

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: P198479

Luminaire Tested: **TT-C4-LED-E1-WQ-SG-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198479
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-SG-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
WIDE DISTRIBUTION WITH SOFTENING GLASS LENS
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7304.2 lumens
Efficiency: N/A
Efficacy: 96.9 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



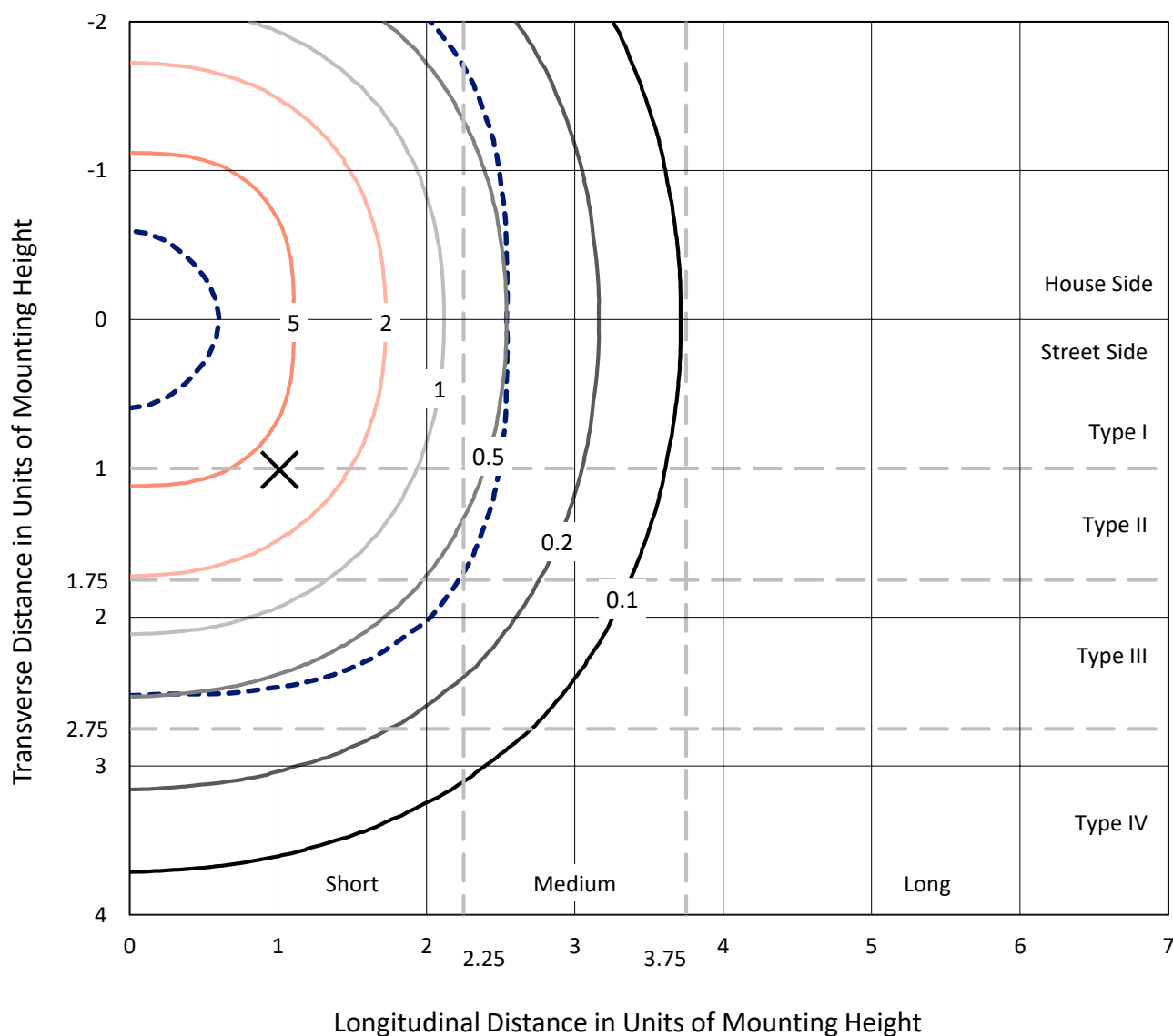
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

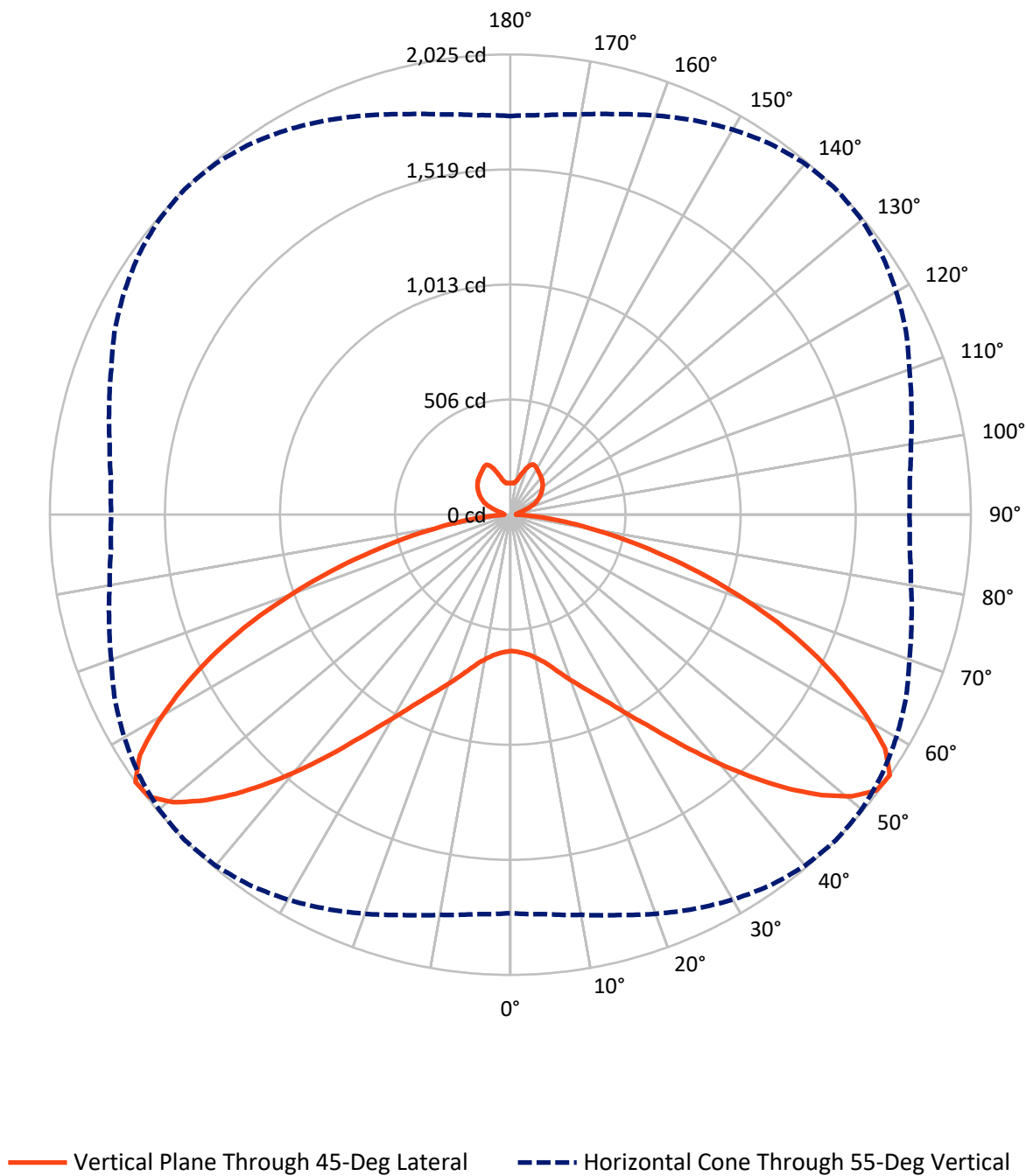


Based on 10 foot mounting height. Maximum calculated value = 6.6 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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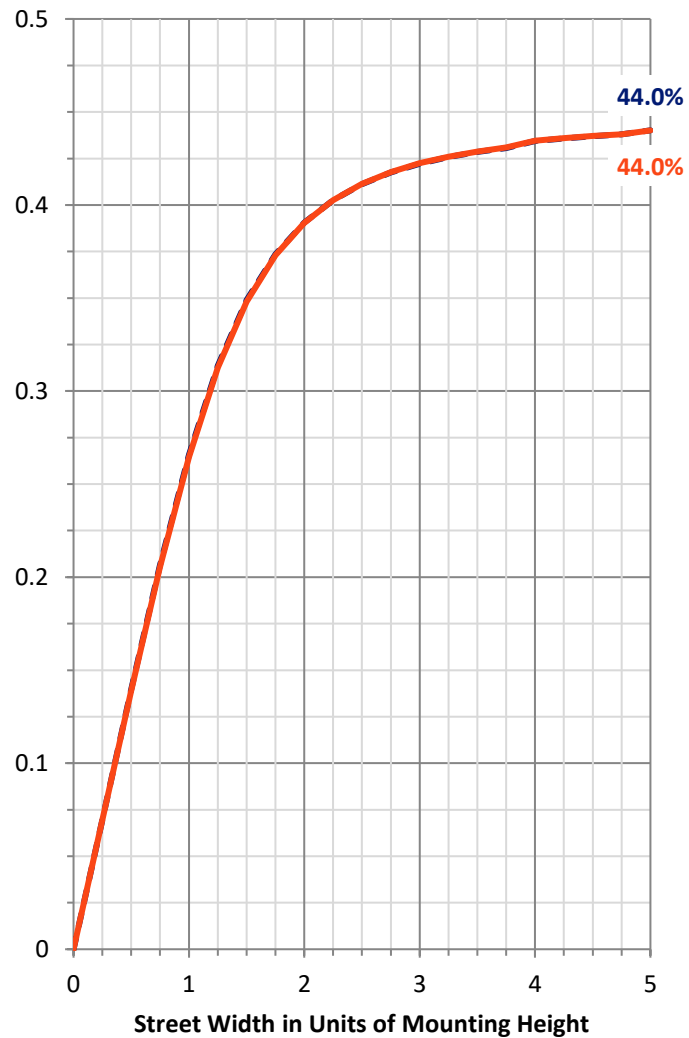
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3240.1	412.0	3652.1
	% Fixture	44.4	5.6	50.0
Street Side	Lumens	3240.1	412.0	3652.1
	% Fixture	44.4	5.6	50.0
Total	Lumens	6480.2	824.0	7304.2
	% Fixture	88.7	11.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	0.8
10°-20°	201.0	2.8
