

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: P198438

Luminaire Tested: **TT-C4-LED-E1-MQ-CG-MS/DIM-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198438
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-MQ-CG-MS/DIM-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS AND DIMMING OCCUPANCY SENSOR
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7261.2 lumens
Efficiency: N/A
Efficacy: 96.3 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



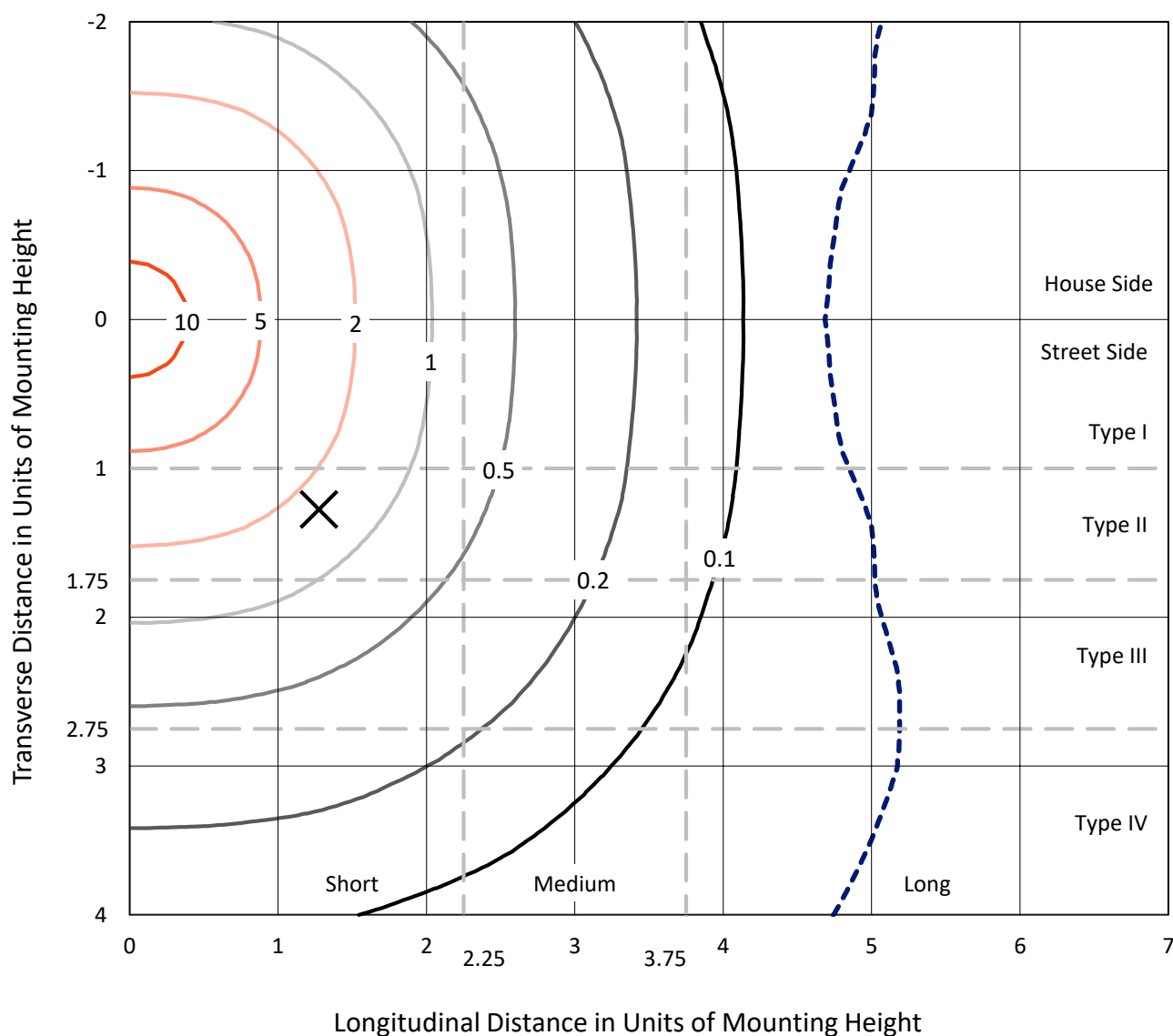
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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

