

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: P198436

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198436
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-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION WITH CLEAR GLASS LENS AND LumaWatt WIRELESS SENSOR
Light Source: (160) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6704.1 lumens
Efficiency: N/A
Efficacy: 88.9 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

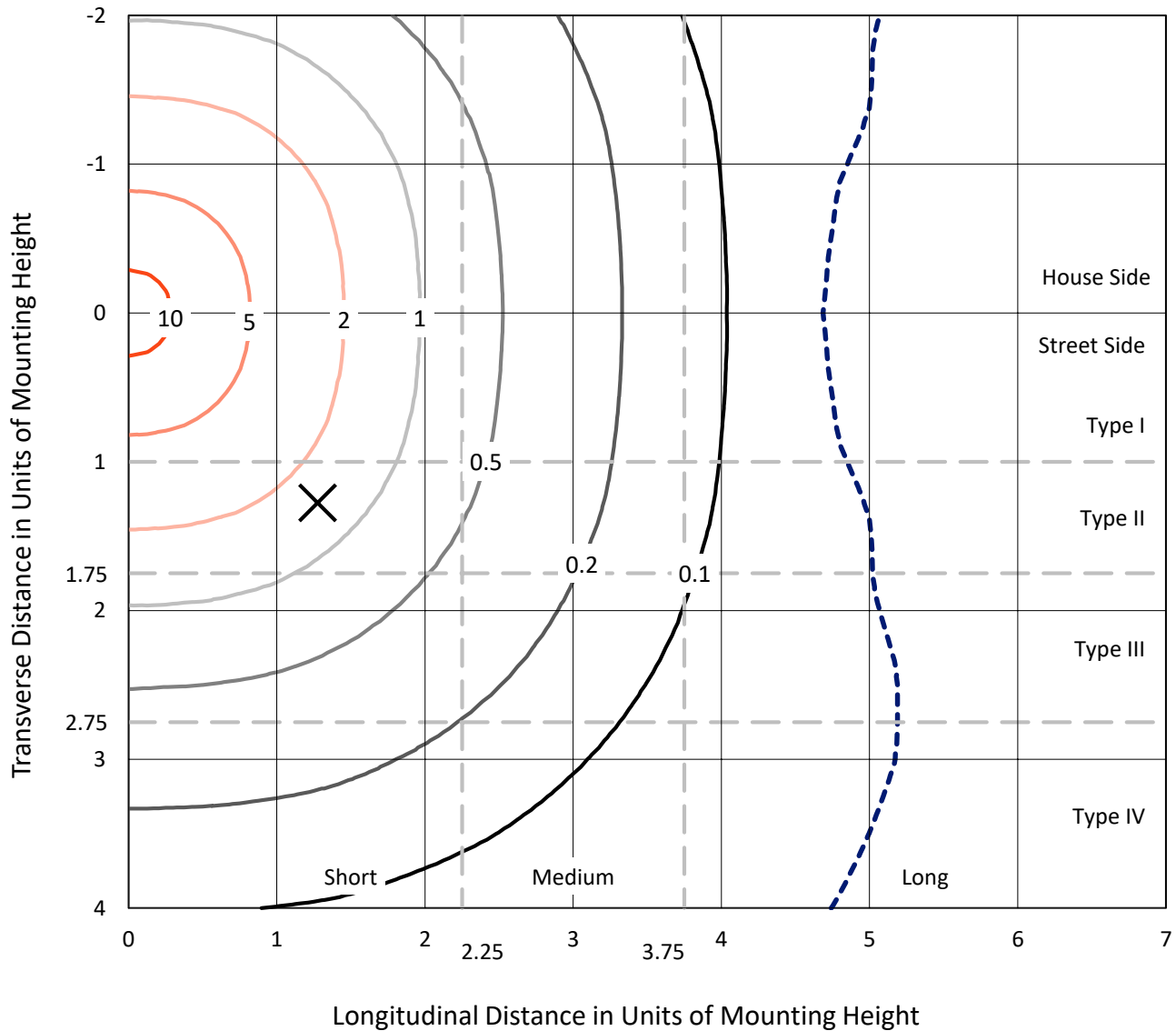
Input Watts (W): 75.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P198436
 CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-LWR-LW-UPL

