

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P198331

Luminaire Tested: **TT-C2-LED-E1-RW-CG-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198331
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C2-LED-E1-RW-CG-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
RECTANGULAR DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: (168) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4548.5 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U4 - G2

Input Watts (W): 51.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



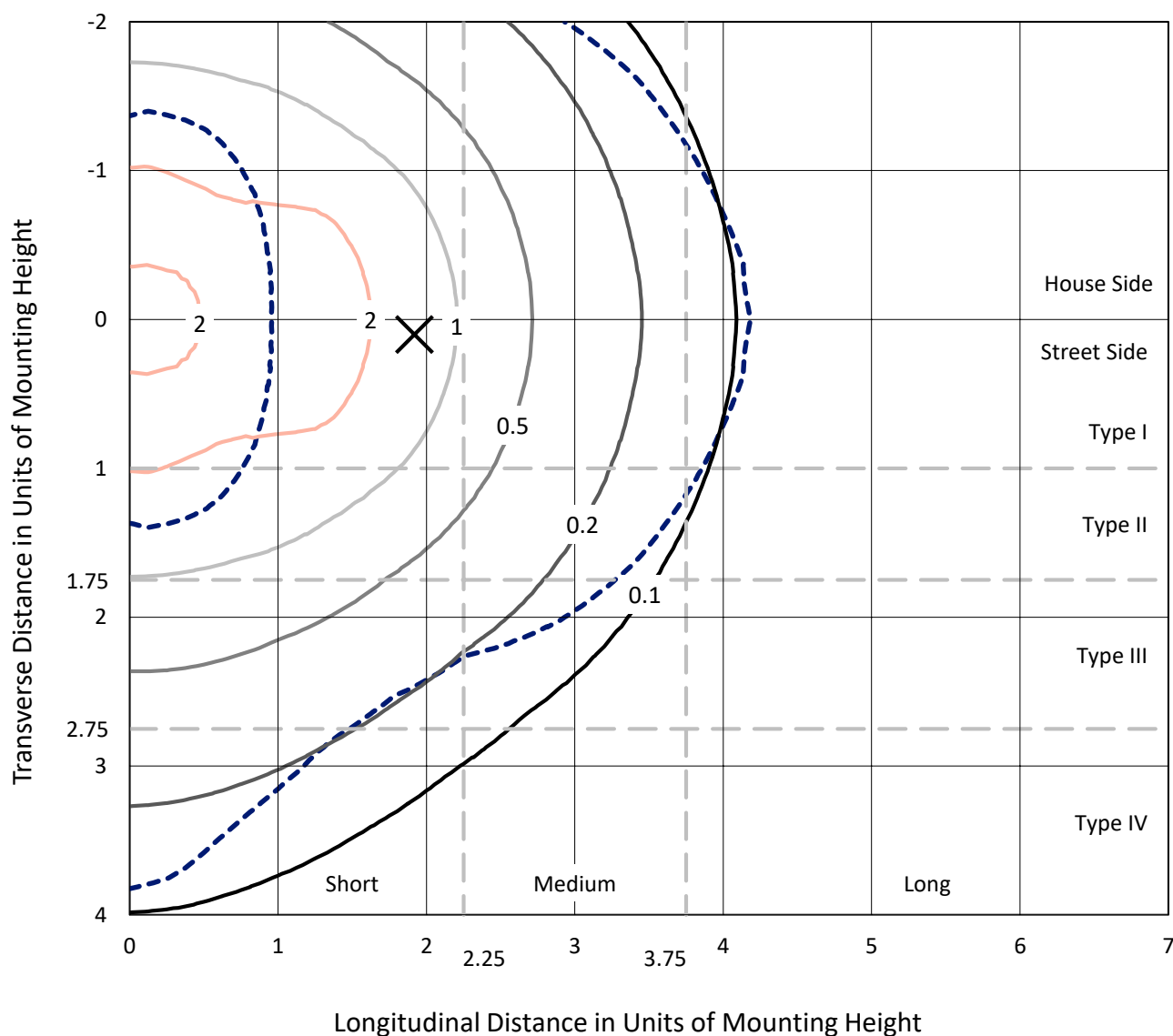
REPORT NUMBER: P198331

CATALOG NUMBER: TT-C2-LED-E1-RW-CG-UPL

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

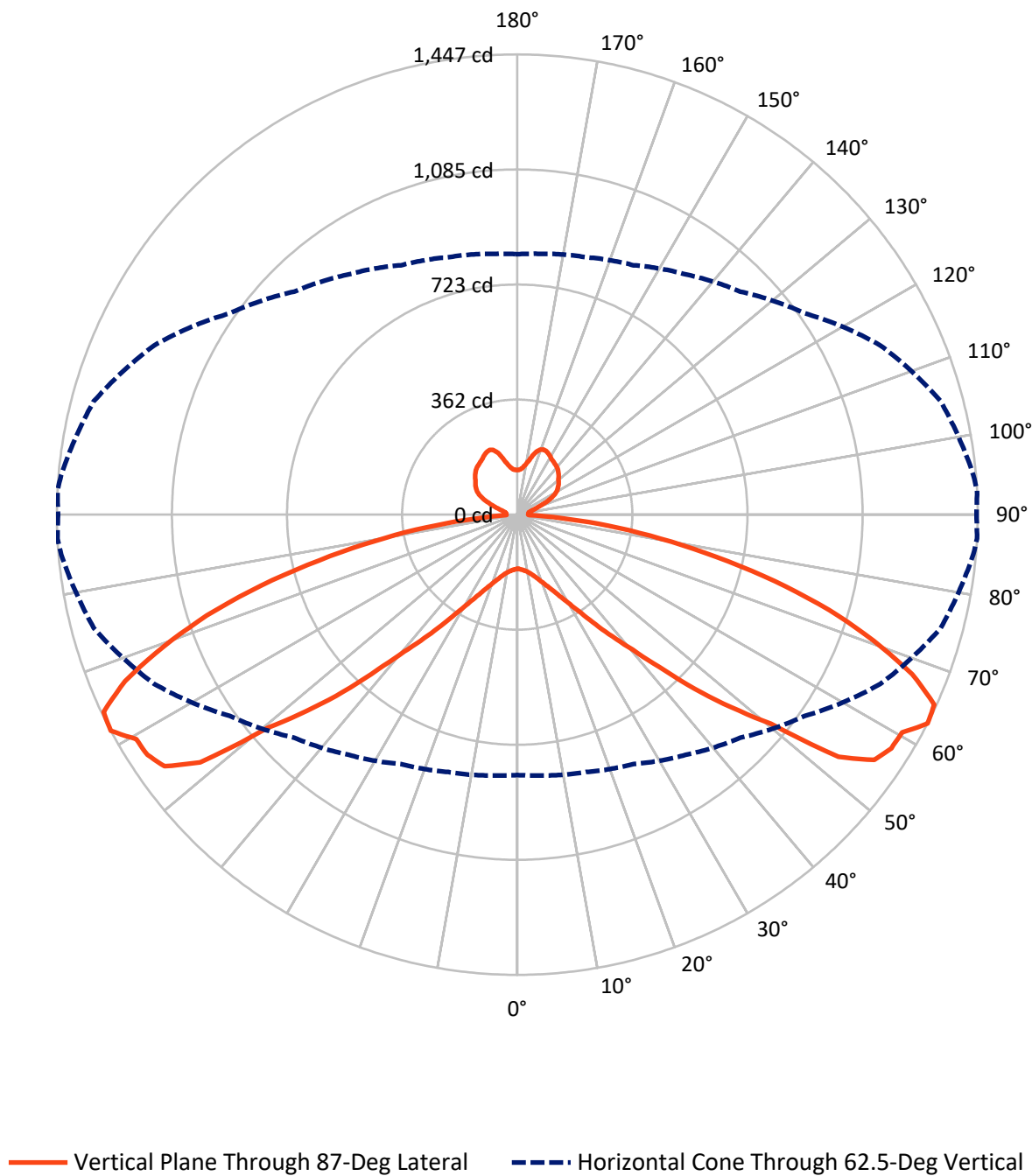


Based on 10 foot mounting height. Maximum calculated value = 2.8 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P198331

CATALOG NUMBER: TT-C2-LED-E1-RW-CG-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198331

