

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: P821249

Luminaire Tested: **TT-D5-735-24VDC-CQ-UPL**

Issue Date: 7/23/2020



Test Information

Test Method: LM-79-08
Report Number: P821249
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D5-735-24VDC-CQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

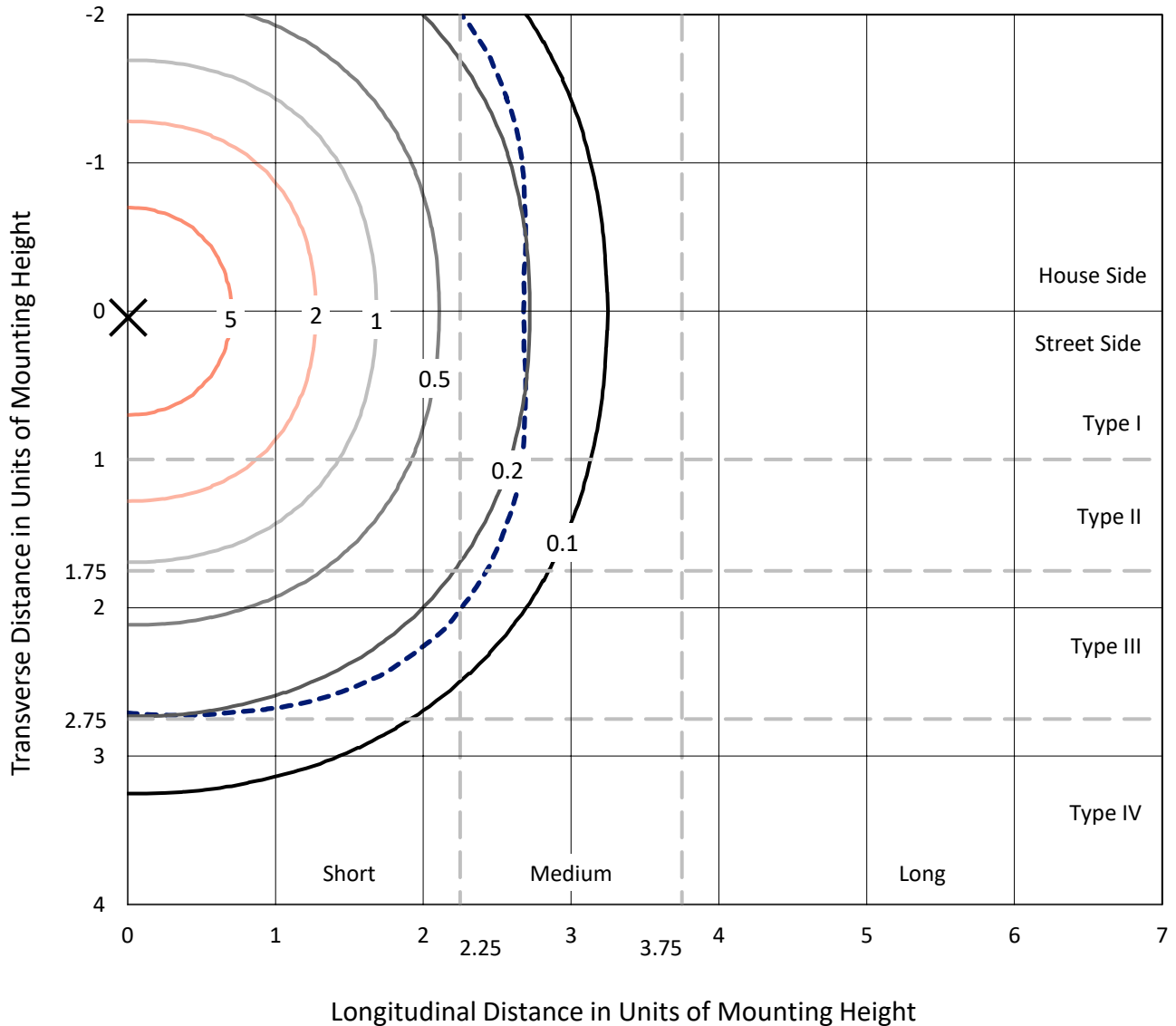
Lumens per Lamp: N/A
Luminaire Lumens: 9734.7 lumens
Efficiency: N/A
Efficacy: 133.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G1

