

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: P198471

Luminaire Tested: **TT-C4-LED-E1-WQ-LWR-LW-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198471
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C4-LED-E1-WQ-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
WIDE DISTRIBUTION WITH LumaWatt WIRELESS SENSOR
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7083.4 lumens
Efficiency: N/A
Efficacy: 93.9 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



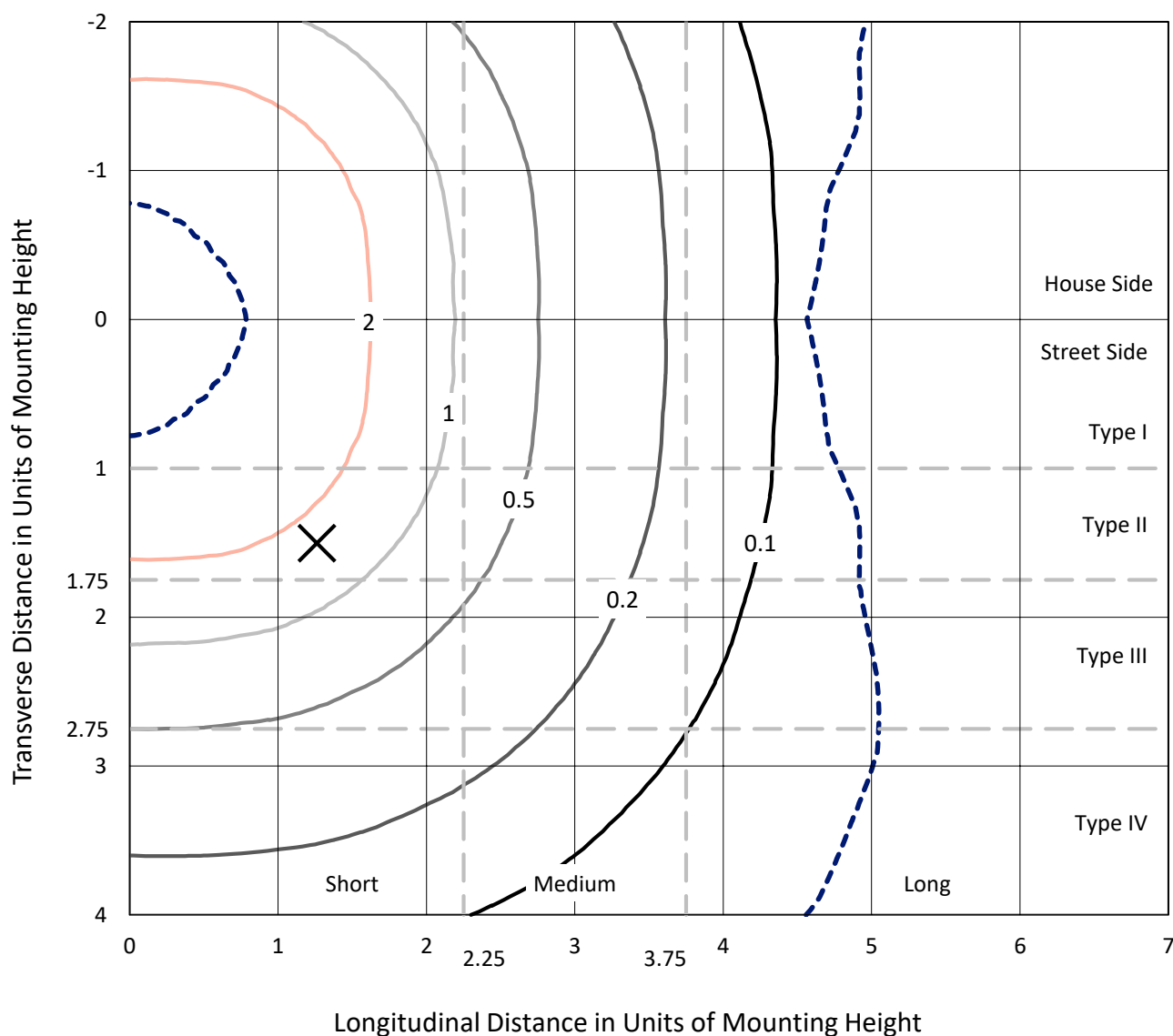
REPORT NUMBER: P198471

CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

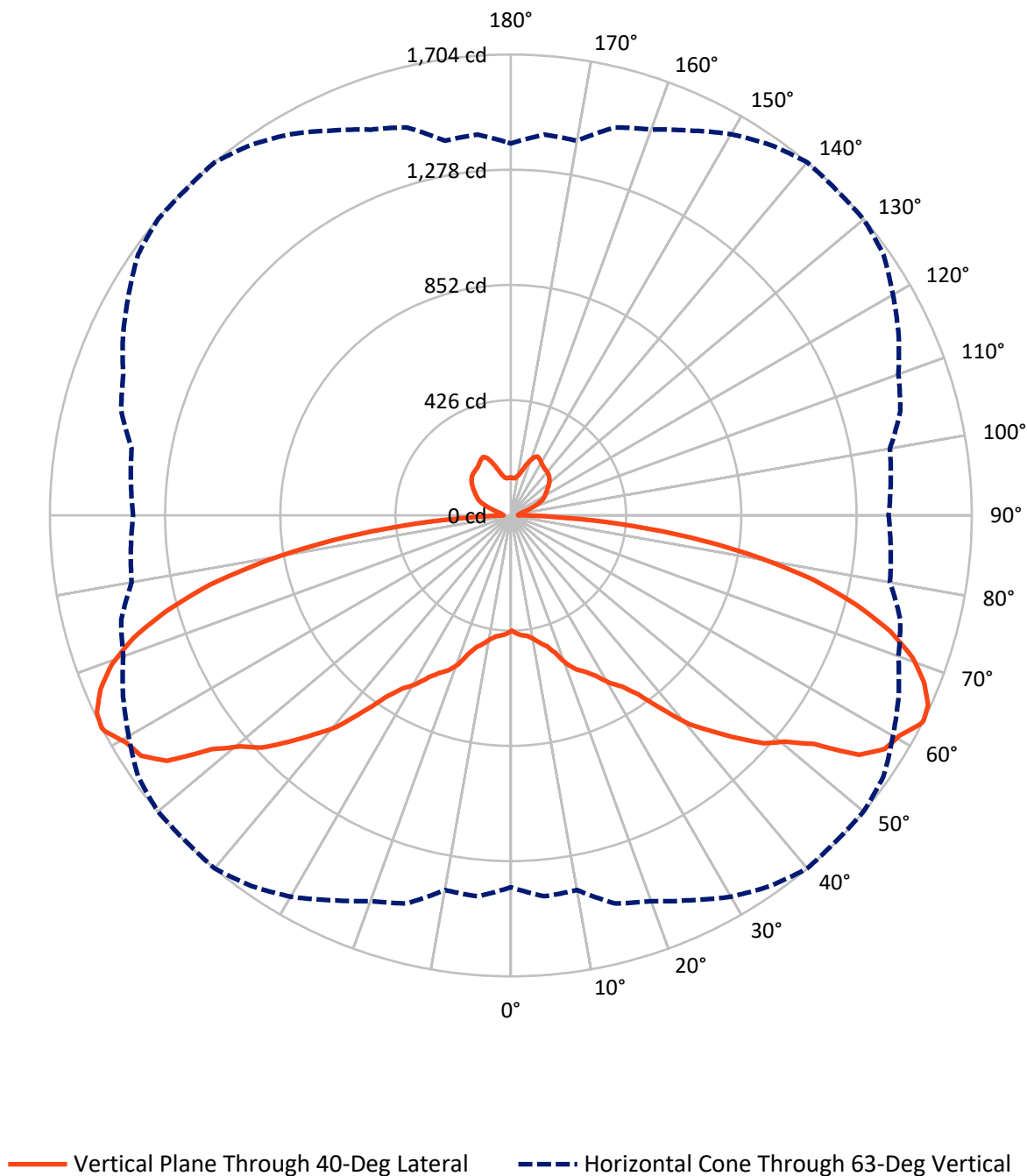


Based on 10 foot mounting height. Maximum calculated value = 4.8 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P198471

CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198471

CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

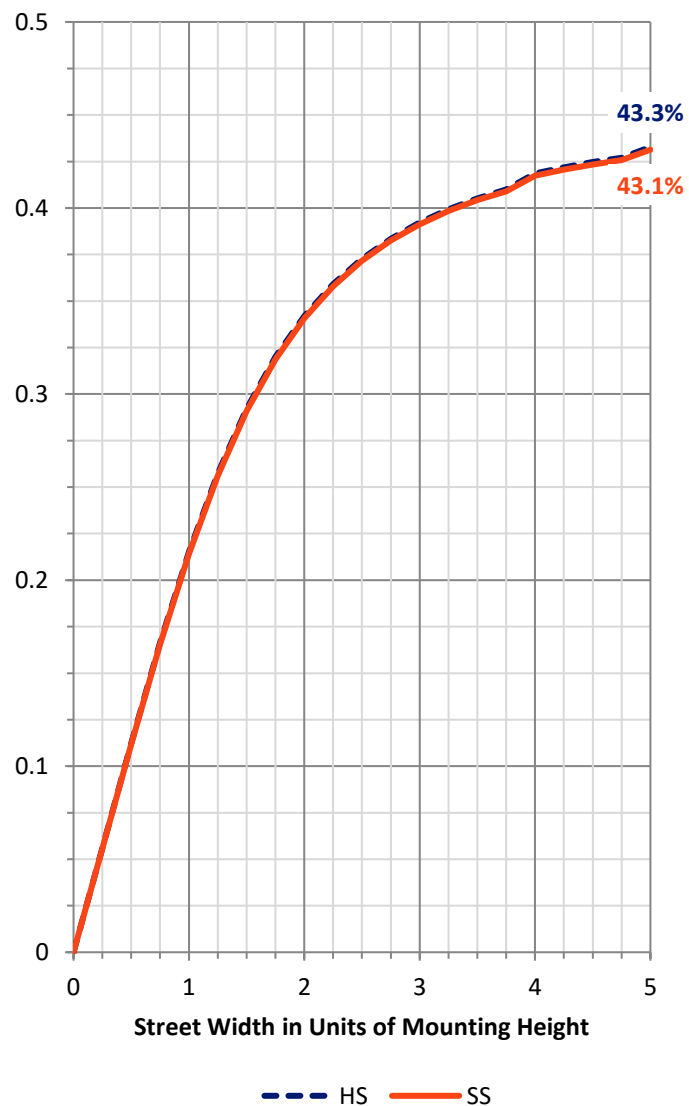
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3129.7	412.0	3541.7
	% Fixture	44.2	5.8	50.0
Street Side	Lumens	3129.7	412.0	3541.7
	% Fixture	44.2	5.8	50.0
Total	Lumens	6259.4	824.0	7083.4
	% Fixture	88.4	11.6	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	0.6
10°-20°	146.1	2.1
20°-30°	297.1	4.2
30°-40°	512.0	7.2
40°-50°	862.5	12.2
50°-60°	1270.1	17.9
60°-70°	1510.4	21.3
70°-80°	1222.7	17.3
80°-90°	395.6	5.6
90°-100°	38.3	0.5
100°-110°	59.4	0.8
110°-120°	119.3	1.7
120°-130°	148.7	2.1
130°-140°	153.2	2.2
140°-150°	136.0	1.9
150°-160°	103.7	1.5
160°-170°	51.8	0.7
170°-180°	13.6	0.2
0°-90°	6259.4	88.4
0°-180°	7083.4	100.0

