

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: P198468

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198468
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-CG-MS/DIM-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
WIDE 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: 7233.9 lumens
Efficiency: N/A
Efficacy: 95.9 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

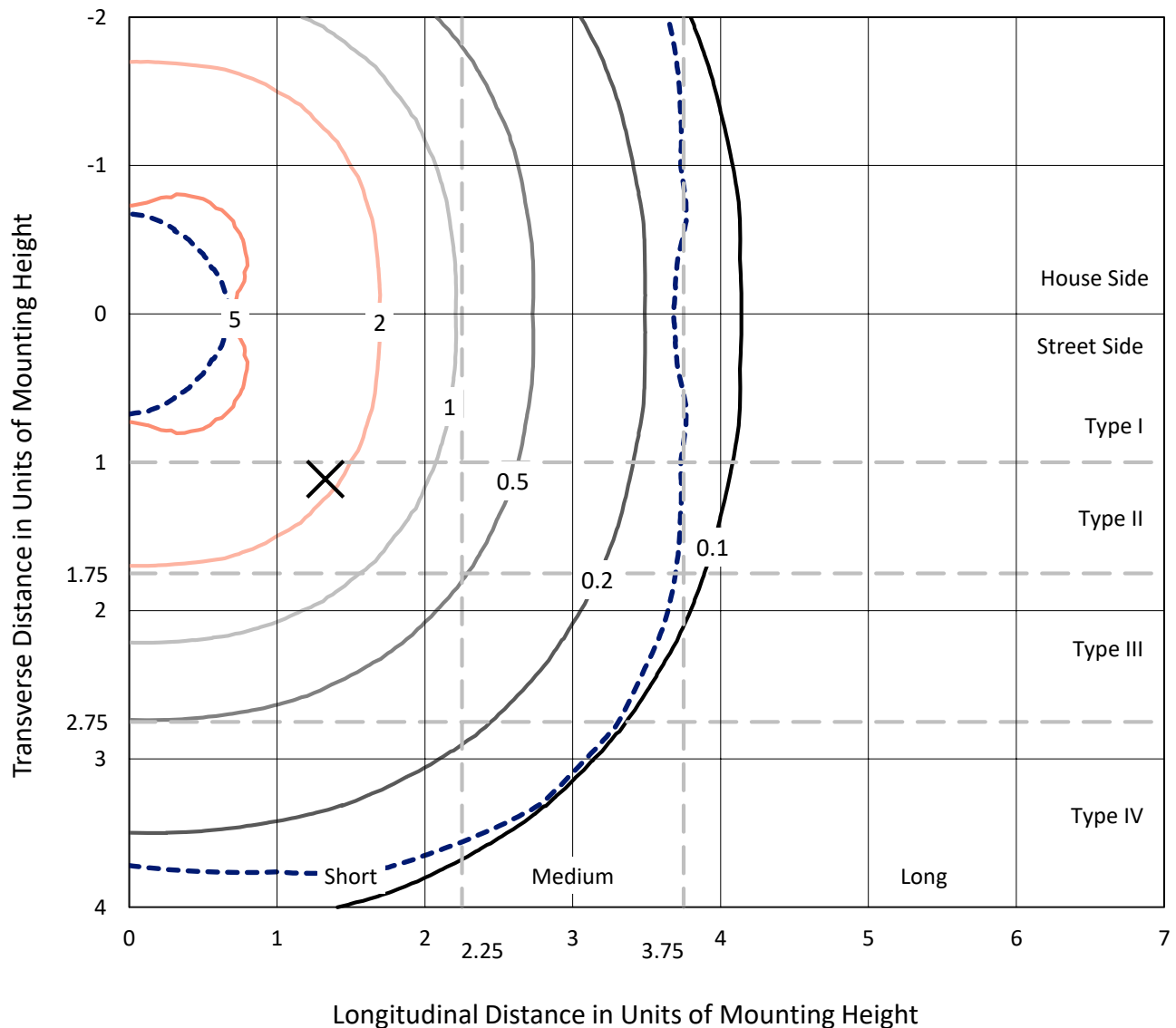


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

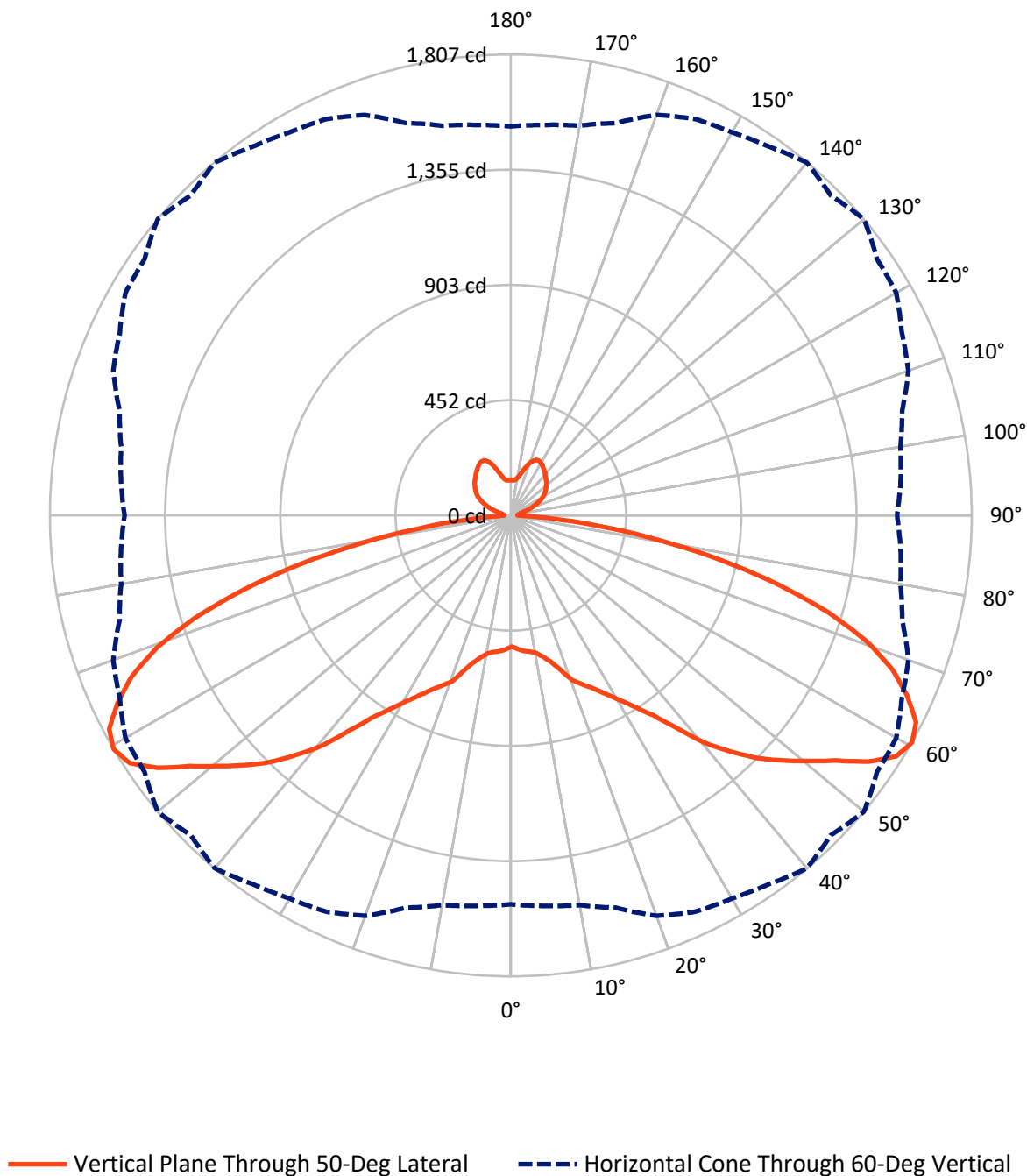


Based on 10 foot mounting height. Maximum calculated value = 5.7 fc
Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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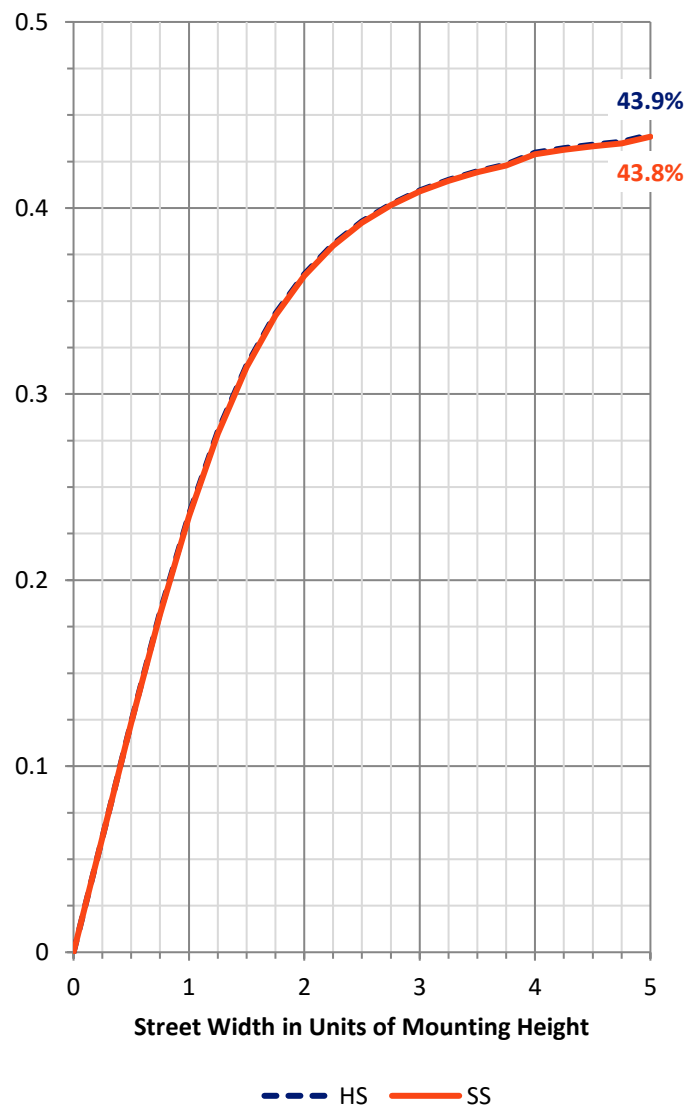
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3204.9	412.0	3616.9
	% Fixture	44.3	5.7	50.0
Street Side	Lumens	3204.9	412.0	3616.9
	% Fixture	44.3	5.7	50.0
Total	Lumens	6409.9	824.0	7233.9
	% Fixture	88.6	11.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.2	0.7
10°-20°	172.8	2.4
20°-30°	348.9	4.8
30°-40°	603.0	8.3
40°-50°	1001.6	13.8
50°-60°	1423.4	19.7
60°-70°	1554.8	21.5
70°-80°	1032.9	14.3