Input Watts (W): 73
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

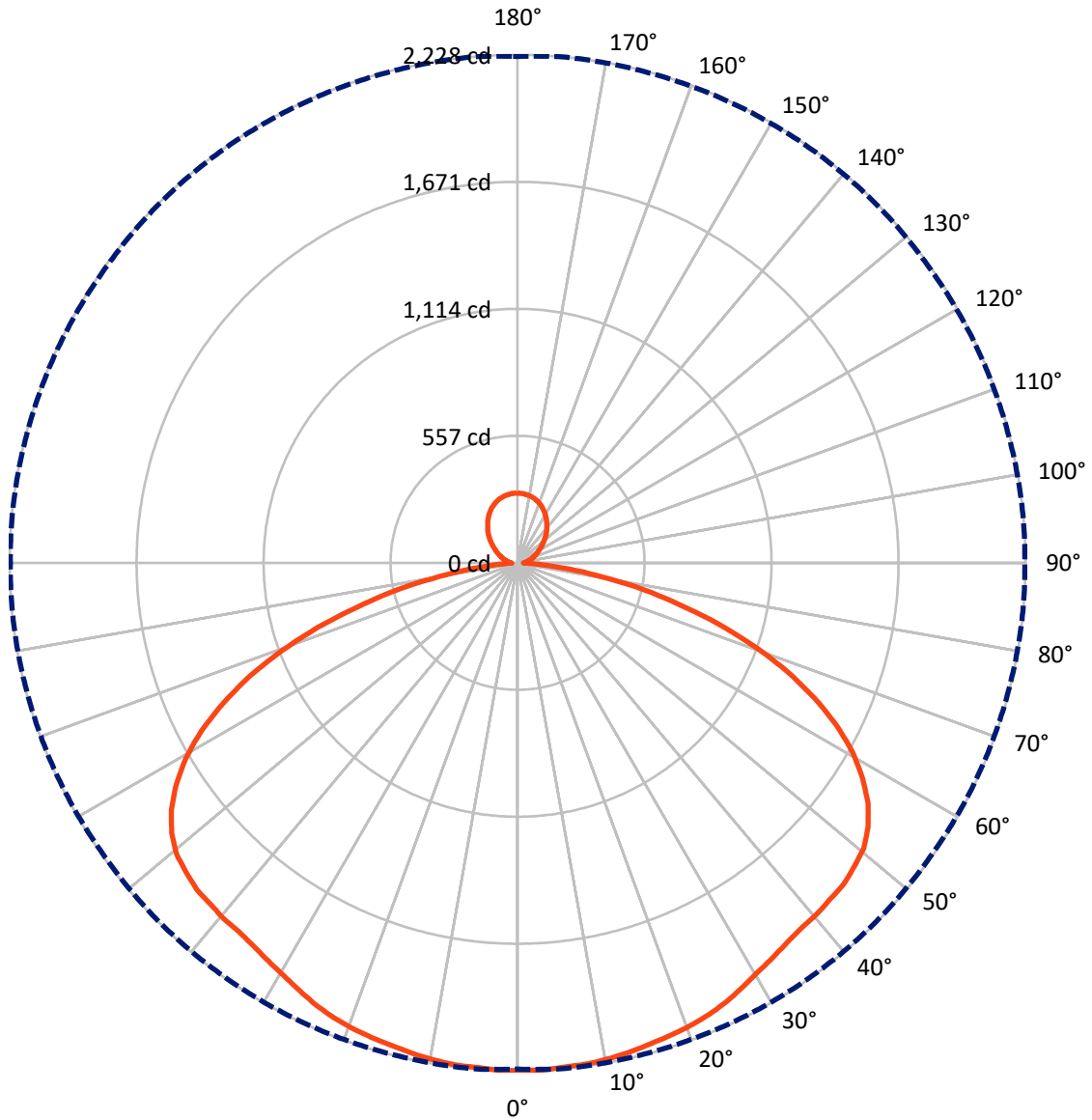
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 9.9 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 2.5-Deg Vertical