Coefficient of Utilization



REPORT NUMBER: P198471

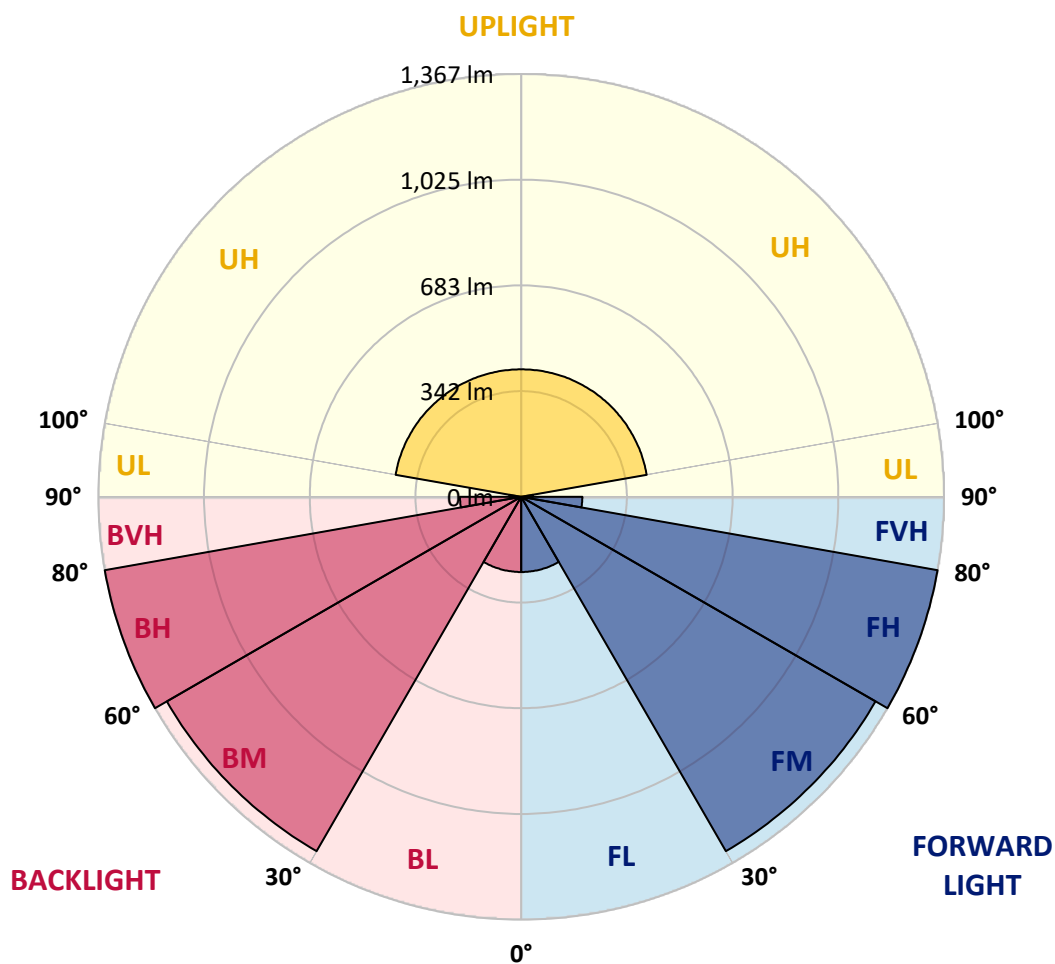
CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	243.1	3.4			
FM	(30°-60°)	1322.3	18.7			
FH	(60°-80°)	1366.5	19.3			G1/1800
FVH	(80°-90°)	197.8	2.8			G2/225
BL	(0°-30°)	243.1	3.4	B1/500		
BM	(30°-60°)	1322.3	18.7	B2/2500		
BH	(60°-80°)	1366.5	19.3	B3/2500		G1/1800
BVH	(80°-90°)	197.8	2.8			G2/225
UL	(90°-100°)	38.3	0.5		U2/50	
UH	(100°-180°)	412.0	5.8		U3/500	