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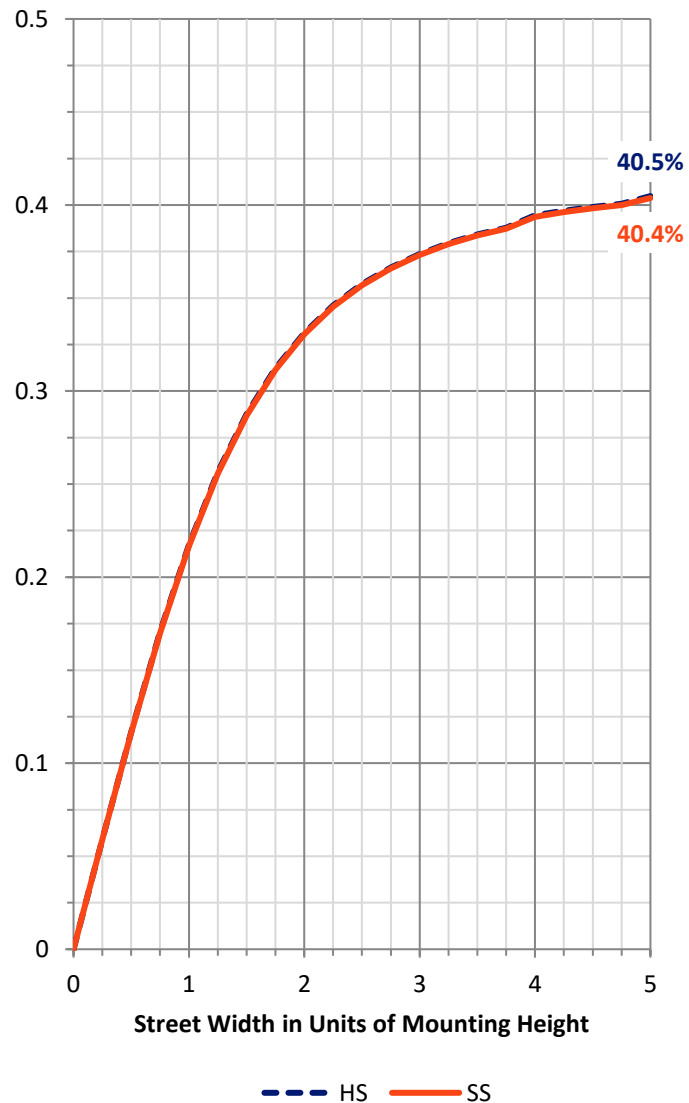
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1861.6	412.7	2274.3
	% Fixture	40.9	9.1	50.0
Street Side	Lumens	1861.6	412.7	2274.3
	% Fixture	40.9	9.1	50.0
Total	Lumens	3723.2	825.3	4548.5
	% Fixture	81.9	18.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.0	0.4
10°-20°	58.7	1.3
20°-30°	129.6	2.8
30°-40°	261.0	5.7
40°-50°	497.9	10.9
50°-60°	852.5	18.7
60°-70°	1032.8	22.7
70°-80°	715.5	15.7
80°-90°	158.2	3.5
90°-100°	38.4	0.8
100°-110°	59.5	1.3
110°-120°	119.6	2.6
120°-130°	148.9	3.3
130°-140°	153.3	3.4
140°-150°	136.3	3.0
150°-160°	103.9	2.3
160°-170°	51.8	1.1
170°-180°	13.6	0.3
0°-90°	3723.2	81.9
0°-180°	4548.5	100.0