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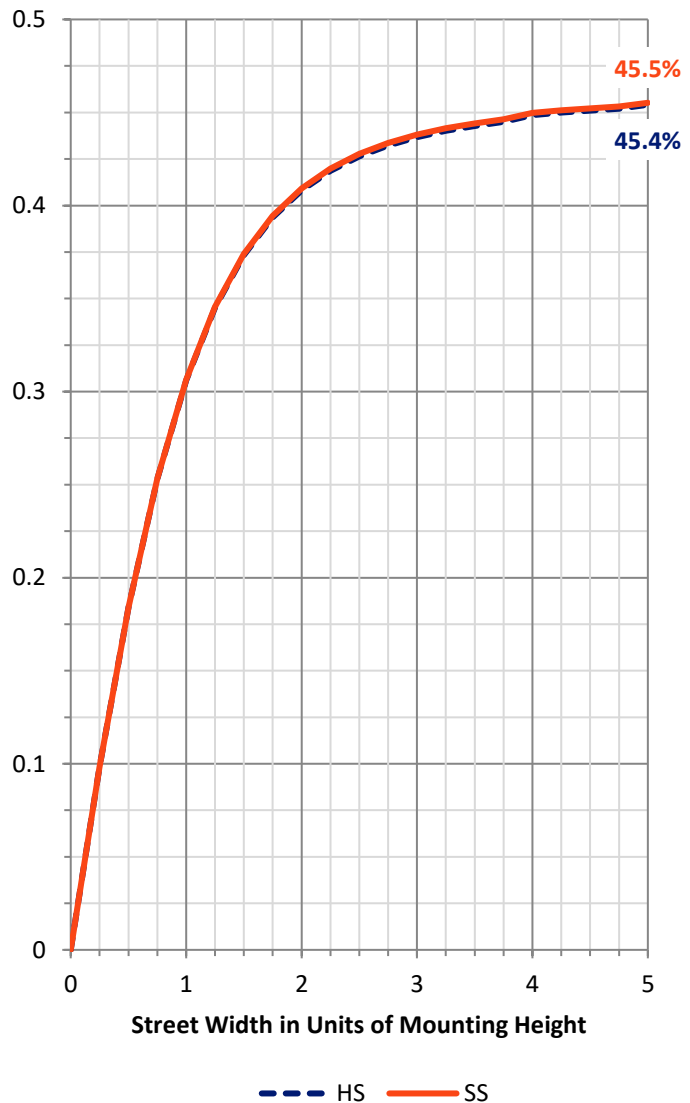
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4451.5	415.9	4867.4
	% Fixture	45.7	4.3	50.0
Street Side	Lumens	4451.5	415.9	4867.4
	% Fixture	45.7	4.3	50.0
Total	Lumens	8903.0	831.7	9734.7
	% Fixture	91.5	8.5	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.8	2.2
10°-20°	620.1	6.4
20°-30°	986.1	10.1
30°-40°	1297.3	13.3
40°-50°	1587.8	16.3
50°-60°	1719.7	17.7
60°-70°	1479.5	15.2
70°-80°	831.8	8.5
80°-90°	168.9	1.7
90°-100°	42.6	0.4
100°-110°	66.0	0.7
110°-120°	91.9	0.9
120°-130°	119.0	1.2
130°-140°	138.7	1.4
140°-150°	140.5	1.4
150°-160°	121.9	1.3
160°-170°	82.2	0.8
170°-180°	28.9	0.3
0°-90°	8903.0	91.5
0°-180°	9734.7	100.0

