

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: P198428

Luminaire Tested: **TT-C4-LED-E1-CQ-LWR-LW-8030-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198428
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-CQ-LWR-LW-8030-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
CONCENTRATED DISTRIBUTION WITH LumaWatt WIRELESS SENSOR
Light Source: (160) 3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6025.5 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B2 - U4 - G1

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

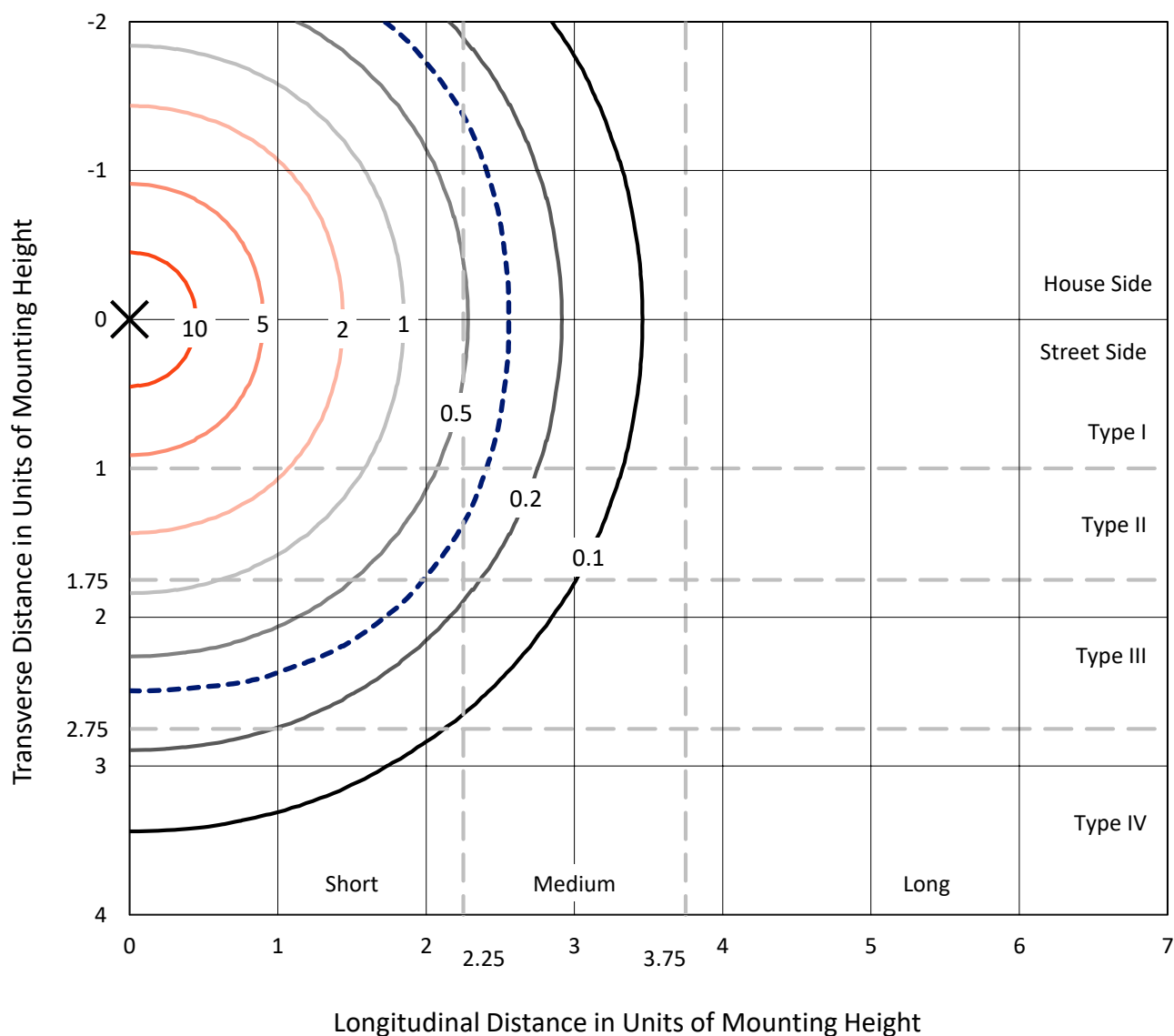


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

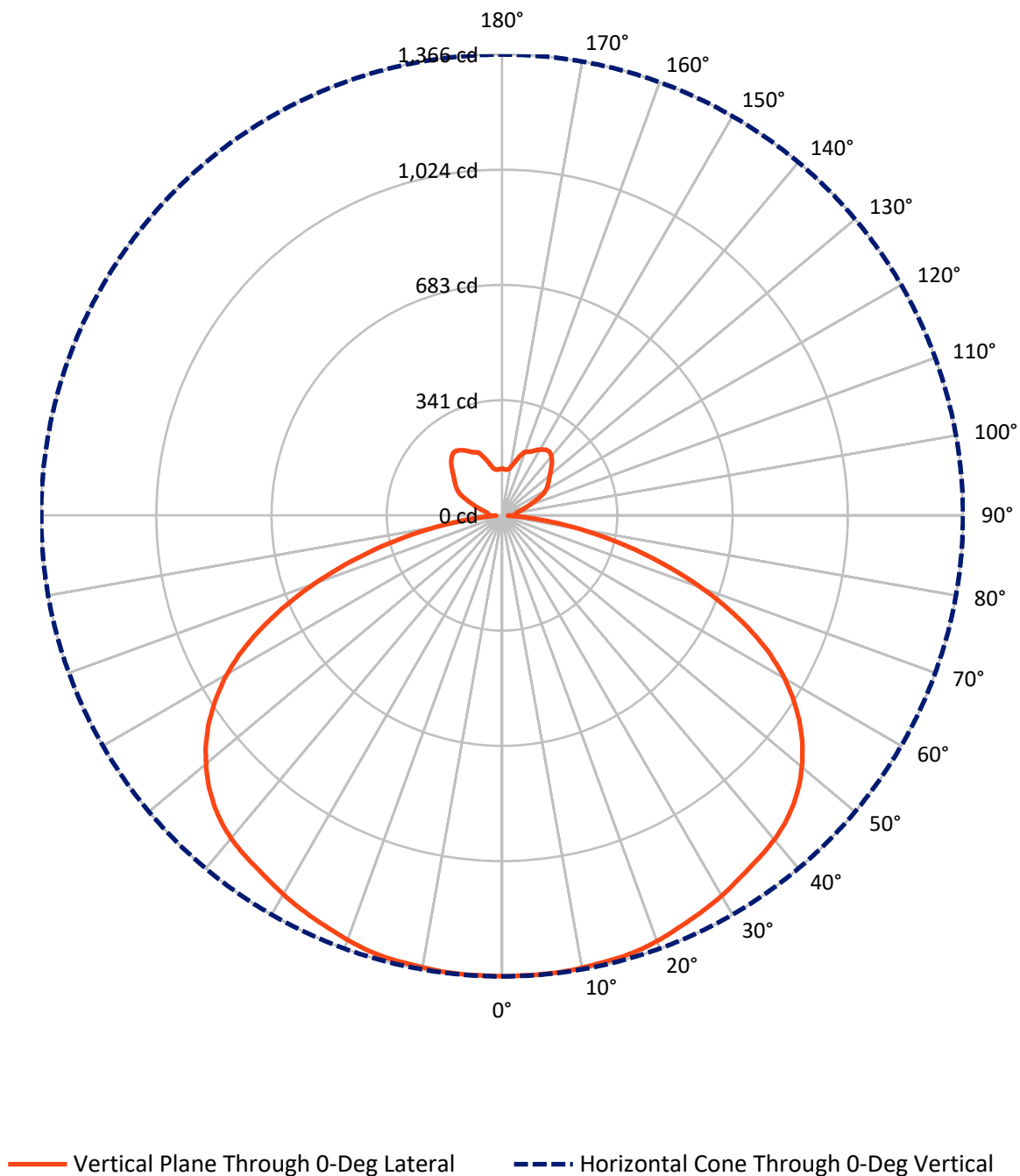


Based on 10 foot mounting height. Maximum calculated value = 13.7 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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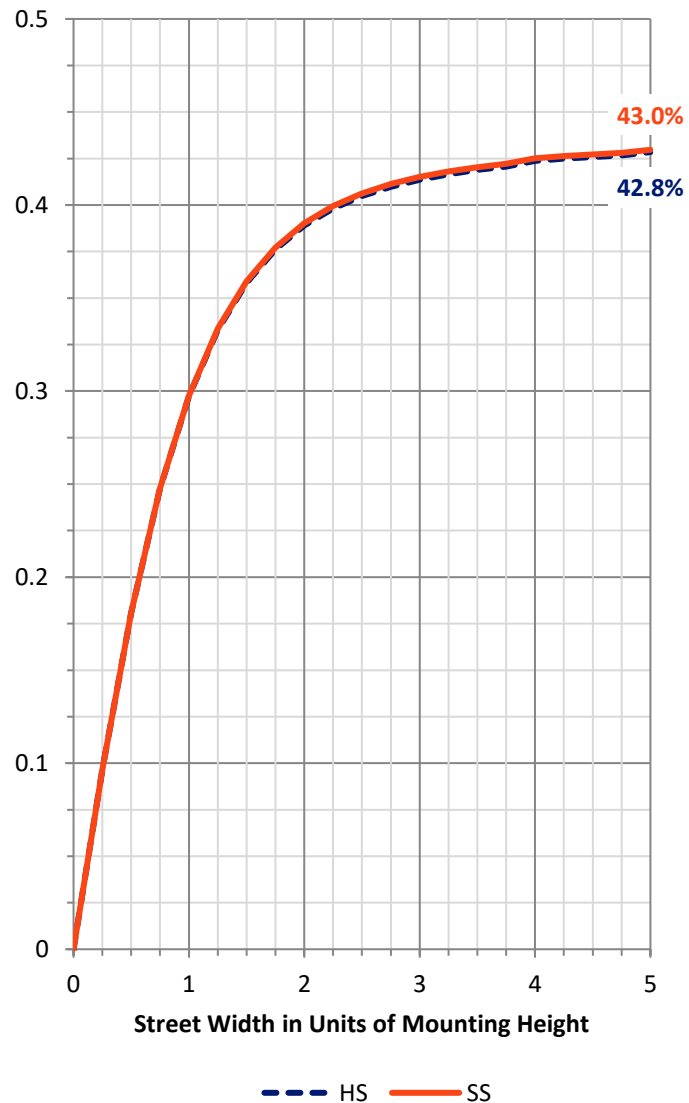
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2600.8	412.0	3012.7
	% Fixture	43.2	6.8	50.0
Street Side	Lumens	2600.8	412.0	3012.7
	% Fixture	43.2	6.8	50.0
Total	Lumens	5201.5	824.0	6025.5
	% Fixture	86.3	13.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	2.2
10°-20°	383.3	6.4
20°-30°	610.4	10.1
30°-40°	800.3	13.3
40°-50°	943.9	15.7
50°-60°	977.6	16.2
60°-70°	817.5	13.6
70°-80°	445.6	7.4
80°-90°	92.8	1.5
90°-100°	38.3	0.6
100°-110°	59.4	1.0
110°-120°	119.3	2.0
120°-130°	148.7	2.5
130°-140°	153.2	2.5
140°-150°	136.0	2.3
150°-160°	103.7	1.7
160°-170°	51.8	0.9
170°-180°	13.6	0.2
0°-90°	5201.5	86.3
0°-180°	6025.5	100.0