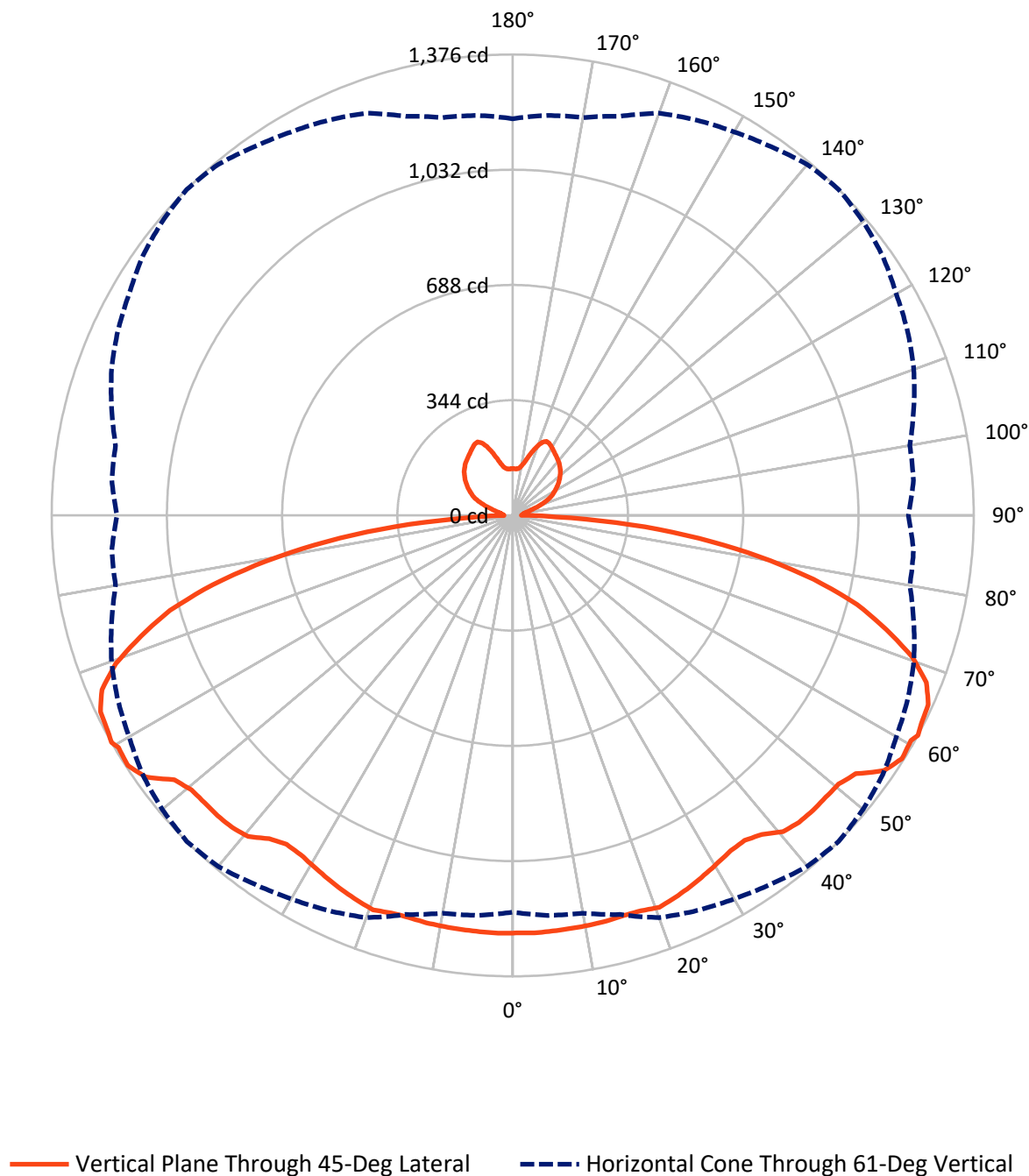


Based on 10 foot mounting height. Maximum calculated value = 12.5 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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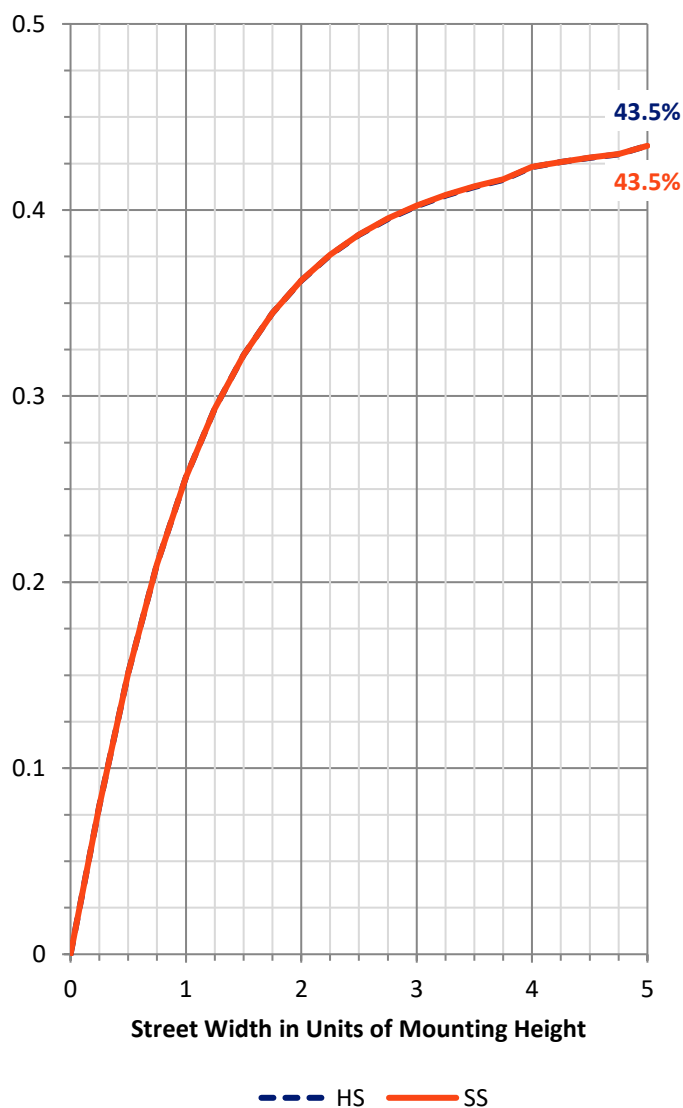
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3218.6	412.0	3630.6
	% Fixture	44.3	5.7	50.0
Street Side	Lumens	3218.6	412.0	3630.6
	% Fixture	44.3	5.7	50.0
Total	Lumens	6437.2	824.0	7261.2
	% Fixture	88.7	11.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.9	1.6
10°-20°	351.5	4.8
20°-30°	565.6	7.8
30°-40°	749.3	10.3
40°-50°	946.2	13.0
50°-60°	1133.7	15.6
60°-70°	1239.6	17.1
70°-80°	992.3	13.7
80°-90°	340.1	4.7
90°-100°	38.3	0.5
100°-110°	59.4	0.8
110°-120°	119.3	1.6
120°-130°	148.7	2.0
130°-140°	153.2	2.1
140°-150°	136.0	1.9
150°-160°	103.7	1.4
160°-170°	51.8	0.7
170°-180°	13.6	0.2
0°-90°	6437.2	88.7
0°-180°	7261.2	100.0