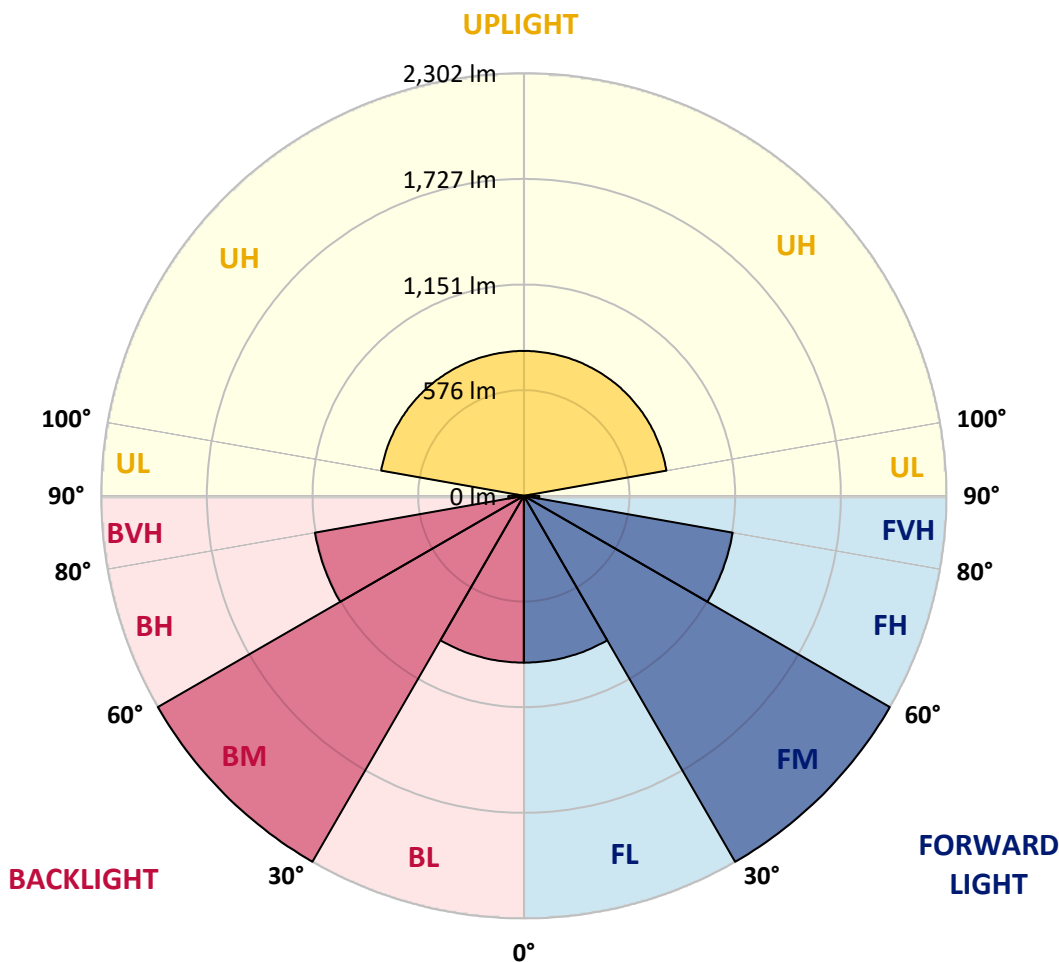


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	909.0	9.3			
FM (30°-60°)	2302.4	23.7			
FH (60°-80°)	1155.6	11.9			G1/1800
FVH (80°-90°)	84.5	0.9			G1/100
BL (0°-30°)	909.0	9.3	B2/1000		
BM (30°-60°)	2302.4	23.7	B2/2500		
BH (60°-80°)	1155.6	11.9	B3/2500		G1/1800
BVH (80°-90°)	84.5	0.9			G1/100
UL (90°-100°)	42.6	0.4		U2/50	
UH (100°-180°)	789.1	8.1		U4/1000	