Iso-Footcandle Lines of Horizontal Illumination

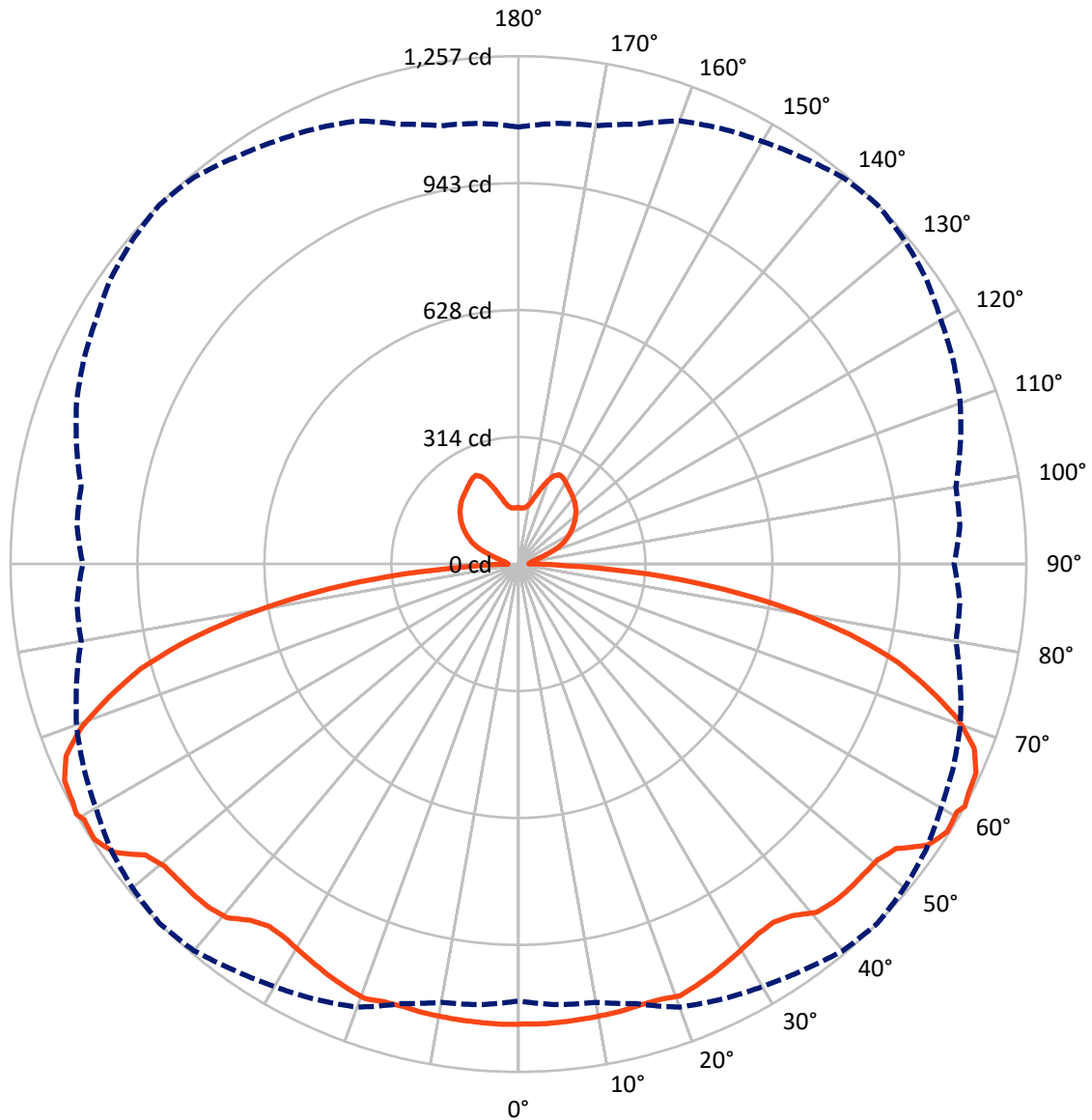
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.4 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P198436
CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-LWR-LW-UPL