20°-30°	409.4	5.6
30°-40°	747.6	10.2
40°-50°	1269.3	17.4
50°-60°	1653.1	22.6
60°-70°	1337.0	18.3
70°-80°	657.0	9.0
80°-90°	146.6	2.0
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°	6480.2	88.7
0°-180°	7304.2	100.0

Coefficient of Utilization



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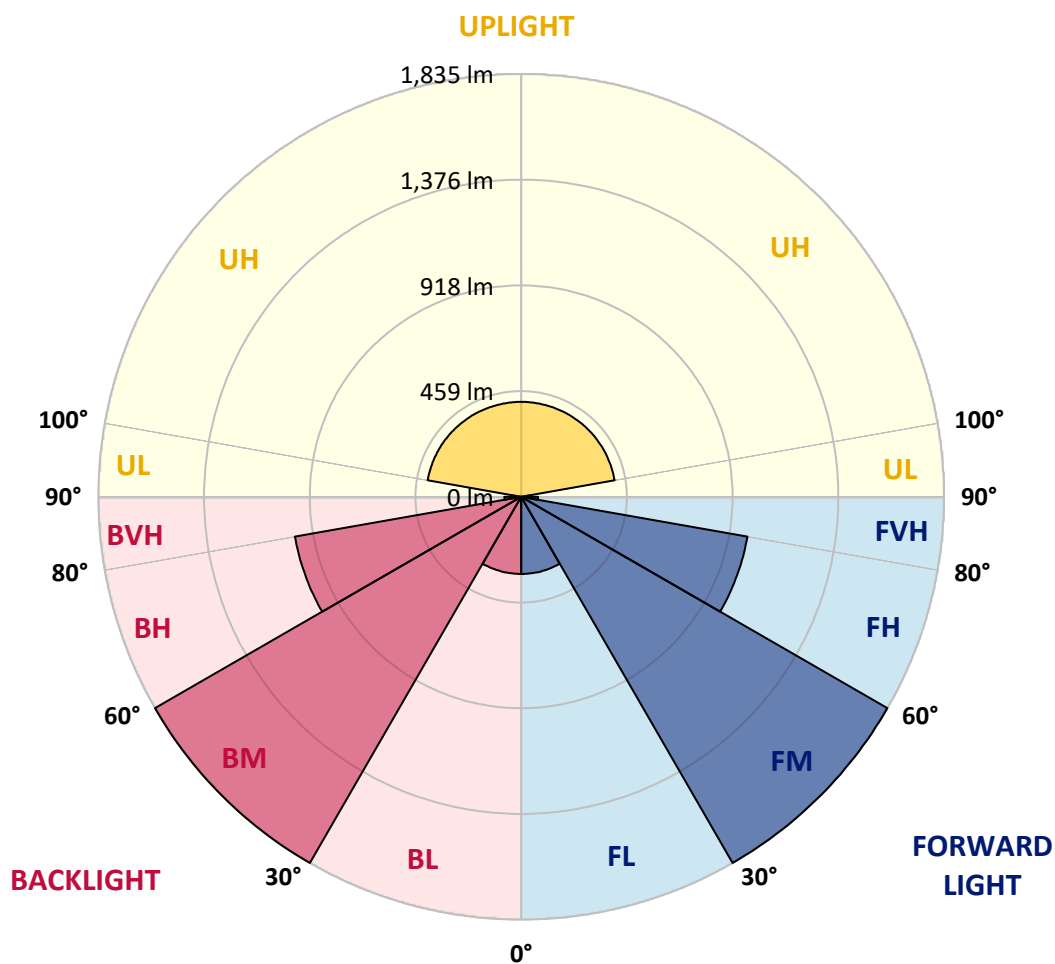
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	334.8	4.6			
FM	(30°-60°)	1835.0	25.1			
FH	(60°-80°)	997.0	13.6			G1/1800
FVH	(80°-90°)	73.3	1.0			G1/100
BL	(0°-30°)	334.8	4.6	B1/500		
BM	(30°-60°)	1835.0	25.1	B2/2500		
BH	(60°-80°)	997.0	13.6	B2/1000		G1/1800
BVH	(80°-90°)	73.3	1.0			G1/100
UL	(90°-100°)	38.3	0.5		U2/50	
UH	(100°-180°)	412.0	5.6		U3/500	

BUG Rating: B2-U4-G1

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0
2.5°	602.7	602.7	602.7	602.7	602.7	602.7	604.0	604.0	604.0	604.0	604.0
5°	610.6	610.6	610.6	612.0	612.0	612.0	612.0	612.0	612.0	612.0	612.0
7.5°	622.6	621.2	622.6	622.6	622.6	623.9	623.9	622.6	623.9	623.9	623.9
10°	639.8	638.5	639.8	639.8	639.8	641.1	641.1	641.1	641.1	642.4	642.4
12.5°	665.0	663.6	665.0	666.3	665.0	666.3	666.3	666.3	666.3	666.3	666.3