BUG Rating: B3-U4-G2

Type V Short



REPORT NUMBER: P198471

CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	425.9	425.9	425.9	425.9	425.9	425.9	425.9	425.9	425.9	425.9	425.9
2.5°	439.2	439.2	439.2	439.2	439.2	439.2	437.9	439.2	437.9	437.9	437.9
5°	447.7	447.7	447.7	447.7	446.4	446.4	445.2	445.2	445.2	444.0	445.2
7.5°	451.3	451.3	451.3	451.3	450.1	450.1	450.1	450.1	450.1	450.1	450.1
10°	459.8	459.8	461.0	462.2	464.5	464.5	464.5	465.9	464.5	464.5	464.5
12.5°	477.9	476.7	479.1	481.5	484.0	485.2	485.2	485.2	484.0	484.0	485.2
15°	503.4	500.8	502.2	503.4	504.5	505.7	505.7	504.5	502.2	502.2	502.2
17.5°	535.9	532.4	531.2	530.0	530.0	532.4	534.7	533.6	534.7	533.6	534.7
20°	574.7	572.2	572.2	572.2	573.4	578.3	583.2	585.6	584.4	581.9	585.6
22.5°	600.0	601.4	607.3	606.1	604.9	609.8	615.8	620.7	618.2	614.6	617.0
25°	628.0	628.0	636.3	640.0	636.3	636.3	638.9	642.4	640.0	637.7	640.0
27.5°	659.4	659.4	663.0	666.7	664.3	664.3	667.9	674.0	672.6	671.4	672.6
30°	696.9	692.1	688.4	694.5	700.6	701.8	705.4	715.0	717.4	716.2	718.7
32.5°	732.0	724.7	727.2	730.8	744.0	748.9	747.7	755.0	753.7	750.1	755.0
35°	765.9	774.4	779.1	786.4	791.3	797.3	797.3	810.7	813.0	809.5	813.0
37.5°	831.2	834.8	848.1	849.3	855.4	878.3	880.9	899.0	908.7	903.8	905.0
40°	920.7	919.5	929.2	943.6	955.8	984.8	993.3	1005.4	1013.9	1010.3	1015.0
42.5°	993.3	983.7	990.9	1022.3	1035.7	1057.4	1068.3	1074.4	1090.2	1085.2	1091.3
45°	1045.4	1049.0	1058.6	1090.2	1098.6	1116.8	1142.1	1153.1	1173.6	1167.5	1171.2
47.5°	1096.1	1113.1	1121.5	1136.1	1162.7	1186.8	1218.4	1229.2	1258.2	1255.9	1252.3
50°	1162.7	1176.0	1185.7	1196.5	1232.9	1272.8	1299.4	1304.2	1313.9	1306.7	1318.8
52.5°	1234.1	1232.9	1241.3	1271.6	1322.4	1338.1	1361.2	1382.9	1403.4	1410.7	1403.4
55°	1328.4	1298.2	1333.3	1376.8	1398.7	1436.1	1491.8	1522.1	1562.0	1568.1	1555.9
57.5°	1367.1	1367.1	1403.4	1428.9	1468.9	1535.4	1594.7	1609.1	1629.7	1618.8	1631.0
60°	1362.4	1408.3	1408.3	1453.1	1518.4	1577.7	1599.5	1623.7	1651.5	1650.3	1650.3
62.5°	1368.5	1413.1	1401.0	1478.5	1518.4	1566.7	1615.2	1660.0	1698.7	1697.5	1696.3
63°	1374.4	1413.1	1405.9	1484.5	1517.2	1569.3	1627.3	1672.0	1703.6	1701.1	1702.3
65°	1392.6	1381.7	1425.3	1474.8	1512.3	1589.8	1638.1	1673.2	1695.1	1693.9	1693.9
67.5°	1358.6	1333.3	1394.9	1414.4	1485.8	1554.7	1592.2	1632.2	1647.8	1647.8	1645.4
70°	1254.7	1265.5	1307.9	1339.3	1411.9	1473.6	1505.1	1555.9	1575.2	1575.2	1574.0
72.5°	1149.4	1167.5	1196.5	1241.3	1310.3	1358.6	1396.3	1442.2	1467.5	1466.3	1466.3
75°	1015.0	1032.0	1065.9	1108.3	1168.7	1216.0	1246.2	1289.8	1318.8	1329.6	1317.6
77.5°	863.9	868.7	900.2	943.6	996.9	1029.6	1075.6	1118.0	1142.1	1140.9	1137.3
80°	679.9	686.0	712.6	762.2	791.3	830.0	872.4	895.3	915.8	915.8	913.4
82.5°	469.4	482.7	509.3	542.0	572.2	606.1	629.2	652.1	669.1	667.9	664.3
85°	264.9	271.0	296.4	317.0	340.0	361.7	377.5	392.0	406.5	406.5	404.1
87.5°	79.9	71.4	86.0	94.3	106.5	117.4	124.6	139.1	148.8	137.9	137.9
90°	36.0	36.0	36.0	36.0	35.0	34.0	31.0	29.0	27.0	26.0	26.0
92.5°	40.0	39.0	39.0	38.0	36.0	34.0	32.0	29.0	27.0	27.0	27.0
95°	44.0	43.0	42.0	41.0	38.0	36.0	34.0	32.0	31.0	30.0	30.0
97.5°	42.0	42.0	41.0	40.0	38.0	37.0	36.0	35.0	34.0	33.0	32.0
100°	45.0	45.0	45.0	44.0	42.0	40.0	39.0	38.0	36.0	36.0	35.0
102.5°	51.0	51.0	50.0	49.0	47.0	46.0	45.0	44.0	42.0	42.0	42.0
105°	60.0	60.0	59.0	57.0	55.0	54.0	53.0	53.0	51.0	52.0	52.0
107.5°	72.0	72.0	72.0	70.0	68.0	67.0	66.0	66.0	66.0	68.0	68.0