Coefficient of Utilization



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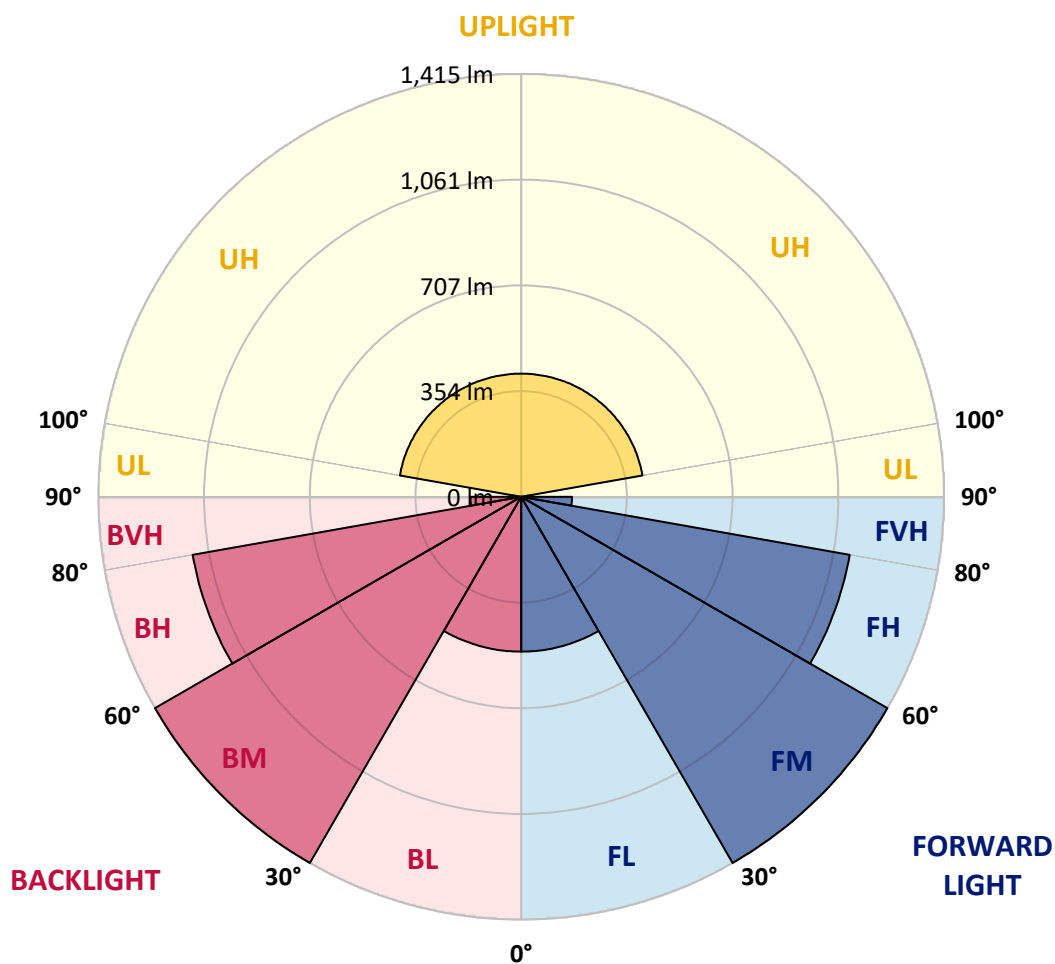
CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-MS/DIM-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	518.0	7.1			
FM	(30°-60°)	1414.6	19.5			
FH	(60°-80°)	1116.0	15.4			G1/1800
FVH	(80°-90°)	170.1	2.3			G2/225
BL	(0°-30°)	518.0	7.1	B2/1000		
BM	(30°-60°)	1414.6	19.5	B2/2500		
BH	(60°-80°)	1116.0	15.4	B3/2500		G1/1800
BVH	(80°-90°)	170.1	2.3			G2/225
UL	(90°-100°)	38.3	0.5		U2/50	
UH	(100°-180°)	412.0	5.7		U3/500	