15°	696.7	695.4	696.7	698.1	696.7	699.4	699.4	698.1	698.1	699.4	699.4
17.5°	735.2	732.5	733.8	735.2	735.2	737.8	737.8	736.5	737.8	739.1	737.8
20°	774.9	772.2	773.6	777.5	777.5	778.9	781.5	780.2	781.5	782.8	781.5
22.5°	818.6	817.3	818.6	822.6	822.6	823.9	827.9	827.9	827.9	829.2	827.9
25°	866.3	865.0	866.3	870.3	870.3	872.9	878.2	878.2	879.5	880.9	879.5
27.5°	921.9	920.6	923.2	927.2	928.5	932.5	939.1	940.5	941.8	943.1	940.5
30°	986.8	984.2	988.2	994.8	997.4	1002.7	1010.7	1013.3	1014.6	1018.6	1016.0
32.5°	1061.0	1058.4	1063.7	1071.6	1075.6	1083.5	1094.1	1096.8	1100.7	1103.4	1099.4
35°	1148.4	1147.1	1152.4	1164.3	1171.0	1180.2	1194.8	1198.8	1201.4	1206.7	1201.4
37.5°	1245.1	1243.8	1253.1	1266.3	1278.2	1292.8	1308.7	1315.3	1319.3	1325.9	1319.3
40°	1352.4	1351.1	1363.0	1378.9	1393.5	1412.0	1431.9	1441.2	1449.1	1455.7	1447.8
42.5°	1462.4	1462.4	1476.9	1494.2	1515.3	1537.9	1560.4	1571.0	1584.2	1588.2	1578.9
45°	1568.3	1569.7	1584.2	1605.4	1635.9	1665.0	1690.2	1703.4	1718.0	1722.0	1710.1
47.5°	1669.0	1670.3	1683.6	1711.4	1745.8	1778.9	1809.4	1828.0	1842.5	1843.8	1834.6