REPORT NUMBER: P198471

CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
110°	86.0	86.0	87.0	89.0	86.0	85.0	85.0	86.0	86.0	87.0	86.0
112.5°	101.0	102.0	104.0	108.0	106.0	107.0	107.0	110.0	108.0	107.0	103.0
115°	121.0	122.0	123.0	128.0	126.0	128.0	127.0	129.0	126.0	124.0	120.0
117.5°	140.0	141.0	141.0	144.0	141.0	141.0	140.0	141.0	138.0	136.0	135.0
120°	152.0	153.0	154.0	155.0	151.0	149.0	147.0	149.0	147.0	147.0	148.0
122.5°	161.0	162.0	163.0	164.0	159.0	154.0	153.0	155.0	156.0	158.0	158.0
125°	169.0	169.0	170.0	172.0	168.0	163.0	160.0	165.0	166.0	168.0	167.0
127.5°	177.0	177.0	179.0	181.0	177.0	171.0	170.0	176.0	177.0	178.0	175.0
130°	187.0	188.0	190.0	191.0	185.0	179.0	179.0	186.0	187.0	186.0	183.0
132.5°	198.0	199.0	200.0	201.0	193.0	186.0	187.0	193.0	195.0	195.0	191.0
135°	210.0	210.0	211.0	209.0	199.0	192.0	193.0	199.0	202.0	201.0	197.0
137.5°	221.0	219.0	217.0	213.0	203.0	197.0	198.0	205.0	207.0	208.0	203.0
140°	229.0	226.0	222.0	216.0	205.0	200.0	201.0	207.0	210.0	213.0	212.0
142.5°	235.0	231.0	225.0	218.0	206.0	201.0	202.0	208.0	212.0	218.0	218.0
145°	235.0	230.0	225.0	218.0	207.0	202.0	204.0	211.0	215.0	223.0	225.0
147.5°	230.0	227.0	223.0	219.0	210.0	207.0	209.0	216.0	220.0	229.0	233.0
150°	224.0	221.0	219.0	220.0	215.0	214.0	216.0	222.0	227.0	235.0	239.0
152.5°	216.0	214.0	216.0	221.0	220.0	220.0	224.0	230.0	234.0	241.0	241.0
155°	208.0	207.0	211.0	219.0	222.0	224.0	229.0	237.0	239.0	243.0	239.0
157.5°	203.0	203.0	207.0	216.0	220.0	224.0	229.0	234.0	232.0	235.0	230.0
160°	199.0	198.0	203.0	210.0	212.0	213.0	216.0	219.0	216.0	219.0	216.0
162.5°	185.0	184.0	188.0	193.0	194.0	193.0	196.0	198.0	195.0	198.0	196.0
165°	169.0	167.0	169.0	173.0	173.0	173.0	175.0	176.0	174.0	177.0	175.0
167.5°	154.0	152.0	153.0	156.0	156.0	155.0	157.0	159.0	157.0	159.0	158.0
170°	142.0	141.0	142.0	145.0	144.0	144.0	146.0	147.0	146.0	147.0	147.0
172.5°	137.0	135.0	136.0	139.0	139.0	138.0	140.0	141.0	140.0	141.0	140.0
175°	136.0	134.0	135.0	137.0	137.0	137.0	138.0	139.0	138.0	139.0	138.0
177.5°	137.0	136.0	136.0	139.0	138.0	138.0	139.0	140.0	139.0	139.0	138.0
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: P198471

CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	425.9	425.9	425.9	425.9	425.9	425.9	425.9	425.9
2.5°	439.2	439.2	439.2	439.2	439.2	439.2	439.2	439.2
5°	445.2	446.4	446.4	447.7	447.7	447.7	447.7	447.7
7.5°	450.1	450.1	450.1	450.1	451.3	451.3	451.3	451.3
10°	464.5	465.9	464.5	464.5	462.2	461.0	461.0	461.0
12.5°	485.2	486.4	486.4	484.0	481.5	479.1	477.9	476.7
15°	504.5	508.1	505.7	504.5	502.2	503.4	503.4	504.5
17.5°	534.7	535.9	532.4	530.0	528.8	531.2	533.6	534.7
20°	586.8	584.4	577.1	574.7	572.2	572.2	574.7	574.7
22.5°	619.5	613.4	608.5	606.1	606.1	606.1	602.6	597.7
25°	642.4	638.9	635.1	637.7	640.0	636.3	628.0	626.7
27.5°	674.0	666.7	665.5	664.3	665.5	663.0	661.8	657.0
30°	715.0	705.4	703.0	700.6	693.3	690.8	693.3	696.9
32.5°	753.7	747.7	750.1	745.4	732.0	727.2	729.6	728.4
35°	809.5	798.5	798.5	788.8	785.2	784.0	774.4	765.9
37.5°	897.7	883.2	879.5	857.8	848.1	850.5	837.3	827.6
40°	1005.4	994.5	984.8	960.6	947.4	930.4	921.9	921.9
42.5°	1076.8	1069.5	1056.2	1039.3	1024.7	995.7	984.8	990.9
45°	1155.5	1145.8	1118.0	1101.0	1087.6	1067.1	1055.0	1042.9
47.5°	1235.3	1221.9	1189.4	1167.5	1136.1	1130.0	1116.8	1099.8
50°	1305.5	1300.6	1277.6	1241.3	1201.4	1191.7	1179.7	1163.9
52.5°	1391.4	1362.4	1343.0	1327.3	1282.5	1251.1	1234.1	1241.3
55°	1531.8	1495.5	1445.8	1396.3	1386.6	1349.0	1306.7	1329.6
57.5°	1612.8	1592.2	1554.7	1476.0	1437.3	1411.9	1384.1	1363.5
60°	1632.2	1594.7	1586.2	1526.9	1465.1	1411.9	1422.9	1374.4
62.5°	1669.7	1618.8	1571.6	1524.5	1487.0	1414.4	1411.9	1386.6
63°	1681.7	1631.0	1581.3	1524.5	1490.6	1422.9	1409.5	1396.3
65°	1679.3	1635.8	1598.3	1524.5	1473.6	1447.0	1381.7	1411.9
67.5°	1633.4	1597.1	1553.5	1502.6	1418.0	1397.5	1351.5	1357.5
70°	1559.6	1512.3	1471.2	1424.1	1356.3	1309.1	1281.3	1258.2
72.5°	1444.6	1402.2	1358.6	1315.2	1254.7	1197.8	1178.4	1153.1
75°	1292.2	1251.1	1211.1	1170.0	1113.1	1062.3	1041.7	1023.5
77.5°	1118.0	1082.9	1026.0	987.2	954.6	900.2	880.9	861.4
80°	891.7	874.8	833.6	782.8	765.9	712.6	698.1	672.6
82.5°	648.5	631.6	598.9	563.8	543.2	515.4	491.2	474.3
85°	395.7	377.5	360.6	329.0	317.0	296.4	277.1	267.4
87.5°	142.8	128.2	115.0	100.4	93.1	78.7	76.2	69.0
90°	28.0	30.0	32.0	33.0	34.0	34.0	34.0	34.0
92.5°	28.0	30.0	32.0	33.0	35.0	36.0	36.0	36.0
95°	30.0	32.0	34.0	35.0	37.0	38.0	39.0	38.0
97.5°	33.0	34.0	34.0	35.0	36.0	36.0	36.0	36.0
100°	36.0	37.0	38.0	38.0	38.0	38.0	37.0	37.0
102.5°	43.0	44.0	44.0	42.0	42.0	41.0	41.0	41.0
105°	54.0	54.0	53.0	51.0	49.0	48.0	48.0	49.0
107.5°	68.0	68.0	66.0	63.0	60.0	59.0	59.0	60.0

