

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: P198444

Luminaire Tested: **TT-C4-LED-E1-MQ-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198444
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-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8242.5 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U4 - G2

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



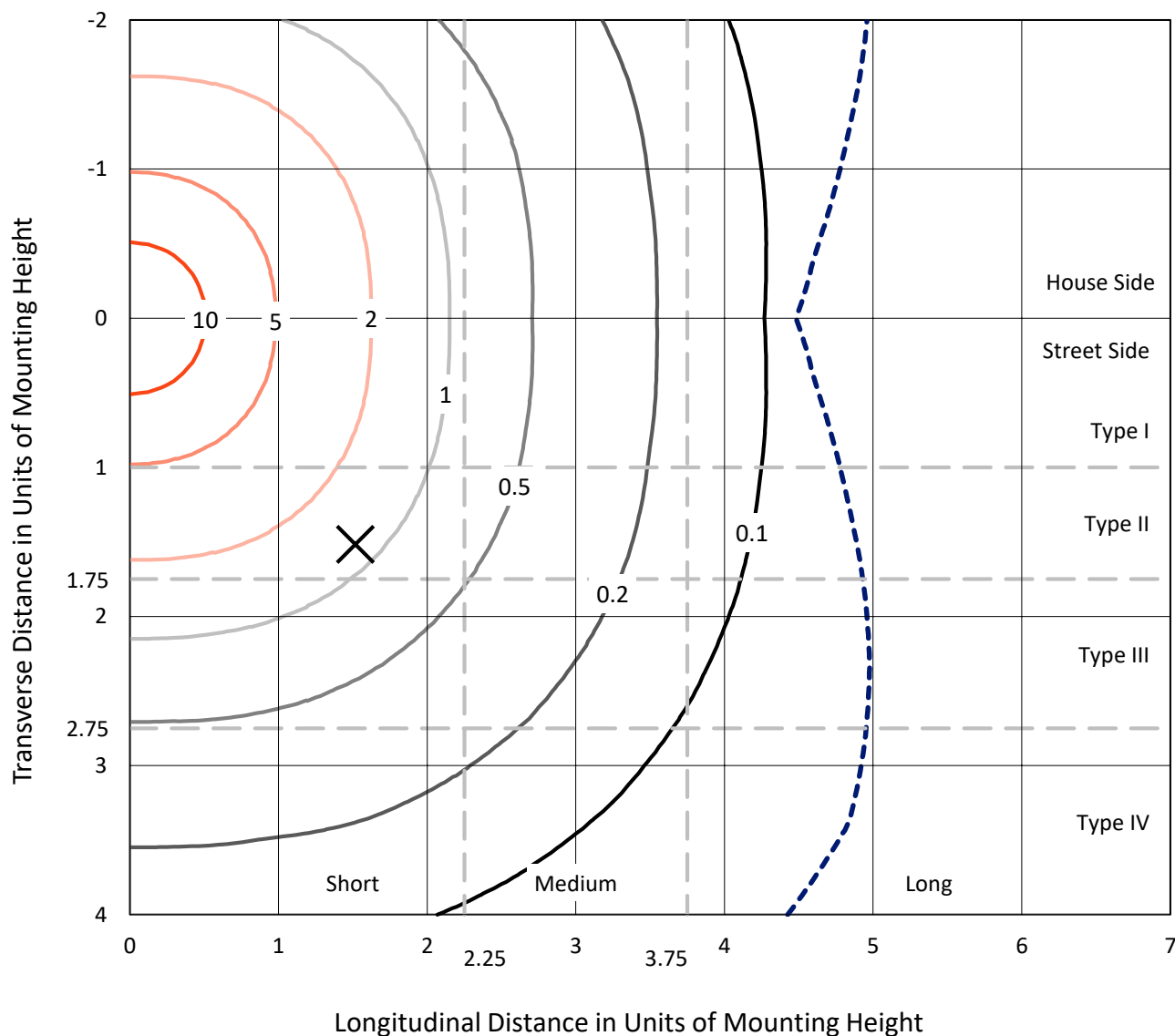
REPORT NUMBER: P198444

CATALOG NUMBER: TT-C4-LED-E1-MQ-UPL

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

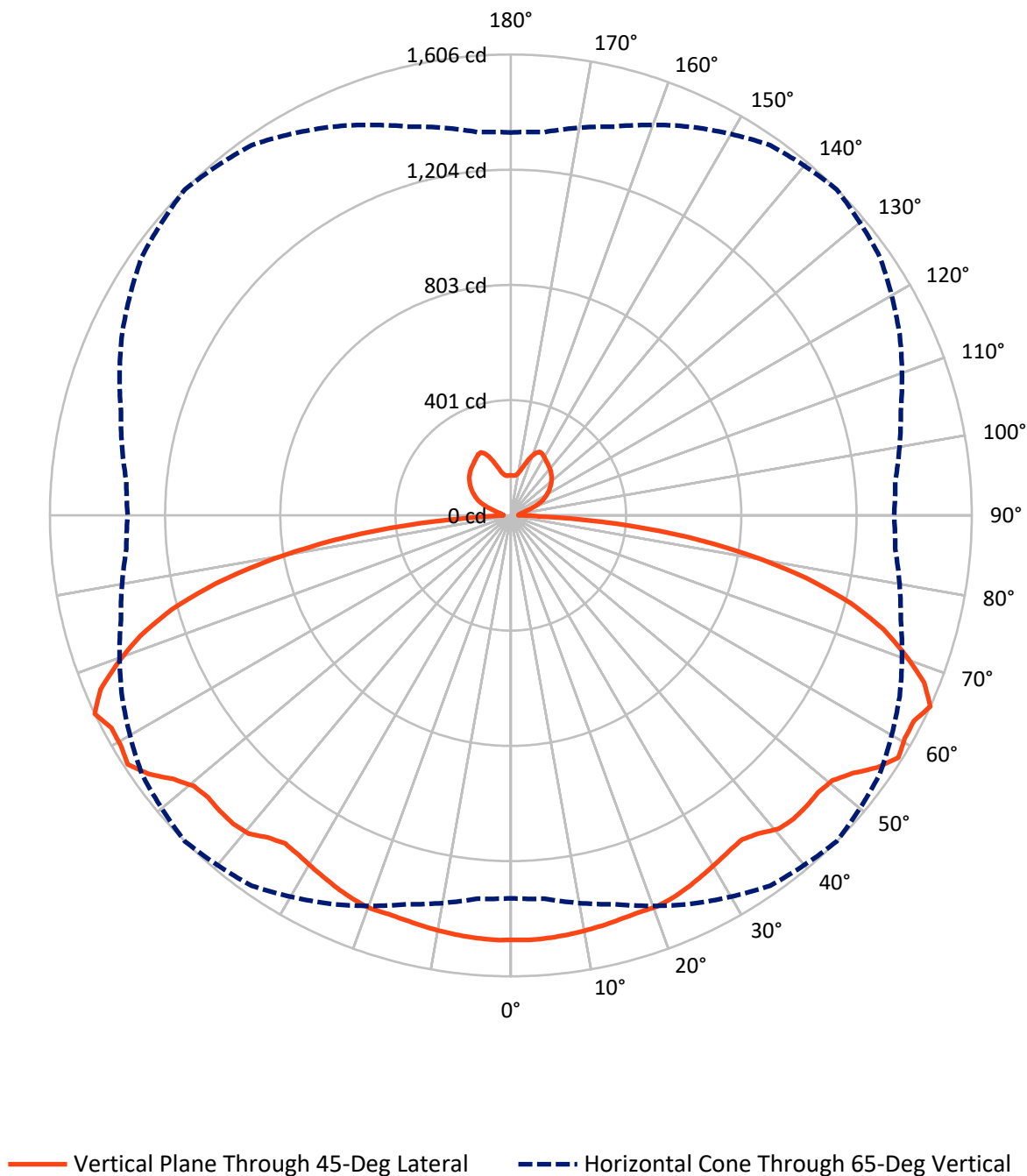


Based on 10 foot mounting height. Maximum calculated value = 14.8 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P198444

CATALOG NUMBER: TT-C4-LED-E1-MQ-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198444