BUG Rating: B3-U4-G2

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3
2.5°	1247.5	1246.3	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5
5°	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3
7.5°	1245.1	1245.1	1245.1	1245.1	1245.1	1245.1	1245.1	1245.1	1246.3	1245.1	1246.3
10°	1242.7	1242.7	1242.7	1242.7	1244.0	1244.0	1244.0	1244.0	1244.0	1244.0	1244.0
12.5°	1240.4	1240.4	1240.4	1240.4	1241.5	1241.5	1241.5	1241.5	1242.7	1242.7	1241.5
15°	1237.9	1236.8	1236.8	1237.9	1237.9	1239.1	1239.1	1239.1	1240.4	1239.1	1239.1
17.5°	1235.5	1234.3	1235.5	1236.8	1236.8	1237.9	1239.1	1239.1	1240.4	1240.4	1240.4
20°	1239.1	1237.9	1239.1	1240.4	1241.5	1244.0	1245.1	1246.3	1247.5	1248.8	1248.8
22.5°	1231.9	1230.7	1231.9	1231.9	1233.2	1234.3	1236.8	1237.9	1239.1	1239.1	1239.1
25°	1221.2	1221.2	1222.4	1222.4	1223.5	1224.8	1226.0	1227.1	1227.1	1228.4	1227.1
27.5°	1209.2	1209.2	1210.4	1210.4	1212.7	1212.7	1214.0	1215.2	1216.3	1216.3	1216.3
30°	1194.8	1194.8	1196.0	1197.1	1199.6	1200.7	1202.0	1203.2	1204.3	1204.3	1204.3
32.5°	1181.7	1180.4	1181.7	1184.0	1187.6	1190.0	1192.4	1193.6	1193.6	1193.6	1194.8
35°	1170.8	1172.0	1174.4	1176.8	1181.7	1184.0	1186.4	1190.0	1191.2	1191.2	1191.2
37.5°	1173.3	1174.4	1178.1	1182.8	1188.9	1196.0	1200.7	1205.6	1209.2	1207.9	1206.8
40°	1188.9	1191.2	1197.1	1204.3	1214.0	1223.5	1230.7	1236.8	1240.4	1241.5	1240.4
42.5°	1191.2	1193.6	1198.4	1209.2	1219.9	1230.7	1240.4	1246.3	1251.1	1252.4	1251.1
45°	1190.0	1190.0	1197.1	1209.2	1219.9	1230.7	1242.7	1251.1	1256.0	1256.0	1256.0
47.5°	1181.7	1185.3	1190.0	1202.0	1216.3	1227.1	1239.1	1247.5	1253.5	1257.1	1253.5
50°	1181.7	1181.7	1190.0	1198.4	1211.5	1230.7	1247.5	1256.0	1261.9	1260.7	1261.9
52.5°	1179.2	1186.4	1191.2	1203.2	1227.1	1246.3	1259.6	1271.4	1279.9	1281.1	1278.6
55°	1200.7	1202.0	1212.7	1235.5	1258.3	1279.9	1303.9	1321.8	1336.2	1344.6	1332.6
57.5°	1217.6	1211.5	1233.2	1252.4	1278.6	1311.1	1347.0	1361.3	1372.1	1369.8	1373.4
60°	1194.8	1203.2	1218.8	1239.1	1281.1	1313.4	1332.6	1348.2	1361.3	1364.9	1360.2
61°	1184.0	1198.4	1205.6	1233.2	1277.5	1301.4	1321.8	1343.4	1367.4	1375.7	1364.9
62.5°	1166.1	1188.9	1186.4	1230.7	1258.3	1285.9	1324.2	1349.3	1366.2	1368.5	1366.2
65°	1167.2	1163.6	1191.2	1223.5	1251.1	1300.3	1332.6	1348.2	1357.7	1362.6	1360.2
67.5°	1128.9	1116.9	1150.5	1173.3	1219.9	1258.3	1289.5	1312.2	1326.7	1331.4	1325.4
70°	1040.3	1048.6	1072.6	1107.4	1145.6	1192.4	1221.2	1251.1	1263.2	1264.3	1264.3
72.5°	955.1	959.9	983.9	1016.2	1060.6	1101.3	1130.0	1154.1	1164.8	1166.1	1168.4
75°	842.5	847.2	874.8	904.8	949.1	983.9	1004.2	1032.9	1048.6	1061.8	1051.0
77.5°	711.9	720.2	741.8	774.2	814.9	834.1	870.0	903.6	914.3	917.9	914.3
80°	564.4	575.2	594.4	637.6	655.5	686.7	721.4	735.8	745.4	747.8	749.0
82.5°	406.3	414.7	435.0	465.0	485.4	510.5	534.4	552.5	563.3	560.8	559.7
85°	239.7	242.1	263.6	284.1	299.7	315.1	334.3	347.6	349.9	354.8	353.5
87.5°	71.9	73.1	82.7	93.5	100.7	107.9	119.9	135.5	139.1	129.4	130.6
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