80°-90°	221.2	3.1
90°-100°	38.3	0.5
100°-110°	59.4	0.8
110°-120°	119.3	1.6
120°-130°	148.7	2.1
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°	6409.9	88.6
0°-180°	7233.9	100.0

Coefficient of Utilization



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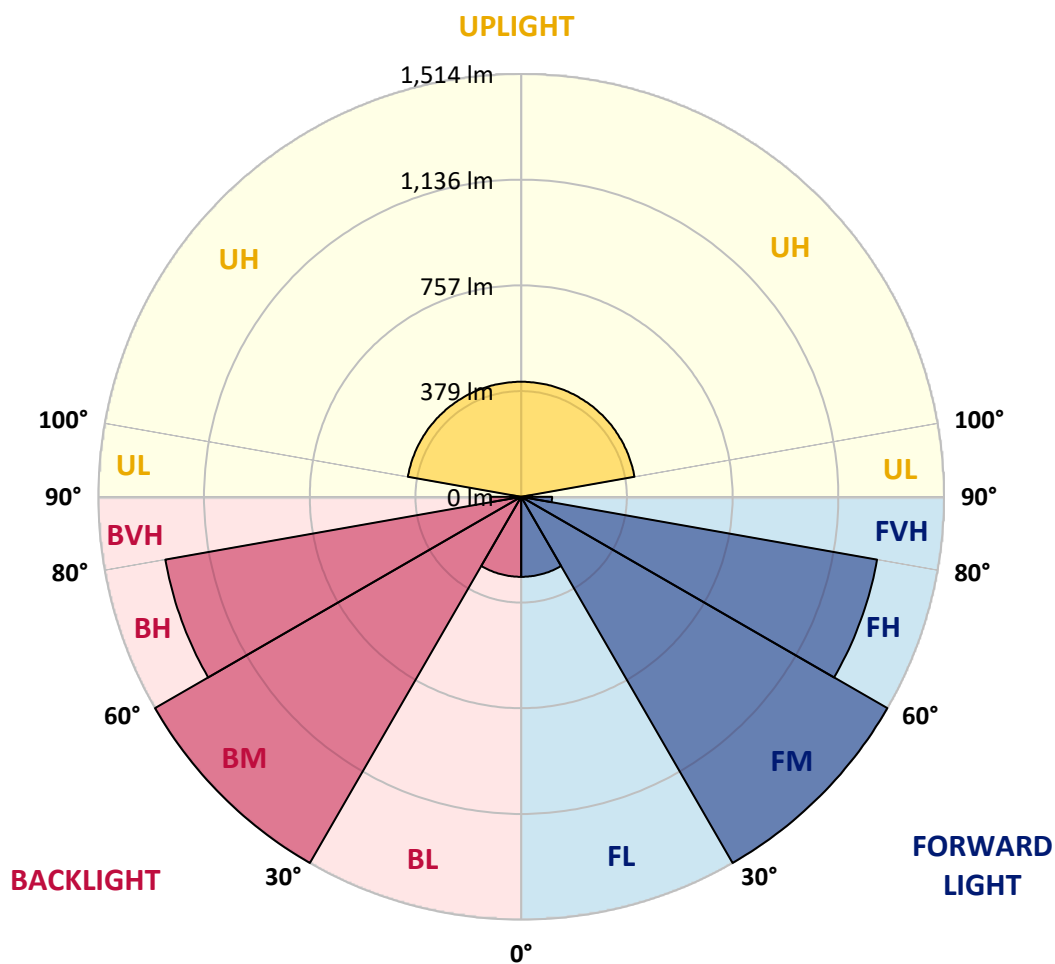
CATALOG NUMBER: TT-C4-LED-E1-WQ-CG-MS/DIM-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	286.4	4.0			
FM	(30°-60°)	1514.0	20.9			
FH	(60°-80°)	1293.9	17.9			G1/1800
FVH	(80°-90°)	110.6	1.5			G2/225
BL	(0°-30°)	286.4	4.0	B1/500		
BM	(30°-60°)	1514.0	20.9	B2/2500		
BH	(60°-80°)	1293.9	17.9	B3/2500		G1/1800
BVH	(80°-90°)	110.6	1.5			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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CATALOG NUMBER: TT-C4-LED-E1-WQ-CG-MS/DIM-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	513.9	513.9	513.9	513.9	513.9	513.9	513.9	513.9	513.9	513.9	513.9
2.5°	524.5	524.5	524.5	524.5	524.5	524.5	524.5	524.5	523.2	524.5	524.5
5°	529.8	529.8	529.8	531.2	531.2	531.2	532.5	532.5	532.5	533.8	533.8
7.5°	533.8	533.8	533.8	533.8	535.1	535.1	535.1	536.5	536.5	537.8	539.1
10°	551.0	551.0	551.0	551.0	551.0	549.7	549.7	549.7	548.4	548.4	548.4
