

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: P198451

Luminaire Tested: **TT-C4-LED-E1-RW-CG-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198451
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-C4-LED-E1-RW-CG-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
RECTANGULAR DISTRIBUTION WITH CLEAR GLASS LENS
Light Source: (160) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6621.1 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U4 - G3

Input Watts (W): 75.4
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



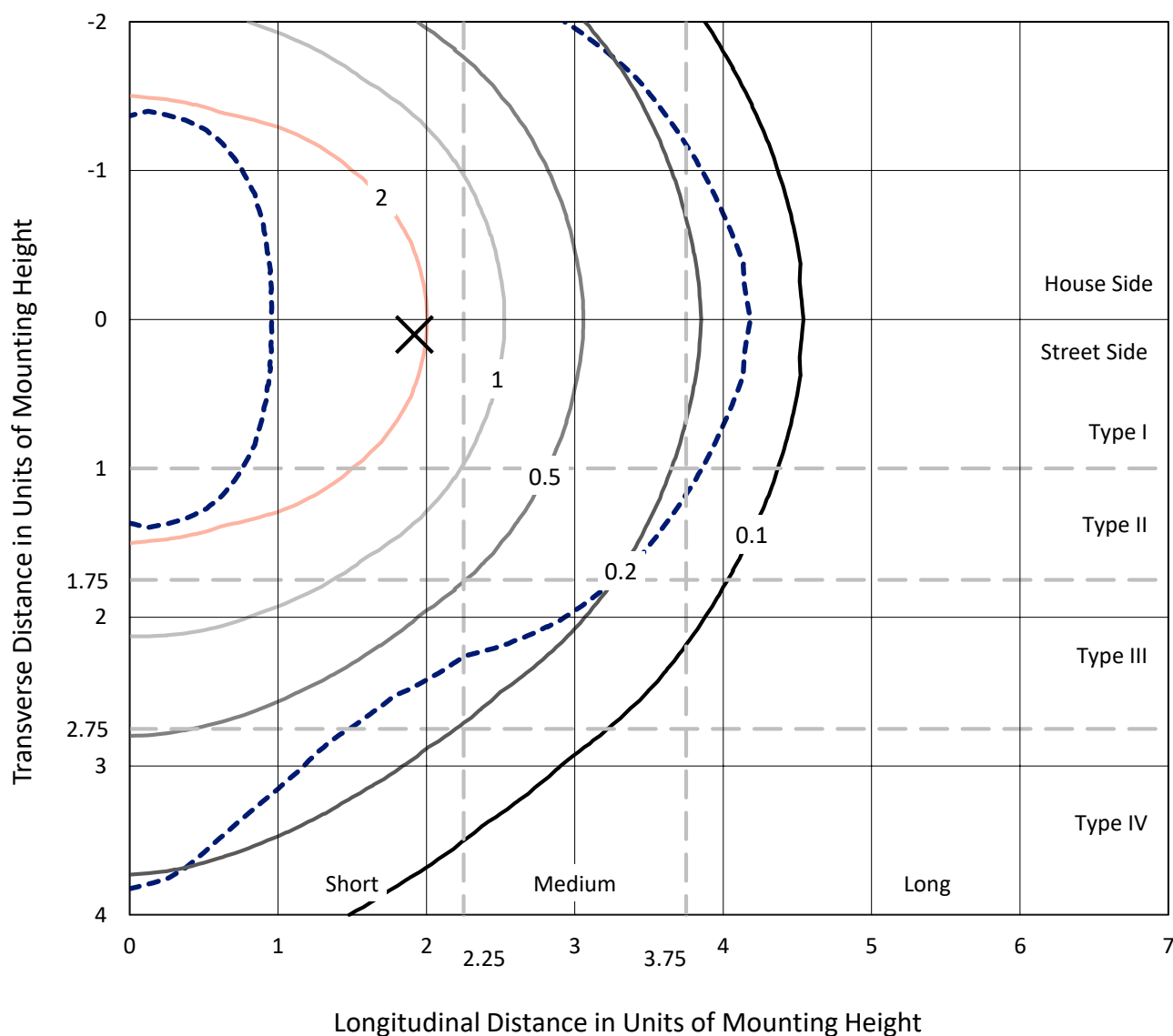
REPORT NUMBER: P198451

CATALOG NUMBER: TT-C4-LED-E1-RW-CG-UPL

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

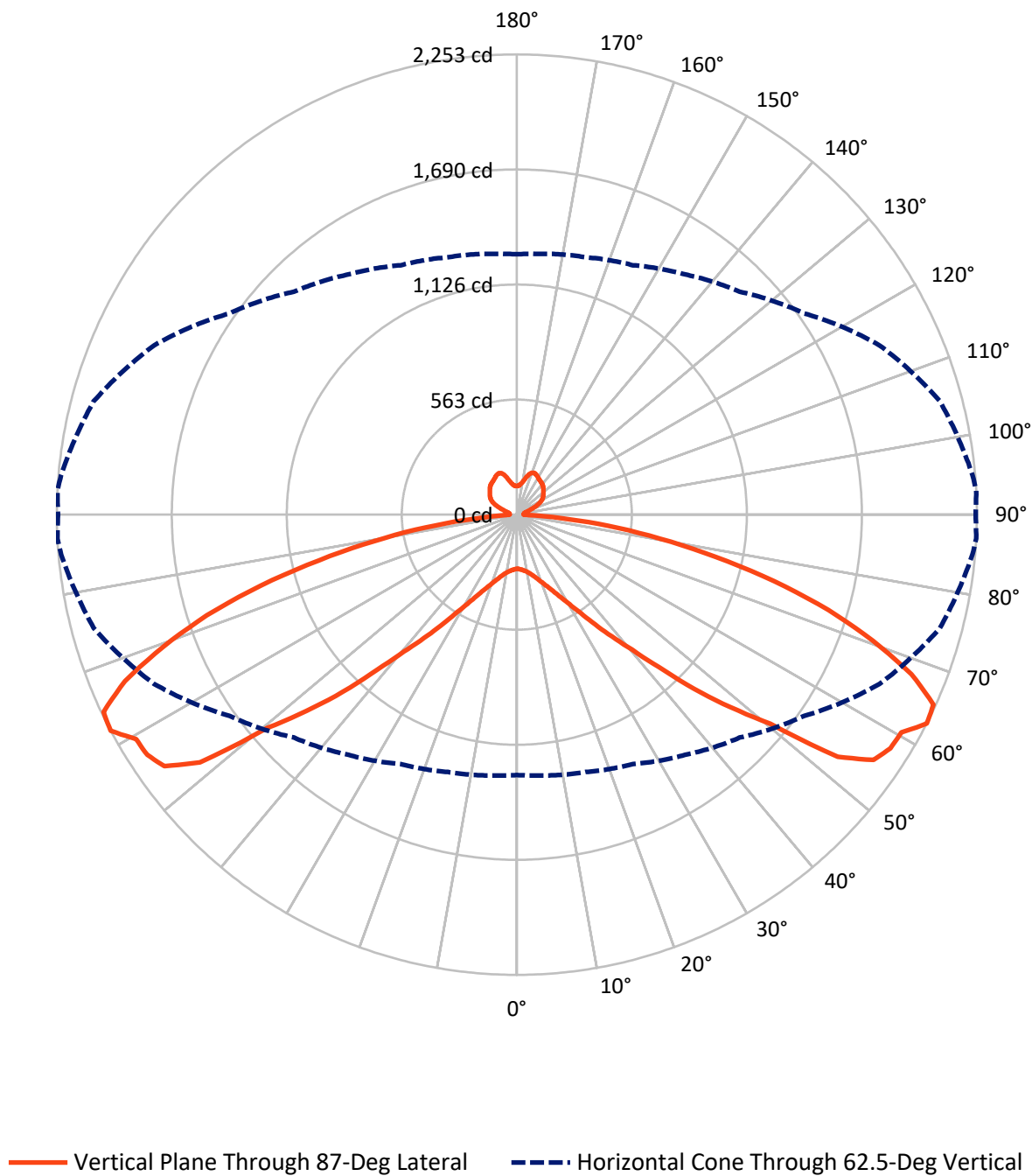


Based on 10 foot mounting height. Maximum calculated value = 4.4 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P198451

CATALOG NUMBER: TT-C4-LED-E1-RW-CG-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198451