Coefficient of Utilization



REPORT NUMBER: P198331

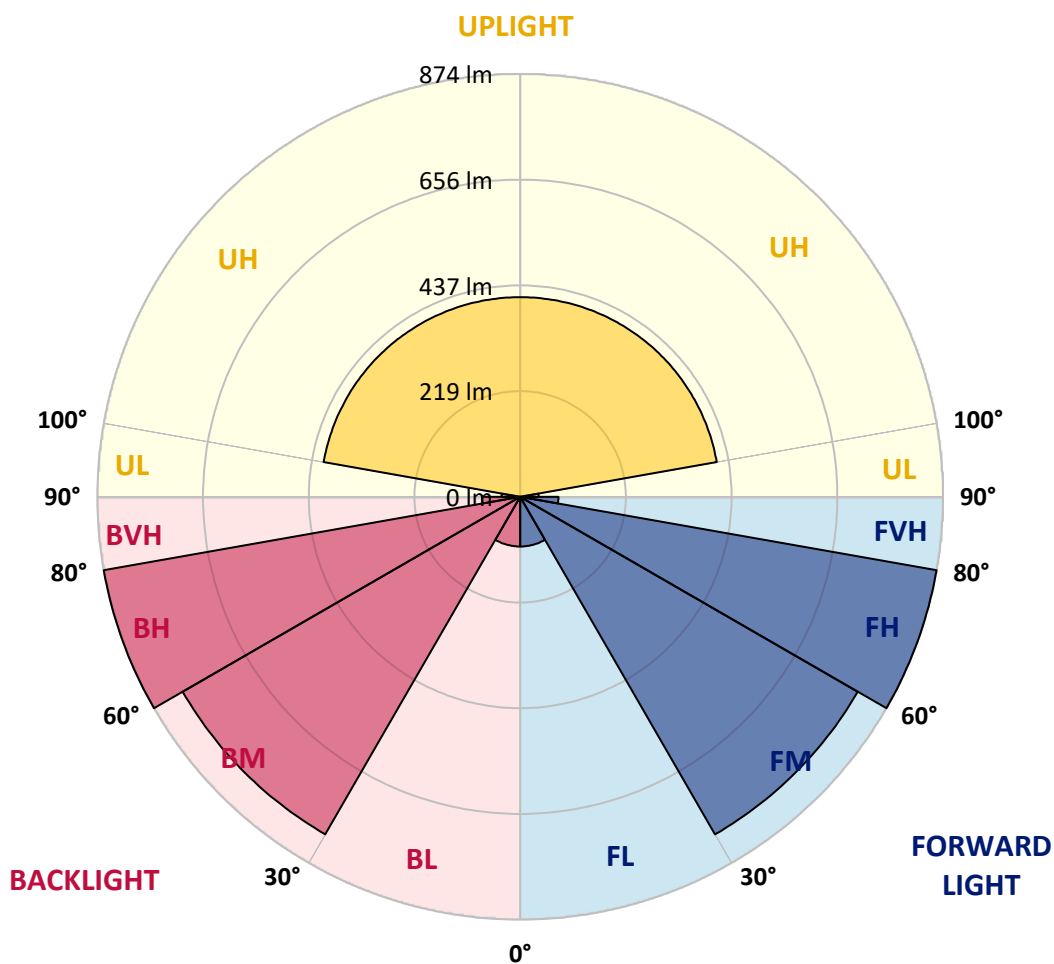
CATALOG NUMBER: TT-C2-LED-E1-RW-CG-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	102.7	2.3			
FM	(30°-60°)	805.7	17.7			
FH	(60°-80°)	874.1	19.2			G1/1800
FVH	(80°-90°)	79.1	1.7			G1/100
BL	(0°-30°)	102.7	2.3	B0/110		
BM	(30°-60°)	805.7	17.7	B1/1000		
BH	(60°-80°)	874.1	19.2	B2/1000		G2/1000
BVH	(80°-90°)	79.1	1.7			G1/100
UL	(90°-100°)	38.4	0.8		U2/50	
UH	(100°-180°)	412.7	9.1		U3/500	