12.5°	572.2	573.6	574.9	574.9	574.9	574.9	572.2	569.6	569.6	569.6	569.6
15°	592.1	593.4	594.7	597.4	598.7	600.0	600.0	600.0	600.0	600.0	597.4
17.5°	623.9	625.2	625.2	626.5	627.9	627.9	629.2	633.2	638.5	641.1	638.5
20°	672.9	675.5	676.9	676.9	678.2	676.9	679.5	682.2	686.1	688.8	690.1
22.5°	708.7	711.3	715.3	715.3	715.3	714.0	716.6	717.9	716.6	716.6	719.3
25°	736.5	739.1	741.8	743.1	745.8	751.1	756.3	756.3	752.4	751.1	751.1
27.5°	772.2	776.2	776.2	777.5	780.2	784.2	789.5	793.4	796.1	793.4	792.1
30°	818.6	821.3	822.6	821.3	826.6	827.9	829.2	831.9	839.8	845.1	838.5
32.5°	854.4	858.3	862.3	867.6	879.5	884.8	883.5	886.2	888.8	894.1	895.4
35°	908.7	915.3	916.6	920.6	935.2	943.1	955.0	961.7	960.3	953.7	963.0
37.5°	990.8	998.8	1000.1	1006.7	1021.3	1027.9	1041.1	1058.4	1062.3	1053.1	1058.4
40°	1076.9	1087.5	1096.8	1111.3	1135.2	1143.1	1159.0	1168.3	1181.5	1182.9	1173.6
42.5°	1149.8	1161.7	1161.7	1186.8	1213.3	1235.9	1255.7	1257.0	1266.3	1279.6	1266.3
45°	1227.9	1237.2	1241.2	1262.3	1278.2	1307.4	1336.5	1347.1	1351.1	1353.7	1357.7
47.5°	1299.4	1311.4	1315.3	1333.9	1351.1	1377.6	1396.1	1427.9	1435.9	1425.3	1435.9