CATALOG NUMBER: TT-C4-LED-E1-RW-CG-UPL

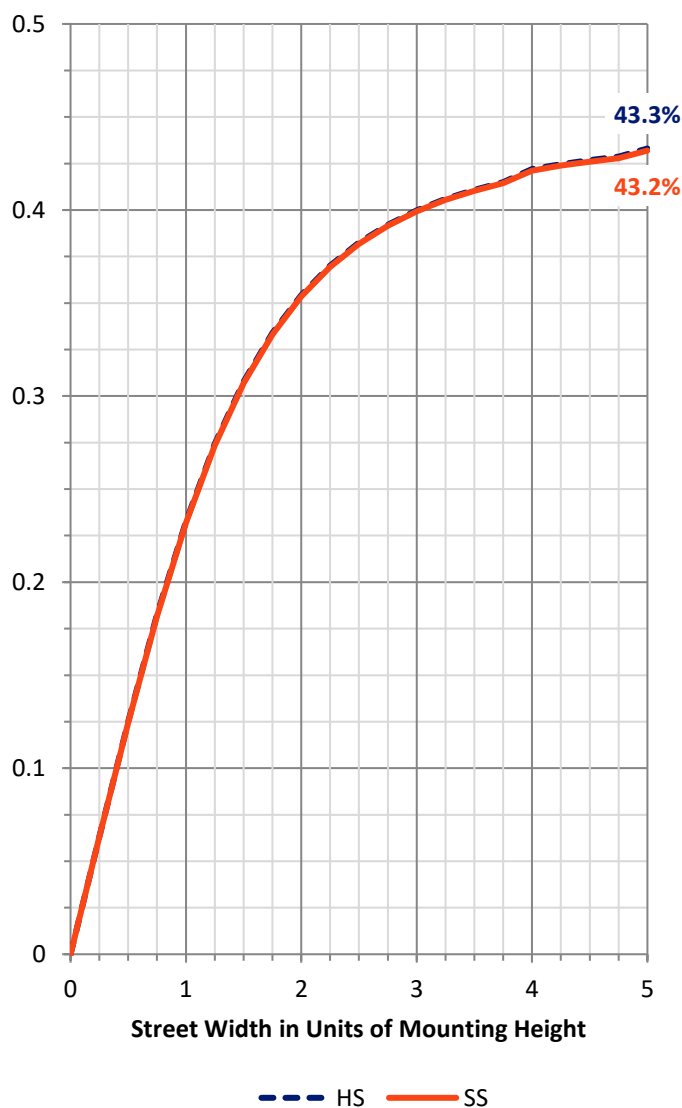
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2897.9	412.7	3310.6
	% Fixture	43.8	6.2	50.0
Street Side	Lumens	2897.9	412.7	3310.6
	% Fixture	43.8	6.2	50.0
Total	Lumens	5795.8	825.3	6621.1
	% Fixture	87.5	12.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.4	0.4
10°-20°	91.5	1.4
20°-30°	201.8	3.0
30°-40°	406.5	6.1
40°-50°	775.3	11.7
50°-60°	1327.6	20.1
60°-70°	1608.4	24.3
70°-80°	1114.3	16.8
80°-90°	243.9	3.7
90°-100°	38.4	0.6
100°-110°	59.5	0.9
110°-120°	119.6	1.8
120°-130°	148.9	2.2
130°-140°	153.3	2.3
140°-150°	136.3	2.1
150°-160°	103.9	1.6
160°-170°	51.8	0.8
170°-180°	13.6	0.2
0°-90°	5795.8	87.5
0°-180°	6621.1	100.0