50°	1751.1	1756.4	1773.6	1798.8	1834.6	1869.0	1906.1	1929.9	1944.5	1948.5	1939.2
52.5°	1782.9	1792.2	1812.1	1843.8	1884.9	1920.7	1961.7	1992.2	2009.4	2016.0	2008.1
55°	1753.8	1764.4	1788.2	1824.0	1869.0	1914.1	1956.4	1992.2	2016.0	2025.3	2017.4
57.5°	1688.9	1690.2	1714.0	1749.8	1790.9	1837.2	1878.3	1911.4	1933.9	1943.2	1941.9
60°	1576.3	1576.3	1598.8	1633.2	1665.0	1712.7	1747.2	1772.3	1788.2	1798.8	1796.2
62.5°	1425.3	1425.3	1445.1	1480.9	1512.7	1553.8	1586.9	1613.4	1624.0	1635.9	1638.5
65°	1257.0	1257.0	1275.6	1311.4	1340.5	1377.6	1409.4	1434.5	1445.1	1459.7	1457.1
67.5°	1078.2	1076.9	1094.1	1124.6	1152.4	1186.8	1217.3	1241.2	1253.1	1270.3	1258.4
70°	894.1	894.1	908.7	932.5	952.4	986.8	1016.0	1039.8	1049.1	1063.7	1057.0
72.5°	719.3	717.9	729.9	748.4	764.3	794.8	812.0	838.5	846.4	866.3	855.7
75°	561.6	559.0	568.3	581.5	592.1	612.0	625.2	646.4	653.0	666.3	661.0
77.5°	422.5	421.2	425.2	434.5	442.4	458.3	463.6	474.2	479.5	492.8	482.2
80°	303.3	299.4	303.3	308.6	311.3	323.2	324.5	328.5	331.2	340.4	329.8
82.5°	204.0	198.7	201.3	205.3	205.3	211.9	213.3	211.9	217.2	219.9	214.6
85°	116.6	112.6	113.9	116.6	115.2	119.2	119.2	117.9	121.9	121.9	119.2