50°	1344.5	1357.7	1368.3	1406.7	1437.2	1459.7	1475.6	1503.4	1519.3	1511.4	1512.7
52.5°	1414.7	1418.7	1429.2	1450.4	1494.2	1555.1	1573.6	1582.9	1605.4	1617.3	1596.1
55°	1510.0	1523.3	1531.2	1556.4	1578.9	1622.6	1692.8	1707.4	1702.1	1739.2	1703.4
57.5°	1525.9	1545.8	1571.0	1618.7	1658.4	1682.2	1726.0	1776.3	1775.0	1780.3	1781.6
60°	1524.6	1536.5	1551.1	1592.2	1670.3	1714.0	1733.9	1764.4	1805.4	1773.6	1806.8
62.5°	1515.3	1532.6	1548.5	1577.6	1620.0	1682.2	1737.9	1733.9	1789.5	1764.4	1782.9
65°	1459.7	1475.6	1504.8	1543.2	1594.8	1624.0	1679.6	1715.4	1707.4	1741.9	1707.4
67.5°	1363.0	1377.6	1401.4	1446.5	1500.8	1543.2	1563.0	1622.6	1616.0	1654.4	1613.4
70°	1230.6	1249.1	1276.9	1308.7	1361.7	1406.7	1429.2	1467.7	1486.2	1483.6	1480.9
72.5°	1071.6	1087.5	1110.0	1144.5	1189.5	1233.2	1250.4	1279.6	1310.0	1300.8	1303.4
75°	894.1	907.4	924.6	945.8	988.2	1022.6	1042.5	1069.0	1092.8	1086.2	1083.5
77.5°	688.8	704.7	723.2	743.1	760.3	792.1	806.7	825.2	845.1	841.1	842.4
80°	482.2	495.4	507.3	528.5	541.8	552.4	568.3	576.2	590.8	588.1	592.1
82.5°	294.1	303.3	311.3	321.9	333.8	331.2	332.5	341.7	353.7	347.0	357.6
85°	144.4	143.1	151.0	153.7	161.6	160.3	159.0	164.3	170.9	166.9	166.9