Coefficient of Utilization



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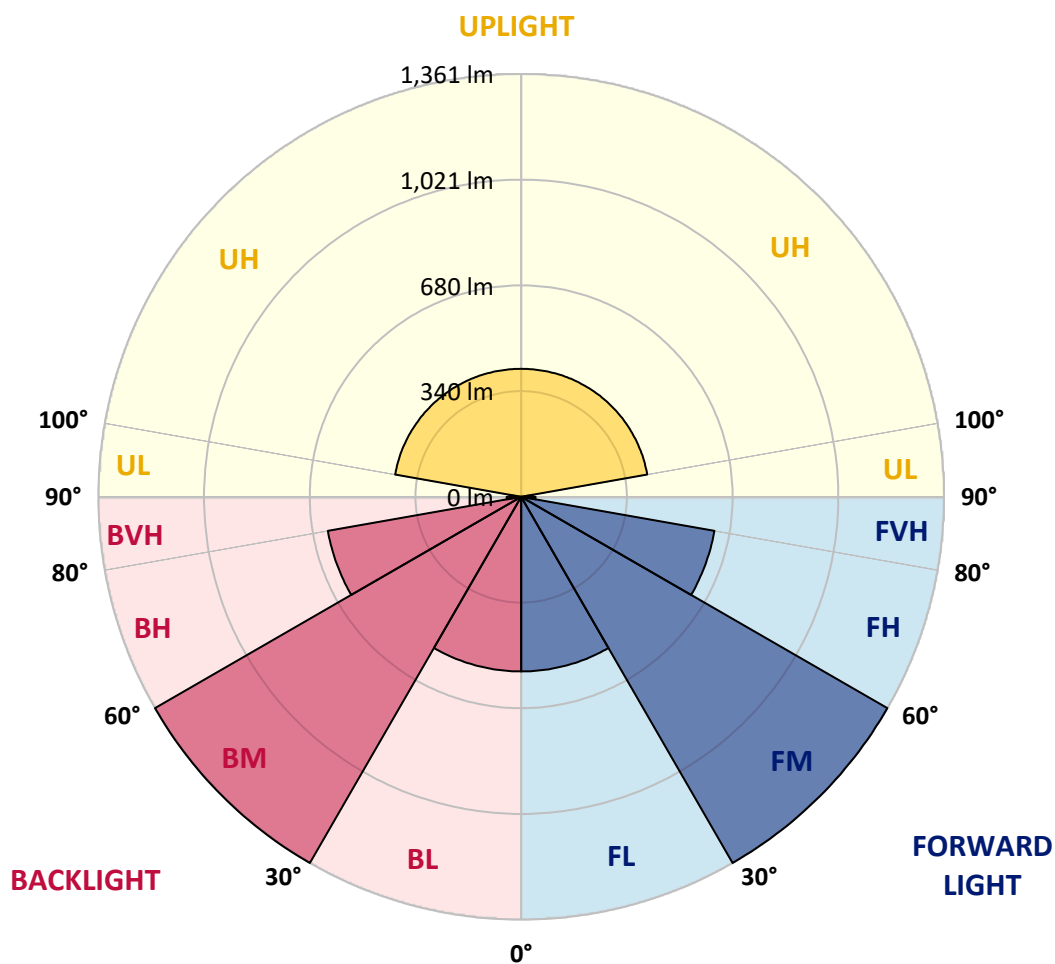
CATALOG NUMBER: TT-C4-LED-E1-CQ-LWR-LW-8030-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	561.9	9.3			
FM	(30°-60°)	1360.9	22.6			
FH	(60°-80°)	631.6	10.5			G0/660
FVH	(80°-90°)	46.4	0.8			G1/100
BL	(0°-30°)	561.9	9.3	B2/1000		
BM	(30°-60°)	1360.9	22.6	B2/2500		
BH	(60°-80°)	631.6	10.5	B2/1000		G0/660
BVH	(80°-90°)	46.4	0.8			G1/100
UL	(90°-100°)	38.3	0.6		U2/50	
UH	(100°-180°)	412.0	6.8		U3/500	