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 61-Deg Vertical

REPORT NUMBER: P198436

CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-LWR-LW-UPL

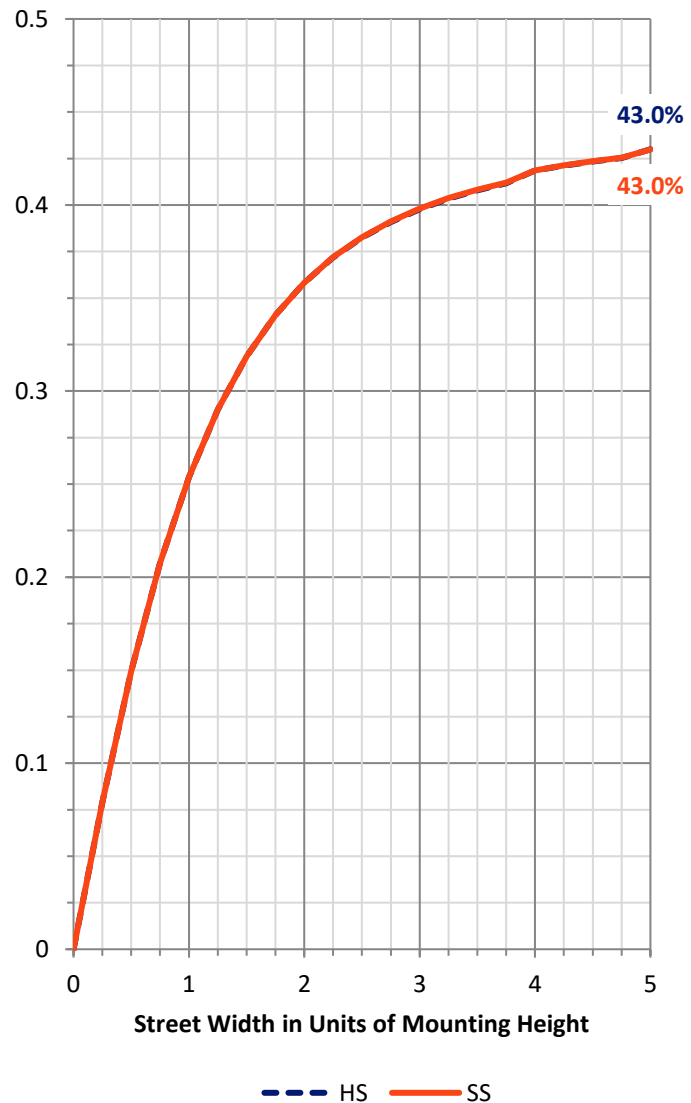
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2940.0	412.0	3352.0
	% Fixture	43.9	6.1	50.0
Street Side	Lumens	2940.0	412.0	3352.0
	% Fixture	43.9	6.1	50.0
Total	Lumens	5880.1	824.0	6704.1
	% Fixture	87.7	12.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.6	1.6
10°-20°	321.1	4.8
20°-30°	516.6	7.7
30°-40°	684.4	10.2
40°-50°	864.2	12.9
50°-60°	1035.5	15.4
60°-70°	1132.3	16.9
70°-80°	906.4	13.5
80°-90°	311.0	4.6
90°-100°	38.3	0.6
100°-110°	59.4	0.9
110°-120°	119.3	1.8
120°-130°	148.7	2.2
130°-140°	153.2	2.3
140°-150°	136.0	2.0
150°-160°	103.7	1.5
160°-170°	51.8	0.8
170°-180°	13.6	0.2
0°-90°	5880.1	87.7
0°-180°	6704.1	100.0