CATALOG NUMBER: TT-C4-LED-E1-MQ-UPL

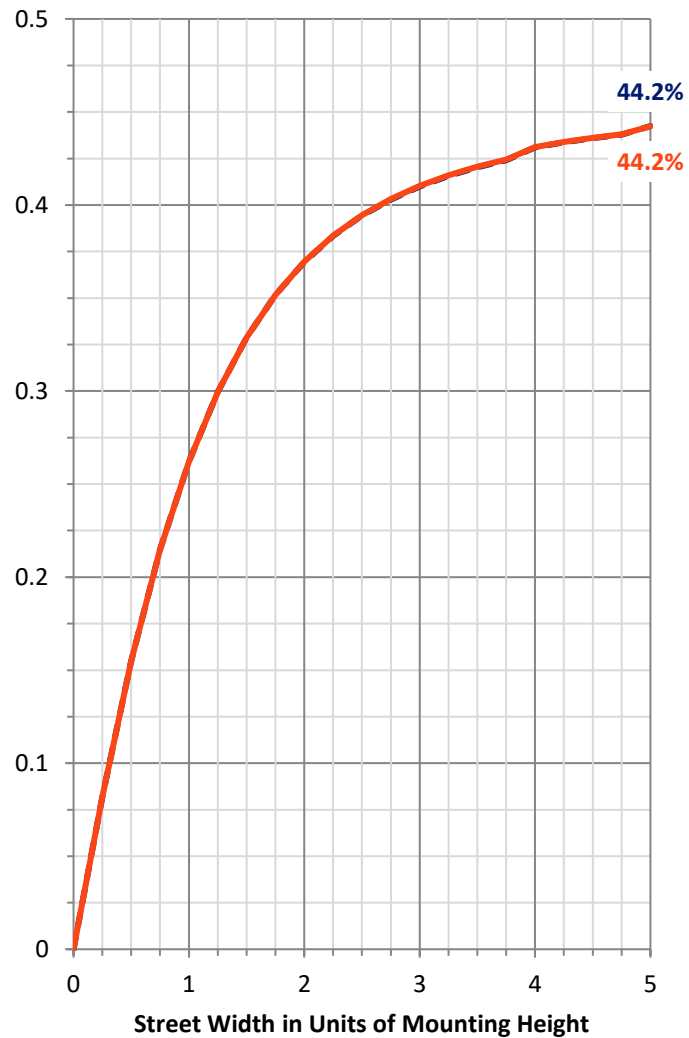
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3708.6	412.7	4121.3
	% Fixture	45.0	5.0	50.0
Street Side	Lumens	3708.6	412.7	4121.3
	% Fixture	45.0	5.0	50.0
Total	Lumens	7417.2	825.3	8242.5
	% Fixture	90.0	10.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.8	1.7
10°-20°	412.9	5.0
20°-30°	660.7	8.0
30°-40°	872.6	10.6
40°-50°	1090.8	13.2
50°-60°	1309.6	15.9
60°-70°	1431.5	17.4
70°-80°	1137.4	13.8
80°-90°	361.0	4.4
90°-100°	38.4	0.5
100°-110°	59.5	0.7
110°-120°	119.6	1.5
120°-130°	148.9	1.8
130°-140°	153.3	1.9