BUG Rating: B2-U4-G2

Type IV Short



REPORT NUMBER: P198331

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	87°
0°	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6	169.6
2.5°	171.1	171.1	171.9	171.9	171.9	171.9	171.9	171.9	171.9	171.9	171.9
5°	174.2	174.2	174.2	174.9	174.9	174.9	174.9	174.9	174.2	174.2	174.2
7.5°	178.7	178.7	178.7	179.5	179.5	179.5	178.7	178.7	178.0	178.0	178.0
10°	184.8	184.8	185.6	185.6	184.8	184.8	184.0	183.3	184.0	183.3	183.3
12.5°	193.2	194.7	193.9	193.9	192.4	192.4	191.7	191.7	191.7	190.9	190.9
15°	205.3	205.3	206.1	204.6	204.6	202.3	201.5	200.8	201.5	201.5	200.8
17.5°	219.8	219.8	219.8	217.5	216.0	214.5	213.7	212.9	212.2	212.9	212.9
20°	241.9	240.3	237.3	235.8	232.0	230.4	228.9	228.2	227.4	227.4	227.4
22.5°	264.7	263.1	259.3	256.3	253.3	249.5	247.9	244.9	244.1	245.7	244.9
25°	286.7	289.0	284.4	280.6	278.4	272.3	268.5	267.7	266.2	265.4	266.2
27.5°	314.1	315.6	311.8	306.5	301.9	297.4	293.6	292.0	292.8	292.8	293.6
30°	344.5	347.6	341.5	338.4	331.6	325.5	322.5	324.0	325.5	327.8	327.0
32.5°	379.5	379.5	376.5	371.1	363.5	358.2	356.7	359.0	365.8	368.9	368.1
35°	420.6	417.5	414.5	407.6	397.8	394.7	397.8	405.4	415.3	420.6	423.6
37.5°	463.2	457.1	452.5	444.9	440.4	438.8	445.7	460.1	470.8	480.7	485.2
40°	499.7	499.7	493.6	485.2	480.7	487.5	498.2	518.7	539.2	549.9	557.5
42.5°	536.2	540.7	533.9	527.1	527.1	536.2	556.7	588.7	627.4	650.3	654.1
45°	574.2	582.6	573.4	568.9	573.4	591.7	630.5	692.1	749.9	787.2	781.1
47.5°	613.8	621.4	613.0	610.7	621.4	654.1	713.4	792.5	850.3	889.1	904.3
50°	662.4	657.1	654.1	653.3	675.4	724.0	800.8	886.0	978.8	1013.8	1032.8
52.5°	703.5	694.4	692.8	698.2	734.7	793.2	889.1	1045.7	1174.3	1261.0	1264.0
55°	739.2	729.4	734.7	747.6	797.0	878.4	999.3	1182.6	1291.4	1356.0	1361.4
57.5°	769.7	764.3	773.5	791.0	854.8	952.2	1087.6	1238.9	1328.7	1380.4	1385.7
60°	797.0	796.3	806.2	835.8	907.3	995.5	1107.3	1242.7	1336.3	1382.7	1389.5
62.5°	818.3	822.9	837.3	864.7	921.8	991.0	1102.8	1258.7	1377.3	1438.2	1446.5
65°	836.6	841.2	855.6	864.7	915.7	981.9	1127.9	1269.3	1371.2	1434.4	1439.7
67.5°	846.5	851.8	849.5	851.0	890.6	942.3	1068.6	1190.2	1273.9	1331.7	1338.5
70°	845.0	840.4	822.1	803.1	811.5	848.0	962.1	1064.0	1140.0	1185.7	1188.0
72.5°	813.0	805.4	762.1	717.9	705.0	729.4	829.0	905.8	970.4	1012.3	1025.2
75°	740.8	725.6	662.4	605.4	576.5	594.7	671.6	738.5	786.4	827.5	835.8
77.5°	609.2	600.1	536.9	474.6	442.6	454.8	515.6	555.2	606.9	649.5	638.8
80°	443.4	441.9	390.9	335.4	312.6	317.9	350.6	389.4	422.1	454.0	455.6
82.5°	289.8	285.2	251.0	210.7	187.1	190.1	210.7	231.2	262.4	282.9	289.0
85°	143.7	141.5	126.2	101.2	88.2	88.2	98.1	110.3	125.5	134.6	133.9
87.5°	39.5	35.7	35.0	25.9	21.3	22.8	22.8	25.1	31.9	34.2	36.5
90°	36.0	36.0	36.0	34.0	29.0	26.0	28.0	32.0	34.0	34.0	34.0
92.5°	40.0	39.0	38.0	34.0	29.0	27.0	28.0	32.0	35.0	36.0	36.0
95°	44.0	43.0	41.0	36.0	32.0	30.0	30.0	34.0	37.0	39.0	38.6
97.5°	42.0	42.0	40.0	37.0	35.0	33.0	33.0	34.0	36.0	36.0	36.0
100°	45.0	45.0	44.0	40.0	38.0	36.0	36.0	38.0	38.0	37.0	37.0
102.5°	51.0	51.0	49.0	46.0	44.0	42.0	43.0	44.0	42.0	41.0	41.0
105°	60.0	60.0	57.0	54.0	53.0	52.0	54.0	53.0	49.0	48.0	48.4
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	66.0	60.0	59.0	59.4
110°	86.0	86.0	89.0	85.0	86.0	87.0	84.0	84.0	78.0	74.0	74.4