BUG Rating: B2-U4-G1

Type V Short



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CATALOG NUMBER: TT-C4-LED-E1-CQ-LWR-LW-8030-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8
2.5°	1364.7	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1364.7	1365.8	1365.8
5°	1364.7	1364.7	1364.7	1364.7	1365.8	1364.7	1364.7	1364.7	1364.7	1364.7	1364.7
7.5°	1363.6	1362.5	1362.5	1362.5	1362.5	1362.5	1363.6	1363.6	1363.6	1363.6	1363.6
10°	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4
12.5°	1357.1	1357.1	1357.1	1357.1	1358.2	1358.2	1358.2	1358.2	1358.2	1358.2	1357.1
15°	1354.9	1354.9	1354.9	1354.9	1354.9	1354.9	1354.9	1354.9	1354.9	1354.9	1354.9
17.5°	1349.4	1349.4	1349.4	1349.4	1350.5	1350.5	1350.5	1350.5	1350.5	1350.5	1350.5
20°	1340.7	1340.7	1340.7	1340.7	1340.7	1341.8	1342.9	1342.9	1342.9	1342.9	1342.9
22.5°	1329.7	1329.7	1330.8	1330.8	1331.9	1331.9	1333.0	1333.0	1333.0	1333.0	1333.0
25°	1319.9	1319.9	1319.9	1321.0	1321.0	1321.0	1322.1	1323.2	1323.2	1323.2	1322.1
27.5°	1310.1	1310.1	1310.1	1311.1	1311.1	1311.1	1312.2	1312.2	1313.3	1312.2	1312.2
30°	1299.1	1298.0	1298.0	1299.1	1300.2	1300.2	1301.3	1301.3	1301.3	1301.3	1300.2
32.5°	1286.0	1286.0	1287.1	1288.2	1288.2	1289.3	1290.4	1290.4	1290.4	1291.5	1289.3
35°	1274.0	1275.1	1275.1	1276.2	1278.3	1279.4	1280.5	1281.6	1281.6	1281.6	1279.4
37.5°	1264.1	1265.2	1266.3	1268.5	1270.7	1272.9	1275.1	1277.2	1276.2	1276.2	1272.9
40°	1252.1	1253.2	1255.4	1257.6	1261.9	1264.1	1267.4	1269.6	1270.7	1269.6	1266.3
42.5°	1235.7	1236.8	1239.0	1242.3	1247.7	1252.1	1255.4	1258.7	1259.8	1258.7	1255.4
45°	1213.8	1214.9	1217.1	1221.5	1228.0	1232.4	1237.9	1241.2	1243.3	1243.3	1240.1
47.5°	1186.5	1187.6	1190.9	1195.2	1201.8	1207.3	1213.8	1218.2	1220.4	1222.6	1219.3
50°	1152.6	1153.7	1158.1	1163.5	1169.0	1176.6	1184.3	1190.9	1194.1	1195.2	1194.1
52.5°	1114.3	1115.4	1119.8	1125.2	1132.9	1141.6	1150.4	1158.1	1162.4	1164.6	1162.4
55°	1068.4	1070.6	1073.9	1081.5	1090.3	1097.9	1108.8	1117.6	1123.1	1124.2	1123.1
57.5°	1014.8	1018.1	1021.4	1030.1	1038.9	1049.8	1058.5	1067.3	1073.9	1074.9	1074.9
60°	954.7	956.8	960.1	968.9	978.7	986.4	998.4	1007.1	1012.6	1012.6	1013.7
62.5°	883.6	885.8	891.2	897.8	908.7	916.4	926.2	935.0	940.4	942.6	941.5
65°	800.5	802.7	805.9	814.7	823.4	832.2	842.0	849.7	855.1	856.2	855.1
67.5°	708.6	710.8	713.0	723.9	732.7	735.9	748.0	754.5	757.8	758.9	758.9
70°	611.3	612.4	615.7	621.1	631.0	634.2	641.9	647.4	649.6	653.9	650.7
72.5°	509.6	511.8	519.4	520.5	528.2	532.6	534.7	534.7	540.2	540.2	541.3
75°	409.0	410.1	413.4	414.4	419.9	419.9	418.8	421.0	425.4	425.4	426.5
77.5°	309.5	309.5	314.9	310.6	312.8	308.4	310.6	308.4	311.7	310.6	311.7
80°	216.5	216.5	219.8	215.4	216.5	212.1	213.2	212.1	212.1	213.2	213.2
82.5°	133.4	134.5	136.7	133.4	133.4	130.1	131.2	132.3	132.3	131.2	130.1
85°	65.6	65.6	67.8	66.7	65.6	63.4	64.5	65.6	65.6	64.5	64.5
87.5°	17.5	17.5	18.6	18.6	17.5	16.4	17.5	18.6	18.6	18.6	17.5
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
110°	86.0	86.0	87.0	89.0	86.0	85.0	85.0	86.0	86.0	87.0	86.0