140°-150°	136.3	1.7
150°-160°	103.9	1.3
160°-170°	51.8	0.6
170°-180°	13.6	0.2
0°-90°	7417.2	90.0
0°-180°	8242.5	100.0

Coefficient of Utilization



REPORT NUMBER: P198444

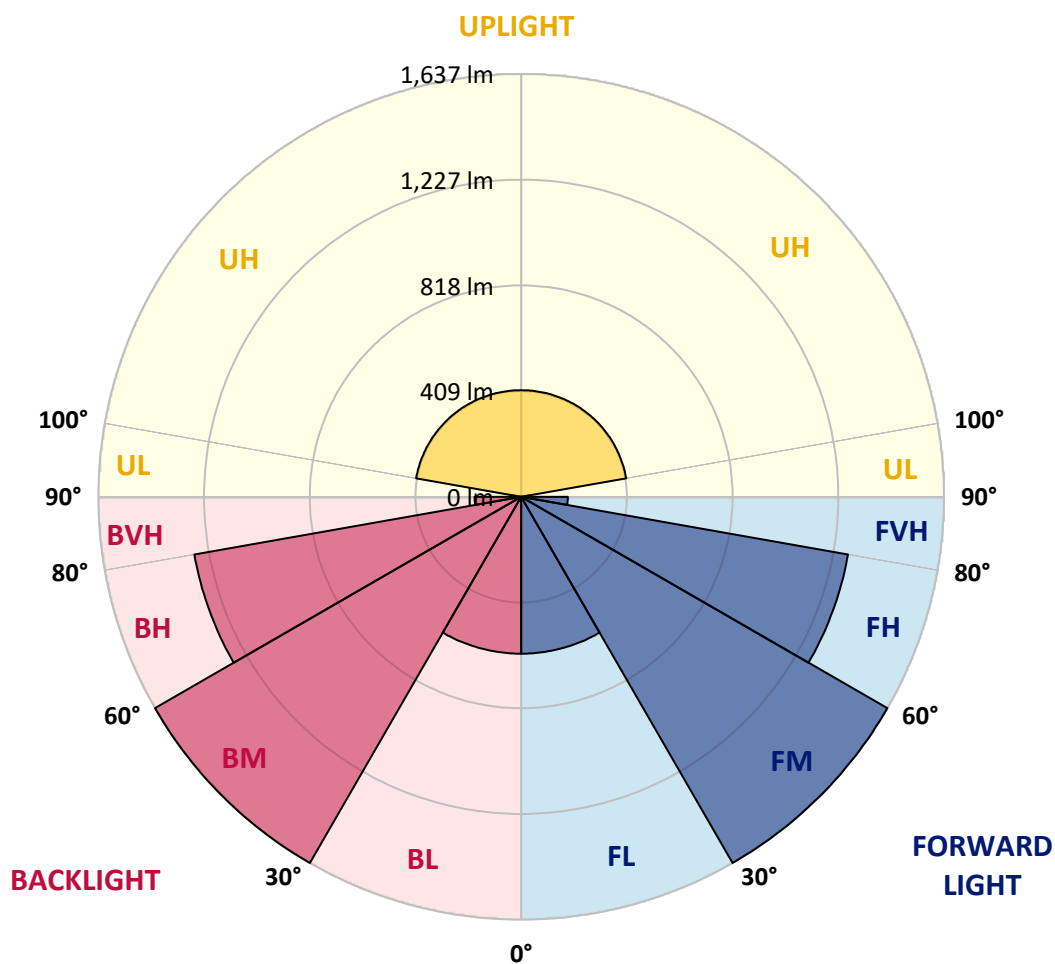
CATALOG NUMBER: TT-C4-LED-E1-MQ-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	607.2	7.4			
FM	(30°-60°)	1636.5	19.9			
FH	(60°-80°)	1284.4	15.6			G1/1800
FVH	(80°-90°)	180.5	2.2			G2/225
BL	(0°-30°)	607.2	7.4	B2/1000		
BM	(30°-60°)	1636.5	19.9	B2/2500		
BH	(60°-80°)	1284.4	15.6	B3/2500		G1/1800
BVH	(80°-90°)	180.5	2.2			G2/225
UL	(90°-100°)	38.4	0.5		U2/50	
UH	(100°-180°)	412.7	5.0		U3/500	