REPORT NUMBER: P198331

CATALOG NUMBER: TT-C2-LED-E1-RW-CG-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	87°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	102.0	105.0	100.0	95.0	94.6
115°	121.0	122.0	128.0	128.0	129.0	124.0	121.0	125.0	123.0	116.0	114.8
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	138.0	141.0	139.0	133.0	131.4
120°	152.0	153.0	155.0	149.0	149.0	147.0	150.0	153.0	148.0	145.0	143.8
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	159.0	162.0	155.0	153.0	151.8
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.0	168.0	163.0	160.0	159.2
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	176.0	175.0	173.0	166.0	164.8
130°	187.0	188.0	191.0	179.0	186.0	186.0	183.0	183.0	184.0	171.0	170.2
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	190.0	192.0	192.0	179.0	177.8
135°	210.0	210.0	209.0	192.0	199.0	201.0	196.0	201.0	199.0	185.0	184.6
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	203.0	210.0	204.0	191.0	190.6
140°	229.0	226.0	216.0	200.0	207.0	213.0	212.0	217.0	209.0	195.0	195.0
142.5°	235.0	231.0	218.0	201.0	208.0	218.0	220.0	223.0	211.0	198.0	198.0
145°	235.0	230.0	218.0	202.0	211.0	223.0	230.0	227.0	211.0	201.0	201.4
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	239.0	229.0	212.0	204.0	204.8
150°	224.0	221.0	220.0	214.0	222.0	235.0	242.0	232.0	214.0	210.0	210.4
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	242.0	235.0	219.0	215.0	215.4
155°	208.0	207.0	219.0	224.0	237.0	243.0	238.0	234.0	224.0	220.0	219.6
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	228.0	229.0	226.0	222.0	220.8
160°	199.0	198.0	210.0	213.0	219.0	219.0	215.0	219.0	221.0	218.0	216.8
162.5°	185.0	184.0	193.0	193.0	198.0	198.0	196.0	200.0	204.0	207.0	207.0
165°	169.0	167.0	173.0	173.0	176.0	177.0	176.0	181.0	185.0	190.0	190.8
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	160.0	165.0	168.0	172.0	172.8
170°	142.0	141.0	145.0	144.0	147.0	147.0	148.0	152.0	155.0	159.0	159.4
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	141.0	145.0	146.0	149.0	149.8
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.0	141.0	141.0	143.0	143.4
177.5°	137.0	136.0	139.0	138.0	140.0	139.0	138.0	140.0	140.0	141.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

REPORT NUMBER: P198331

CATALOG NUMBER: TT-C2-LED-E1-RW-CG-UPL

CANDELA DISTRIBUTION (continued):

	90°
0°	169.6
2.5°	171.9
5°	174.2
7.5°	178.0
10°	184.0
12.5°	190.9
15°	200.8
17.5°	212.2
20°	227.4
22.5°	246.4
25°	266.2
27.5°	292.8
30°	327.8
32.5°	368.9
35°	422.1
37.5°	481.4
40°	554.4
42.5°	650.3
45°	787.9
47.5°	896.7
50°	1022.9
52.5°	1268.6
55°	1362.9
57.5°	1387.2
60°	1390.3
62.5°	1442.7
65°	1445.8
67.5°	1333.2
70°	1191.8
72.5°	1023.7
75°	841.9
77.5°	650.3
80°	454.8
82.5°	284.4
85°	133.1
87.5°	33.5
90°	34.0
92.5°	36.0
95°	38.0
97.5°	36.0
100°	37.0
102.5°	41.0
105°	49.0
107.5°	60.0
110°	75.0

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CANDELA DISTRIBUTION (continued):

	90°
112.5°	94.0
115°	113.0
117.5°	129.0
120°	142.0
122.5°	150.0
125°	158.0
127.5°	163.0
130°	169.0
132.5°	176.0
135°	184.0
137.5°	190.0
140°	195.0
142.5°	198.0
145°	202.0
147.5°	206.0
150°	211.0
152.5°	216.0
155°	219.0
157.5°	219.0
160°	215.0
162.5°	207.0
165°	192.0
167.5°	174.0
170°	160.0
172.5°	151.0
175°	144.0
177.5°	141.0
180°	140.0

(END OF REPORT)