REPORT NUMBER: P198471

CATALOG NUMBER: TT-C4-LED-E1-WQ-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
110°	84.0	83.0	84.0	81.0	78.0	76.0	74.0	75.0
112.5°	102.0	102.0	105.0	103.0	100.0	98.0	95.0	94.0
115°	121.0	123.0	125.0	124.0	123.0	121.0	116.0	113.0
117.5°	138.0	140.0	141.0	139.0	139.0	139.0	133.0	129.0
120°	150.0	151.0	153.0	148.0	148.0	148.0	145.0	142.0
122.5°	159.0	160.0	162.0	156.0	155.0	156.0	153.0	150.0
125°	167.0	167.0	168.0	164.0	163.0	164.0	160.0	158.0
127.5°	176.0	175.0	175.0	173.0	173.0	173.0	166.0	163.0
130°	183.0	182.0	183.0	181.0	184.0	181.0	171.0	169.0
132.5°	190.0	189.0	192.0	189.0	192.0	190.0	179.0	176.0
135°	196.0	197.0	201.0	199.0	199.0	195.0	185.0	184.0
137.5°	203.0	205.0	210.0	207.0	204.0	198.0	191.0	190.0
140°	212.0	214.0	217.0	214.0	209.0	202.0	195.0	195.0
142.5°	220.0	222.0	223.0	217.0	211.0	204.0	198.0	198.0
145°	230.0	230.0	227.0	217.0	211.0	205.0	201.0	202.0
147.5°	239.0	236.0	229.0	218.0	212.0	207.0	204.0	206.0
150°	242.0	240.0	232.0	220.0	214.0	211.0	210.0	211.0
152.5°	242.0	241.0	235.0	223.0	219.0	217.0	215.0	216.0
155°	238.0	237.0	234.0	227.0	224.0	223.0	220.0	219.0
157.5°	228.0	229.0	229.0	226.0	226.0	225.0	222.0	219.0
160°	215.0	217.0	219.0	219.0	221.0	222.0	218.0	215.0
162.5°	196.0	199.0	200.0	201.0	204.0	208.0	207.0	207.0
165°	176.0	179.0	181.0	181.0	185.0	189.0	190.0	192.0
167.5°	160.0	163.0	165.0	164.0	168.0	171.0	172.0	174.0
170°	148.0	150.0	152.0	152.0	155.0	158.0	159.0	160.0
172.5°	141.0	144.0	145.0	144.0	146.0	149.0	149.0	151.0
175°	138.0	140.0	141.0	140.0	141.0	143.0	143.0	144.0
177.5°	138.0	140.0	140.0	138.0	140.0	141.0	141.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)