	9.902	565	57.298	700	7.897
435	15.804	570	60.863	705	6.794
440	22.968	575	63.863	710	5.841
445	32.860	580	66.646	715	5.017
450	41.924	585	68.528	720	4.309
455	37.526	590	69.711	725	3.689
460	24.201	595	69.751	730	3.173
465	16.435	600	68.891	735	2.717
470	11.858	605	67.088	740	2.328
475	8.172	610	64.444	745	2.011
480	6.314	615	61.156	750	1.746
485	5.973	620	57.571	755	1.502
490	6.542	625	53.417	760	1.297
495	8.267	630	48.895	765	1.121
500	11.315	635	44.539	770	0.974
505	15.383	640	40.098	775	0.842
510	20.085	645	35.926	780	0.127



REPORT NUMBER: RAB02345
DATE: 8/16/2016
PREPARED FOR: RAB LIGHTING INC.
CATALOG NUMBER: SLIM26Y/D10, SLIM26Y

Page 4 of 4

CIE Chromaticity Diagram