REPORT NUMBER: P198436

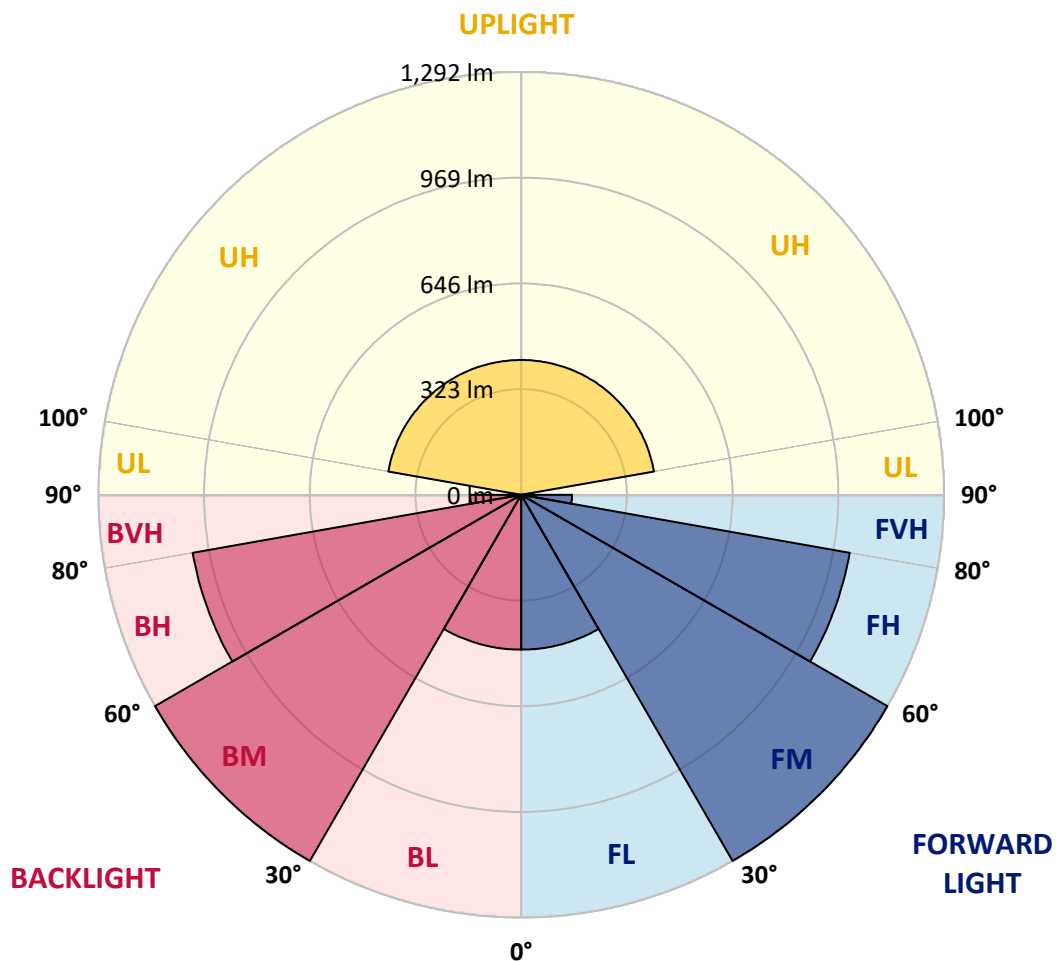
CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-LWR-LW-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	473.1	7.1			
FM	(30°-60°)	1292.1	19.3			
FH	(60°-80°)	1019.3	15.2			G1/1800
FVH	(80°-90°)	155.5	2.3			G2/225
BL	(0°-30°)	473.1	7.1	B1/500		
BM	(30°-60°)	1292.1	19.3	B2/2500		
BH	(60°-80°)	1019.3	15.2	B3/2500		G1/1800
BVH	(80°-90°)	155.5	2.3			G2/225
UL	(90°-100°)	38.3	0.6		U2/50	
UH	(100°-180°)	412.0	6.1		U3/500	