87.5°	37.1	37.1	37.1	38.4	42.4	46.4	42.4	45.0	47.7	49.0	47.7
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-WQ-CG-MS/DIM-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°	513.9	513.9	513.9	513.9	513.9	513.9	513.9	513.9
2.5°	523.2	524.5	523.2	524.5	524.5	524.5	524.5	523.2
5°	533.8	532.5	532.5	532.5	531.2	529.8	529.8	529.8
7.5°	539.1	539.1	537.8	536.5	535.1	535.1	537.8	536.5
10°	551.0	552.4	553.7	555.0	553.7	552.4	552.4	551.0
12.5°	569.6	570.9	573.6	576.2	576.2	574.9	572.2	570.9
15°	596.1	594.7	596.1	598.7	598.7	594.7	590.8	589.4
17.5°	633.2	629.2	626.5	626.5	629.2	625.2	621.2	622.6
20°	684.8	678.2	676.9	672.9	676.9	676.9	670.2	670.2
22.5°	721.9	716.6	711.3	707.3	712.6	715.3	708.7	703.4
25°	756.3	755.0	747.1	743.1	743.1	744.4	735.2	736.5
27.5°	790.8	790.8	785.5	778.9	776.2	780.2	772.2	769.6
30°	831.9	827.9	831.9	822.6	816.0	819.9	819.9	814.6
32.5°	884.8	879.5	883.5	872.9	863.6	862.3	855.7	847.7
35°	960.3	947.1	940.5	935.2	916.6	915.3	914.0	907.4
37.5°	1055.7	1038.5	1023.9	1025.2	998.8	992.1	992.1	982.9
40°	1169.6	1159.0	1137.8	1129.9	1103.4	1086.2	1084.9	1067.6
42.5°	1249.1	1253.1	1225.3	1206.7	1185.5	1159.0	1160.4	1141.8
45°	1336.5	1328.6	1303.4	1272.9	1263.7	1234.5	1235.9	1217.3