Coefficient of Utilization



REPORT NUMBER: P198451

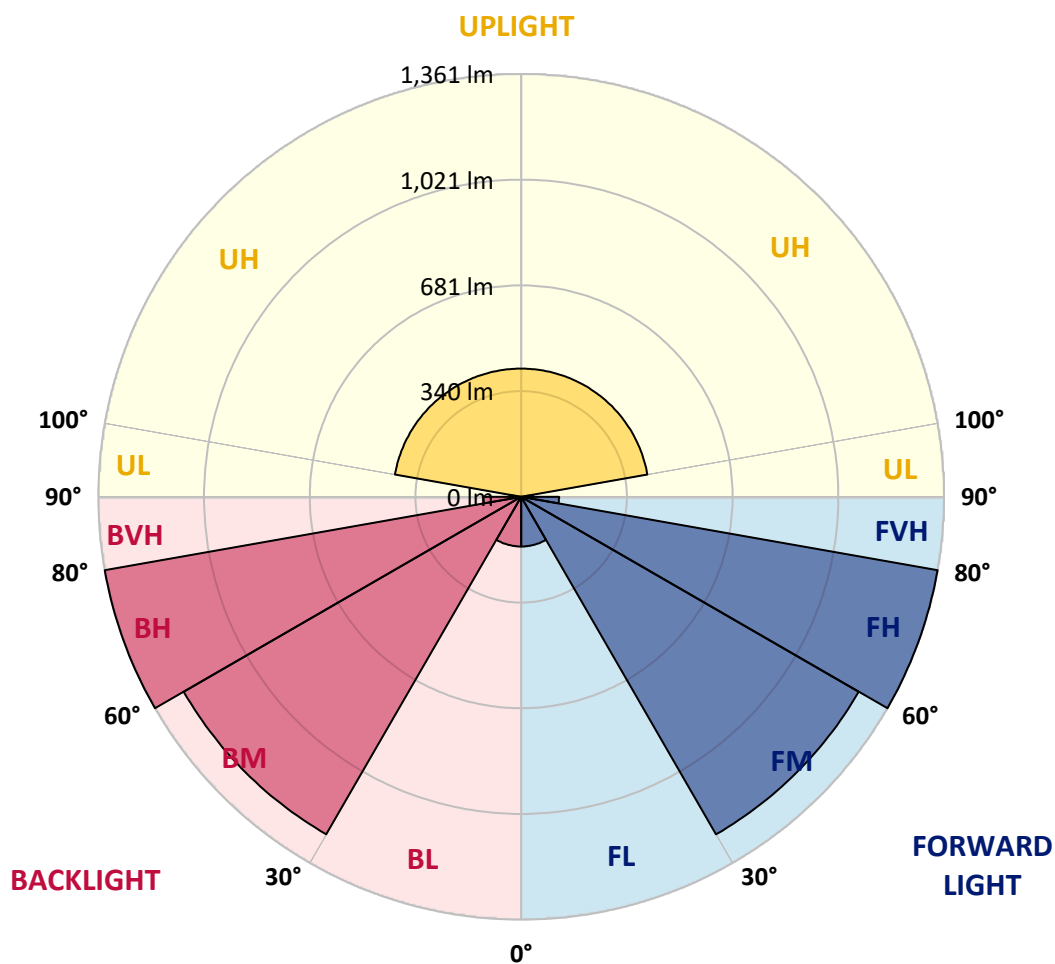
CATALOG NUMBER: TT-C4-LED-E1-RW-CG-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	159.9	2.4			
FM	(30°-60°)	1254.7	19.0			
FH	(60°-80°)	1361.3	20.6			G1/1800
FVH	(80°-90°)	122.0	1.8			G2/225
BL	(0°-30°)	159.9	2.4	B1/500		
BM	(30°-60°)	1254.7	19.0	B2/2500		
BH	(60°-80°)	1361.3	20.6	B3/2500		G3/2500
BVH	(80°-90°)	122.0	1.8			G2/225
UL	(90°-100°)	38.4	0.6		U2/50	
UH	(100°-180°)	412.7	6.2		U3/500	