BUG Rating: B3-U4-G2

Type V Short





REPORT NUMBER: P198436

CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-LWR-LW-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5
2.5°	1139.4	1138.5	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4
5°	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5
7.5°	1137.3	1137.3	1137.3	1137.3	1137.3	1137.3	1137.3	1137.3	1138.5	1137.3	1138.5
10°	1135.1	1135.1	1135.1	1135.1	1136.2	1136.2	1136.2	1136.2	1136.2	1136.2	1136.2
12.5°	1132.9	1132.9	1132.9	1132.9	1134.0	1134.0	1134.0	1134.0	1135.1	1135.1	1134.0
15°	1130.7	1129.6	1129.6	1130.7	1130.7	1131.8	1131.8	1131.8	1132.9	1131.8	1131.8
17.5°	1128.5	1127.4	1128.5	1129.6	1129.6	1130.7	1131.8	1131.8	1132.9	1132.9	1132.9
20°	1131.8	1130.7	1131.8	1132.9	1134.0	1136.2	1137.3	1138.5	1139.4	1140.5	1140.5
22.5°	1125.2	1124.1	1125.2	1125.2	1126.3	1127.4	1129.6	1130.7	1131.8	1131.8	1131.8
25°	1115.4	1115.4	1116.5	1116.5	1117.6	1118.7	1119.8	1120.9	1120.9	1122.0	1120.9
27.5°	1104.5	1104.5	1105.6	1105.6	1107.8	1107.8	1108.9	1109.9	1111.0	1111.0	1111.0
30°	1091.4	1091.4	1092.5	1093.6	1095.6	1096.7	1097.9	1099.0	1100.1	1100.1	1100.1
32.5°	1079.3	1078.2	1079.3	1081.4	1084.7	1086.9	1089.2	1090.3	1090.3	1090.3	1091.4
35°	1069.4	1070.5	1072.7	1074.9	1079.3	1081.4	1083.6	1086.9	1088.0	1088.0	1088.0
37.5°	1071.6	1072.7	1076.0	1080.3	1085.8	1092.5	1096.7	1101.2	1104.5	1103.4	1102.3
40°	1085.8	1088.0	1093.6	1100.1	1108.9	1117.6	1124.1	1129.6	1132.9	1134.0	1132.9
42.5°	1088.0	1090.3	1094.5	1104.5	1114.3	1124.1	1132.9	1138.5	1142.7	1143.8	1142.7
45°	1086.9	1086.9	1093.6	1104.5	1114.3	1124.1	1135.1	1142.7	1147.2	1147.2	1147.2
47.5°	1079.3	1082.5	1086.9	1097.9	1111.0	1120.9	1131.8	1139.4	1144.9	1148.3	1144.9
50°	1079.3	1079.3	1086.9	1094.5	1106.7	1124.1	1139.4	1147.2	1152.7	1151.6	1152.7
52.5°	1077.1	1083.6	1088.0	1099.0	1120.9	1138.5	1150.5	1161.4	1169.0	1170.1	1168.0
55°	1096.7	1097.9	1107.8	1128.5	1149.4	1169.0	1190.9	1207.4	1220.5	1228.2	1217.2
57.5°	1112.1	1106.7	1126.3	1143.8	1168.0	1197.6	1230.3	1243.4	1253.3	1251.1	1254.5
60°	1091.4	1099.0	1113.2	1131.8	1170.1	1199.6	1217.2	1231.4	1243.4	1246.7	1242.4
61°	1081.4	1094.5	1101.2	1126.3	1166.9	1188.7	1207.4	1227.1	1248.9	1256.7	1246.7
62.5°	1065.0	1085.8	1083.6	1124.1	1149.4	1174.5	1209.6	1232.5	1247.8	1250.0	1247.8
65°	1066.1	1062.9	1088.0	1117.6	1142.7	1187.6	1217.2	1231.4	1240.2	1244.5	1242.4
67.5°	1031.2	1020.1	1050.8	1071.6	1114.3	1149.4	1177.8	1198.5	1211.8	1216.1	1210.7
70°	950.1	957.8	979.6	1011.4	1046.5	1089.2	1115.4	1142.7	1153.8	1154.7	1154.7
72.5°	872.3	876.8	898.7	928.3	968.7	1005.9	1032.3	1054.1	1064.0	1065.0	1067.2
75°	769.5	773.9	799.0	826.4	867.0	898.7	917.2	943.6	957.8	969.8	960.0
77.5°	650.1	657.9	677.5	707.2	744.3	761.9	794.7	825.4	835.2	838.5	835.2
80°	515.5	525.4	543.0	582.3	598.8	627.2	659.0	672.1	680.8	683.0	684.1
82.5°	371.1	378.8	397.3	424.6	443.3	466.3	488.2	504.6	514.4	512.3	511.2
85°	218.9	221.1	240.8	259.5	273.7	287.9	305.3	317.5	319.7	324.0	322.9
87.5°	65.7	66.8	75.5	85.3	92.0	98.5	109.5	123.7	126.9	118.2	119.3
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: P198436

CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-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: P198436

CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-LWR-LW-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5
2.5°	1139.4	1139.4	1139.4	1139.4	1139.4	1139.4	1138.5	1139.4
5°	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5	1138.5
7.5°	1138.5	1137.3	1137.3	1137.3	1137.3	1137.3	1137.3	1137.3
10°	1136.2	1136.2	1136.2	1136.2	1135.1	1135.1	1135.1	1135.1
12.5°	1134.0	1134.0	1134.0	1134.0	1132.9	1132.9	1132.9	1132.9
15°	1131.8	1131.8	1131.8	1131.8	1130.7	1130.7	1130.7	1130.7
17.5°	1132.9	1131.8	1130.7	1130.7	1129.6	1128.5	1128.5	1128.5
20°	1139.4	1138.5	1136.2	1134.0	1132.9	1131.8	1131.8	1131.8
22.5°	1130.7	1129.6	1127.4	1126.3	1126.3	1125.2	1124.1	1124.1
25°	1120.9	1118.7	1118.7	1117.6	1117.6	1115.4	1115.4	1114.3
27.5°	1109.9	1108.9	1107.8	1106.7	1106.7	1105.6	1104.5	1103.4
30°	1100.1	1097.9	1095.6	1094.5	1093.6	1092.5	1092.5	1092.5
32.5°	1090.3	1088.0	1086.9	1083.6	1081.4	1080.3	1079.3	1079.3
35°	1086.9	1083.6	1081.4	1078.2	1074.9	1072.7	1071.6	1069.4
37.5°	1100.1	1095.6	1092.5	1086.9	1079.3	1076.0	1072.7	1071.6
40°	1128.5	1124.1	1117.6	1108.9	1100.1	1093.6	1088.0	1085.8
42.5°	1138.5	1132.9	1124.1	1115.4	1104.5	1094.5	1090.3	1088.0
45°	1141.6	1136.2	1124.1	1113.2	1103.4	1094.5	1088.0	1085.8
47.5°	1138.5	1130.7	1119.8	1111.0	1096.7	1085.8	1081.4	1078.2
50°	1146.0	1139.4	1125.2	1105.6	1093.6	1086.9	1079.3	1078.2
52.5°	1161.4	1149.4	1136.2	1122.0	1099.0	1085.8	1081.4	1076.0
55°	1207.4	1190.9	1168.0	1144.9	1130.7	1109.9	1096.7	1096.7
57.5°	1242.4	1229.2	1199.6	1169.0	1142.7	1127.4	1107.8	1108.9
60°	1232.5	1215.0	1200.7	1170.1	1132.9	1112.1	1104.5	1090.3
61°	1231.4	1207.4	1187.6	1163.6	1131.8	1099.0	1096.7	1078.2
62.5°	1233.6	1211.8	1174.5	1149.4	1125.2	1082.5	1081.4	1064.0
65°	1231.4	1210.7	1192.0	1144.9	1112.1	1094.5	1057.4	1071.6
67.5°	1197.6	1178.9	1144.9	1118.7	1068.3	1046.5	1025.6	1025.6
70°	1143.8	1116.5	1083.6	1050.8	1016.9	979.6	961.0	950.1
72.5°	1054.1	1031.2	1004.9	969.8	928.3	894.3	876.8	869.2
75°	941.4	916.1	893.2	867.0	823.2	794.7	776.1	770.6
77.5°	823.2	801.2	760.8	735.6	706.1	673.2	656.8	650.1
80°	672.1	660.1	631.6	591.0	576.8	536.4	525.4	515.5
82.5°	504.6	491.5	465.2	436.8	419.3	396.2	376.6	374.4
85°	317.5	308.6	292.2	271.5	249.5	236.4	218.9	223.3
87.5°	118.2	112.7	102.9	89.8	80.0	71.1	62.4	65.7
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



REPORT NUMBER: P198436

CATALOG NUMBER: TT-C4-LED-E1-MQ-CG-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)