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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

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3
2.5°	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1246.3	1247.5
5°	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3	1246.3
7.5°	1246.3	1245.1	1245.1	1245.1	1245.1	1245.1	1245.1	1245.1
10°	1244.0	1244.0	1244.0	1244.0	1242.7	1242.7	1242.7	1242.7
12.5°	1241.5	1241.5	1241.5	1241.5	1240.4	1240.4	1240.4	1240.4
15°	1239.1	1239.1	1239.1	1239.1	1237.9	1237.9	1237.9	1237.9
17.5°	1240.4	1239.1	1237.9	1237.9	1236.8	1235.5	1235.5	1235.5
20°	1247.5	1246.3	1244.0	1241.5	1240.4	1239.1	1239.1	1239.1
22.5°	1237.9	1236.8	1234.3	1233.2	1233.2	1231.9	1230.7	1230.7
25°	1227.1	1224.8	1224.8	1223.5	1223.5	1221.2	1221.2	1219.9
27.5°	1215.2	1214.0	1212.7	1211.5	1211.5	1210.4	1209.2	1207.9
30°	1204.3	1202.0	1199.6	1198.4	1197.1	1196.0	1196.0	1196.0
32.5°	1193.6	1191.2	1190.0	1186.4	1184.0	1182.8	1181.7	1181.7
35°	1190.0	1186.4	1184.0	1180.4	1176.8	1174.4	1173.3	1170.8
37.5°	1204.3	1199.6	1196.0	1190.0	1181.7	1178.1	1174.4	1173.3
40°	1235.5	1230.7	1223.5	1214.0	1204.3	1197.1	1191.2	1188.9
42.5°	1246.3	1240.4	1230.7	1221.2	1209.2	1198.4	1193.6	1191.2
45°	1249.9	1244.0	1230.7	1218.8	1207.9	1198.4	1191.2	1188.9
47.5°	1246.3	1237.9	1226.0	1216.3	1200.7	1188.9	1184.0	1180.4
50°	1254.7	1247.5	1231.9	1210.4	1197.1	1190.0	1181.7	1180.4
52.5°	1271.4	1258.3	1244.0	1228.4	1203.2	1188.9	1184.0	1178.1
55°	1321.8	1303.9	1278.6	1253.5	1237.9	1215.2	1200.7	1200.7
57.5°	1360.2	1345.7	1313.4	1279.9	1251.1	1234.3	1212.7	1214.0
60°	1349.3	1330.3	1314.7	1281.1	1240.4	1217.6	1209.2	1193.6
61°	1348.2	1321.8	1300.3	1273.9	1239.1	1203.2	1200.7	1180.4
62.5°	1350.6	1326.7	1285.9	1258.3	1231.9	1185.3	1184.0	1164.8
65°	1348.2	1325.4	1305.0	1253.5	1217.6	1198.4	1157.6	1173.3
67.5°	1311.1	1290.6	1253.5	1224.8	1169.7	1145.6	1122.8	1122.8
70°	1252.4	1222.4	1186.4	1150.5	1113.3	1072.6	1052.1	1040.3
72.5°	1154.1	1128.9	1100.1	1061.8	1016.2	979.1	959.9	951.5
75°	1030.6	1003.1	977.8	949.1	901.2	870.0	849.7	843.6
77.5°	901.2	877.2	832.9	805.4	772.9	737.0	719.1	711.9
80°	735.8	722.7	691.4	647.1	631.5	587.2	575.2	564.4
82.5°	552.5	538.0	509.3	478.2	459.0	433.8	412.2	409.9
85°	347.6	337.9	320.0	297.2	273.3	258.8	239.7	244.4
87.5°	129.4	123.5	112.7	98.3	87.4	77.9	68.4	71.9
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

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CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-MS/DIM-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)