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CATALOG NUMBER: TT-C4-LED-E1-CQ-LWR-LW-8030-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8	1365.8
2.5°	1364.7	1364.7	1365.8	1364.7	1365.8	1364.7	1365.8	1365.8
5°	1364.7	1364.7	1364.7	1364.7	1364.7	1364.7	1364.7	1364.7
7.5°	1362.5	1363.6	1362.5	1362.5	1362.5	1363.6	1362.5	1363.6
10°	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4	1360.4
12.5°	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1356.0
15°	1354.9	1353.8	1353.8	1353.8	1352.7	1352.7	1352.7	1352.7
17.5°	1350.5	1349.4	1348.3	1348.3	1348.3	1348.3	1347.2	1347.2
20°	1342.9	1341.8	1340.7	1340.7	1339.6	1339.6	1338.5	1338.5
22.5°	1331.9	1331.9	1330.8	1329.7	1329.7	1328.6	1328.6	1327.6
25°	1322.1	1321.0	1319.9	1318.8	1317.7	1317.7	1316.6	1315.5
27.5°	1311.1	1309.0	1307.9	1306.8	1305.7	1304.6	1303.5	1302.4
30°	1299.1	1296.9	1294.7	1293.7	1291.5	1289.3	1288.2	1287.1
32.5°	1287.1	1284.9	1281.6	1278.3	1276.2	1274.0	1271.8	1270.7
35°	1277.2	1272.9	1269.6	1265.2	1261.9	1258.7	1257.6	1256.5
37.5°	1269.6	1265.2	1259.8	1255.4	1252.1	1247.7	1245.5	1243.3
40°	1261.9	1256.5	1249.9	1244.4	1240.1	1234.6	1232.4	1230.2
42.5°	1251.0	1244.4	1237.9	1231.3	1224.8	1219.3	1216.0	1213.8
45°	1235.7	1229.1	1221.5	1212.7	1206.2	1199.6	1196.3	1194.1
47.5°	1214.9	1208.4	1199.6	1192.0	1184.3	1177.7	1173.4	1171.2
50°	1189.8	1183.2	1174.5	1165.7	1158.1	1150.4	1147.1	1143.8
52.5°	1158.1	1152.6	1142.7	1136.2	1127.4	1119.8	1116.5	1114.3
55°	1118.7	1113.2	1103.4	1096.8	1088.1	1081.5	1077.1	1073.9
57.5°	1070.6	1066.2	1055.3	1048.7	1040.0	1033.4	1030.1	1027.9
60°	1011.5	1007.1	996.2	989.6	982.0	974.3	972.2	970.0
62.5°	938.3	936.1	927.3	919.7	912.0	904.4	902.2	901.1
65°	853.0	850.8	843.1	836.6	830.0	823.4	821.2	819.1
67.5°	755.6	754.5	748.0	742.5	738.1	731.6	730.5	728.3
70°	651.7	649.6	644.1	639.7	636.4	631.0	629.9	627.7
72.5°	543.5	542.4	539.1	533.6	533.6	526.0	524.9	523.8
75°	424.3	429.8	425.4	423.2	423.2	418.8	418.8	417.7
77.5°	310.6	316.0	319.3	314.9	319.3	314.9	314.9	313.8
80°	212.1	216.5	219.8	216.5	222.0	218.7	218.7	223.1
82.5°	129.0	133.4	135.6	134.5	137.8	136.7	135.6	138.9
85°	63.4	65.6	66.7	66.7	67.8	65.6	67.8	68.9
87.5°	16.4	17.5	18.6	17.5	18.6	18.6	18.6	19.7
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
110°	84.0	83.0	84.0	81.0	78.0	76.0	74.0	75.0

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CATALOG NUMBER: TT-C4-LED-E1-CQ-LWR-LW-8030-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
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)