BUG Rating: B3-U4-G3

Type IV Short



REPORT NUMBER: P198451

CATALOG NUMBER: TT-C4-LED-E1-RW-CG-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	87°
0°	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1	264.1
2.5°	266.5	266.5	267.7	267.7	267.7	267.7	267.7	267.7	267.7	267.7	267.7
5°	271.2	271.2	271.2	272.4	272.4	272.4	272.4	272.4	271.2	271.2	271.2
7.5°	278.3	278.3	278.3	279.5	279.5	279.5	278.3	278.3	277.2	277.2	277.2
10°	287.8	287.8	289.0	289.0	287.8	287.8	286.6	285.4	286.6	285.4	285.4
12.5°	300.8	303.2	302.0	302.0	299.7	299.7	298.5	298.5	298.5	297.3	297.3
15°	319.8	319.8	321.0	318.6	318.6	315.1	313.9	312.7	313.9	313.9	312.7
17.5°	342.3	342.3	342.3	338.7	336.4	334.0	332.8	331.6	330.5	331.6	331.6
20°	376.6	374.3	369.5	367.2	361.2	358.9	356.5	355.3	354.1	354.1	354.1
22.5°	412.2	409.8	403.9	399.1	394.4	388.5	386.1	381.4	380.2	382.6	381.4
25°	446.5	450.1	443.0	437.0	433.5	424.0	418.1	416.9	414.5	413.4	414.5
27.5°	489.2	491.5	485.6	477.3	470.2	463.1	457.2	454.8	456.0	456.0	457.2
30°	536.5	541.3	531.8	527.1	516.4	506.9	502.2	504.6	506.9	510.5	509.3
32.5°	591.0	591.0	586.3	578.0	566.1	557.9	555.5	559.0	569.7	574.4	573.3
35°	655.0	650.2	645.5	634.8	619.4	614.7	619.4	631.3	646.7	655.0	659.7
37.5°	721.3	711.8	704.7	692.9	685.8	683.4	694.1	716.6	733.2	748.5	755.7
40°	778.2	778.2	768.7	755.7	748.5	759.2	775.8	807.8	839.7	856.3	868.2
42.5°	835.0	842.1	831.5	820.8	820.8	835.0	867.0	916.7	977.1	1012.7	1018.6
45°	894.2	907.3	893.0	885.9	893.0	921.5	981.9	1077.8	1167.8	1225.9	1216.4
47.5°	955.8	967.7	954.6	951.1	967.7	1018.6	1111.0	1234.2	1324.2	1384.6	1408.3
50°	1031.6	1023.3	1018.6	1017.4	1051.8	1127.6	1247.2	1379.8	1524.3	1578.8	1608.4
52.5°	1095.6	1081.4	1079.0	1087.3	1144.1	1235.3	1384.6	1628.6	1828.7	1963.8	1968.5
55°	1151.2	1135.9	1144.1	1164.3	1241.3	1368.0	1556.3	1841.8	2011.1	2111.8	2120.1
57.5°	1198.6	1190.3	1204.5	1231.8	1331.3	1482.9	1693.7	1929.4	2069.2	2149.7	2158.0
60°	1241.3	1240.1	1255.5	1301.7	1413.0	1550.4	1724.5	1935.3	2081.0	2153.3	2163.9
62.5°	1274.4	1281.5	1304.0	1346.7	1435.5	1543.3	1717.4	1960.2	2145.0	2239.7	2252.8
65°	1302.9	1310.0	1332.5	1346.7	1426.0	1529.1	1756.5	1976.8	2135.5	2233.8	2242.1
67.5°	1318.3	1326.5	1323.0	1325.4	1386.9	1467.5	1664.1	1853.6	1983.9	2073.9	2084.6
70°	1315.9	1308.8	1280.3	1250.7	1263.8	1320.6	1498.3	1657.0	1775.4	1846.5	1850.1
72.5°	1266.1	1254.3	1186.8	1118.1	1097.9	1135.9	1291.0	1410.6	1511.3	1576.5	1596.6
75°	1153.6	1129.9	1031.6	942.8	897.8	926.2	1045.8	1150.1	1224.7	1288.6	1301.7
77.5°	948.7	934.5	836.2	739.1	689.3	708.3	803.0	864.6	945.2	1011.5	994.9
80°	690.5	688.1	608.8	522.3	486.8	495.1	546.0	606.4	657.3	707.1	709.5
82.5°	451.3	444.2	390.9	328.1	291.4	296.1	328.1	360.1	408.6	440.6	450.1
85°	223.9	220.3	196.6	157.5	137.4	137.4	152.8	171.7	195.4	209.6	208.5
87.5°	61.6	55.7	54.5	40.3	33.2	35.5	35.5	39.1	49.7	53.3	56.9
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: P198451

CATALOG NUMBER: TT-C4-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: P198451

CATALOG NUMBER: TT-C4-LED-E1-RW-CG-UPL

CANDELA DISTRIBUTION (continued):

	90°
0°	264.1
2.5°	267.7
5°	271.2
7.5°	277.2
10°	286.6
12.5°	297.3
15°	312.7
17.5°	330.5
20°	354.1
22.5°	383.7
25°	414.5
27.5°	456.0
30°	510.5
32.5°	574.4
35°	657.3
37.5°	749.7
40°	863.4
42.5°	1012.7
45°	1227.1
47.5°	1396.4
50°	1593.0
52.5°	1975.6
55°	2122.5
57.5°	2160.4
60°	2165.1
62.5°	2246.8
65°	2251.6
67.5°	2076.3
70°	1856.0
72.5°	1594.2
75°	1311.1
77.5°	1012.7
80°	708.3
82.5°	443.0
85°	207.3
87.5°	52.1
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

REPORT NUMBER: P198451

CATALOG NUMBER: TT-C4-LED-E1-RW-CG-UPL

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)