87.5°	38.4	35.8	37.1	38.4	38.4	39.7	41.1	39.7	42.4	42.4	39.7
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-SG-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°	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0
2.5°	604.0	604.0	604.0	604.0	604.0	604.0	604.0	604.0
5°	612.0	612.0	612.0	612.0	612.0	610.6	610.6	610.6
7.5°	623.9	623.9	623.9	623.9	623.9	622.6	622.6	622.6
10°	642.4	641.1	641.1	641.1	641.1	639.8	641.1	639.8
12.5°	666.3	667.6	667.6	666.3	667.6	665.0	665.0	665.0
15°	699.4	698.1	698.1	698.1	698.1	696.7	696.7	696.7
17.5°	736.5	736.5	735.2	735.2	733.8	732.5	732.5	732.5
20°	780.2	778.9	777.5	776.2	774.9	772.2	770.9	770.9
22.5°	825.2	823.9	822.6	821.3	819.9	817.3	814.6	814.6
25°	875.6	872.9	871.6	868.9	866.3	863.6	862.3	861.0
27.5°	936.5	933.8	929.9	925.9	920.6	919.3	916.6	916.6
30°	1009.3	1005.4	1000.1	993.5	988.2	982.9	980.2	978.9
32.5°	1094.1	1088.8	1079.6	1071.6	1062.3	1057.0	1053.1	1050.4
35°	1193.5	1185.5	1174.9	1163.0	1151.1	1141.8	1135.2	1135.2
37.5°	1310.0	1298.1	1282.2	1267.6	1250.4	1239.8	1231.9	1226.6
40°	1437.2	1420.0	1400.1	1381.6	1361.7	1347.1	1335.2	1336.5