47.5°	1420.0	1390.8	1377.6	1344.5	1329.9	1296.8	1300.8	1287.5
50°	1502.1	1470.3	1455.7	1420.0	1396.1	1361.7	1357.7	1329.9
52.5°	1589.5	1559.1	1539.2	1487.5	1455.7	1429.2	1418.7	1405.4
55°	1703.4	1673.0	1624.0	1573.6	1549.8	1508.7	1504.8	1487.5
57.5°	1753.8	1729.9	1678.3	1645.2	1597.5	1555.1	1539.2	1506.1
60°	1752.5	1744.5	1691.5	1658.4	1588.2	1551.1	1533.9	1514.0
62.5°	1737.9	1728.6	1666.4	1629.3	1565.7	1533.9	1520.6	1495.5
65°	1708.7	1676.9	1621.3	1590.8	1522.0	1494.2	1465.0	1442.5
67.5°	1626.6	1560.4	1535.2	1496.8	1429.2	1400.1	1372.3	1349.8
70°	1473.0	1423.9	1401.4	1353.7	1295.5	1276.9	1242.5	1217.3
72.5°	1276.9	1250.4	1226.6	1174.9	1133.9	1115.3	1080.9	1059.7
75°	1059.7	1043.8	1010.7	972.3	935.2	928.5	891.5	883.5
77.5°	822.6	808.0	781.5	753.7	736.5	723.2	690.1	687.5
80°	576.2	566.9	545.7	533.8	521.9	510.0	487.5	484.8
82.5°	340.4	333.8	335.1	323.2	316.6	313.9	296.7	298.0
85°	164.3	159.0	159.0	159.0	152.3	151.0	140.4	141.7
87.5°	47.7	42.4	42.4	42.4	39.7	39.7	34.4	35.8
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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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)