BUG Rating: B3-U4-G2

Type V Short



REPORT NUMBER: P198444

CATALOG NUMBER: TT-C4-LED-E1-MQ-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1478.9	1478.9	1478.9	1478.9	1478.9	1478.9	1478.9	1478.9	1478.9	1478.9	1478.9
2.5°	1480.2	1480.2	1480.2	1480.2	1478.9	1480.2	1478.9	1478.9	1480.2	1480.2	1480.2
5°	1477.6	1477.6	1477.6	1477.6	1477.6	1477.6	1477.6	1477.6	1477.6	1477.6	1477.6
7.5°	1473.8	1473.8	1473.8	1473.8	1473.8	1473.8	1473.8	1473.8	1473.8	1473.8	1473.8
10°	1468.6	1469.9	1469.9	1469.9	1468.6	1468.6	1468.6	1469.9	1469.9	1468.6	1468.6
12.5°	1463.4	1463.4	1464.7	1463.4	1463.4	1463.4	1463.4	1463.4	1463.4	1463.4	1462.1
15°	1455.6	1455.6	1456.9	1456.9	1456.9	1456.9	1456.9	1455.6	1455.6	1454.3	1454.3
17.5°	1449.2	1449.2	1451.7	1451.7	1453.0	1453.0	1453.0	1450.4	1450.4	1447.9	1447.9
20°	1447.9	1447.9	1449.2	1451.7	1453.0	1454.3	1453.0	1450.4	1447.9	1445.3	1445.3
22.5°	1438.8	1440.1	1442.7	1444.0	1446.6	1446.6	1446.6	1442.7	1441.4	1438.8	1438.8
25°	1427.1	1425.8	1429.7	1432.3	1434.9	1434.9	1433.6	1431.0	1429.7	1425.8	1425.8
27.5°	1409.0	1410.3	1412.9	1416.8	1420.7	1420.7	1419.4	1416.8	1414.2	1411.6	1410.3
30°	1393.5	1394.8	1397.4	1401.2	1403.8	1407.7	1403.8	1401.2	1397.4	1396.1	1394.8
32.5°	1376.6	1377.9	1381.8	1388.3	1392.2	1394.8	1392.2	1389.6	1383.1	1379.2	1377.9
35°	1365.0	1366.3	1370.2	1379.2	1387.0	1387.0	1387.0	1380.5	1372.7	1366.3	1365.0
37.5°	1366.3	1368.9	1377.9	1390.9	1403.8	1405.1	1403.8	1390.9	1379.2	1368.9	1367.6
40°	1376.6	1379.2	1394.8	1414.2	1431.0	1436.2	1432.3	1414.2	1396.1	1381.8	1377.9
42.5°	1375.3	1379.2	1396.1	1420.7	1437.5	1445.3	1437.5	1420.7	1398.6	1383.1	1377.9
45°	1370.2	1372.7	1390.9	1416.8	1437.5	1445.3	1438.8	1419.4	1394.8	1376.6	1372.7
47.5°	1362.4	1365.0	1379.2	1410.3	1433.6	1441.4	1434.9	1414.2	1383.1	1368.9	1366.3
50°	1352.0	1359.8	1383.1	1415.5	1446.6	1451.7	1447.9	1418.1	1385.7	1365.0	1354.6
52.5°	1362.4	1361.1	1388.3	1446.6	1475.1	1491.9	1478.9	1444.0	1394.8	1367.6	1365.0
55°	1385.7	1396.1	1425.8	1480.2	1526.9	1550.2	1532.0	1484.1	1428.4	1394.8	1388.3
57.5°	1384.4	1397.4	1450.4	1504.8	1576.1	1591.6	1570.9	1511.3	1447.9	1403.8	1387.0
60°	1376.6	1381.8	1422.0	1519.1	1559.2	1577.4	1559.2	1512.6	1432.3	1383.1	1383.1
62.5°	1350.7	1359.8	1423.3	1490.6	1547.6	1576.1	1554.1	1495.8	1422.0	1368.9	1352.0
65°	1333.9	1340.4	1402.5	1493.2	1574.8	1605.9	1569.6	1494.5	1406.4	1344.3	1335.2
67.5°	1280.8	1292.5	1350.7	1449.2	1528.2	1552.8	1538.5	1446.6	1350.7	1293.7	1279.5
70°	1190.1	1196.6	1276.9	1370.2	1442.7	1459.5	1438.8	1379.2	1269.1	1205.7	1186.3
72.5°	1078.8	1087.8	1161.7	1265.3	1335.2	1357.2	1332.6	1269.1	1155.2	1098.2	1080.1
75°	966.1	975.2	1023.1	1135.8	1194.0	1225.1	1196.6	1128.0	1025.7	970.0	962.2
77.5°	804.2	818.5	892.3	967.4	1023.1	1055.5	1030.9	967.4	887.1	821.1	796.5
80°	632.0	642.3	711.0	777.0	827.5	848.3	836.6	777.0	712.3	644.9	633.3
82.5°	442.9	449.4	509.0	562.0	624.2	624.2	611.3	572.4	507.7	449.4	452.0
85°	237.0	244.8	290.1	331.5	370.4	370.4	358.7	334.1	288.8	243.5	238.3
87.5°	47.9	53.1	69.9	76.4	90.7	97.1	88.1	80.3	69.9	55.7	55.7
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	38.0
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	49.0
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	66.0	60.0	59.0	60.0
110°	86.0	86.0	89.0	85.0	86.0	87.0	84.0	84.0	78.0	74.0	75.0

REPORT NUMBER: P198444

CATALOG NUMBER: TT-C4-LED-E1-MQ-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	102.0	105.0	100.0	95.0	94.0
115°	121.0	122.0	128.0	128.0	129.0	124.0	121.0	125.0	123.0	116.0	113.0
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	138.0	141.0	139.0	133.0	129.0
120°	152.0	153.0	155.0	149.0	149.0	147.0	150.0	153.0	148.0	145.0	142.0
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	159.0	162.0	155.0	153.0	150.0
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.0	168.0	163.0	160.0	158.0
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	176.0	175.0	173.0	166.0	163.0
130°	187.0	188.0	191.0	179.0	186.0	186.0	183.0	183.0	184.0	171.0	169.0
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	190.0	192.0	192.0	179.0	176.0
135°	210.0	210.0	209.0	192.0	199.0	201.0	196.0	201.0	199.0	185.0	184.0
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	203.0	210.0	204.0	191.0	190.0
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	202.0
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	239.0	229.0	212.0	204.0	206.0
150°	224.0	221.0	220.0	214.0	222.0	235.0	242.0	232.0	214.0	210.0	211.0
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	242.0	235.0	219.0	215.0	216.0
155°	208.0	207.0	219.0	224.0	237.0	243.0	238.0	234.0	224.0	220.0	219.0
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	228.0	229.0	226.0	222.0	219.0
160°	199.0	198.0	210.0	213.0	219.0	219.0	215.0	219.0	221.0	218.0	215.0
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	192.0
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	160.0	165.0	168.0	172.0	174.0
170°	142.0	141.0	145.0	144.0	147.0	147.0	148.0	152.0	155.0	159.0	160.0
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	141.0	145.0	146.0	149.0	151.0
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.0	141.0	141.0	143.0	144.0
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

(END OF REPORT)