42.5°	1563.0	1548.5	1524.6	1502.1	1476.9	1457.1	1442.5	1441.2
45°	1695.5	1676.9	1647.8	1618.7	1589.5	1565.7	1548.5	1545.8
47.5°	1818.7	1798.8	1764.4	1728.6	1696.8	1670.3	1651.8	1649.1
50°	1919.4	1895.5	1859.7	1821.3	1786.9	1757.8	1737.9	1732.6
52.5°	1984.3	1957.8	1919.4	1873.0	1835.9	1802.8	1778.9	1772.3
55°	1994.9	1960.4	1919.4	1867.7	1826.6	1789.5	1763.0	1755.1
57.5°	1922.0	1884.9	1847.8	1802.8	1761.7	1722.0	1700.8	1690.2
60°	1780.3	1751.1	1720.7	1679.6	1646.5	1609.4	1592.2	1586.9
62.5°	1617.3	1592.2	1564.4	1522.0	1494.2	1461.0	1445.1	1438.5
65°	1442.5	1413.4	1386.9	1352.4	1322.0	1294.1	1271.6	1269.0
67.5°	1249.1	1218.6	1196.1	1165.7	1135.2	1108.7	1094.1	1086.2
70°	1045.1	1019.9	997.4	964.3	944.4	919.3	908.7	900.7
72.5°	842.4	827.9	800.1	778.9	756.3	736.5	729.9	721.9
75°	651.7	634.5	613.3	600.0	582.8	572.2	566.9	561.6
77.5°	478.2	463.6	451.7	446.4	438.4	427.8	423.9	419.9
80°	331.2	324.5	316.6	315.3	310.0	302.0	300.7	299.4
82.5°	214.6	210.6	208.0	208.0	205.3	200.0	198.7	198.7
85°	119.2	117.9	119.2	117.9	115.2	112.6	112.6	112.6
87.5°	39.7	39.7	41.1	42.4	38.4	38.4	37.1	37.1
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)