BUG Rating: B3-U4-G1
 Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2226.3	2226.3	2226.3	2226.3	2226.3	2226.3	2226.3	2226.3	2226.3	2226.3	2226.3
2.5°	2220.6	2227.7	2224.9	2224.9	2224.9	2224.9	2222.0	2224.9	2224.9	2226.3	2224.9
5°	2222.0	2220.6	2220.6	2222.0	2222.0	2223.4	2220.6	2222.0	2223.4	2223.4	2224.9
7.5°	2217.8	2219.2	2216.4	2219.2	2216.4	2217.8	2217.8	2219.2	2217.8	2219.2	2222.0
10°	2209.3	2210.7	2209.3	2209.3	2209.3	2212.1	2206.4	2210.7	2209.3	2210.7	2209.3
12.5°	2193.7	2200.8	2197.9	2200.8	2200.8	2200.8	2196.5	2199.4	2200.8	2200.8	2200.8
15°	2186.6	2188.0	2183.8	2189.4	2190.9	2192.3	2186.6	2189.4	2189.4	2190.9	2192.3
17.5°	2171.0	2178.1	2176.7	2181.0	2179.5	2183.8	2182.4	2181.0	2179.5	2182.4	2179.5
20°	2159.7	2166.8	2165.4	2169.6	2171.0	2175.3	2171.0	2171.0	2166.8	2168.2	2172.5
22.5°	2148.4	2151.2	2151.2	2155.5	2155.5	2159.7	2155.5	2154.0	2154.0	2152.6	2156.9
25°	2130.0	2131.4	2130.0	2134.2	2137.0	2139.9	2138.5	2135.6	2134.2	2134.2	2132.8
27.5°	2100.2	2105.9	2108.7	2114.4	2115.8	2120.1	2114.4	2114.4	2111.6	2108.7	2110.1
30°	2077.6	2080.4	2080.4	2093.1	2093.1	2100.2	2093.1	2091.7	2090.3	2088.9	2086.1
32.5°	2056.3	2060.6	2064.8	2074.7	2081.8	2084.6	2080.4	2077.6	2070.5	2066.2	2064.8
35°	2039.3	2040.7	2049.2	2063.4	2071.9	2079.0	2073.3	2066.2	2056.3	2049.2	2054.9
37.5°	2026.6	2028.0	2040.7	2059.2	2074.7	2080.4	2071.9	2060.6	2045.0	2036.5	2033.7
40°	2015.3	2023.8	2037.9	2063.4	2080.4	2088.9	2081.8	2066.2	2043.6	2026.6	2025.2
42.5°	2009.6	2013.8	2035.1	2064.8	2088.9	2100.2	2090.3	2069.1	2040.7	2020.9	2019.5
45°	1995.4	2008.2	2028.0	2066.2	2093.1	2107.3	2093.1	2066.2	2032.2	2009.6	2005.3
47.5°	1984.1	1988.3	2019.5	2063.4	2096.0	2107.3	2093.1	2059.2	2016.7	1986.9	1984.1
50°	1957.2	1967.1	1998.3	2045.0	2083.2	2094.6	2077.6	2032.2	1984.1	1951.5	1945.9
52.5°	1916.1	1924.6	1961.4	2019.5	2056.3	2069.1	2043.6	1995.4	1938.8	1899.1	1899.1
55°	1852.4	1865.1	1903.4	1962.9	2009.6	2020.9	1991.2	1940.2	1876.5	1836.8	1835.4
57.5°	1775.9	1784.4	1825.5	1890.6	1935.9	1952.9	1923.2	1866.6	1802.8	1756.1	1751.8
60°	1676.8	1688.1	1732.0	1794.3	1841.1	1855.2	1829.7	1773.1	1707.9	1658.4	1658.4
62.5°	1557.8	1570.6	1614.5	1678.2	1726.3	1747.6	1712.2	1658.4	1590.4	1542.2	1538.0
65°	1419.0	1430.4	1470.0	1536.6	1586.1	1601.7	1574.8	1518.2	1453.0	1407.7	1403.5
67.5°	1263.3	1278.8	1318.5	1375.1	1417.6	1437.4	1420.5	1369.5	1301.5	1254.8	1250.5
70°	1094.7	1106.1	1137.2	1189.6	1237.8	1251.9	1226.4	1192.4	1128.7	1086.2	1080.6
72.5°	914.9	924.8	950.3	999.8	1033.8	1052.2	1038.1	994.2	943.2	907.8	913.5
75°	733.6	732.2	760.5	795.9	827.1	839.8	829.9	801.6	754.8	725.1	723.7
77.5°	552.3	566.5	576.4	606.1	631.6	641.5	627.4	604.7	569.3	545.2	549.5
80°	388.0	379.5	398.0	416.4	433.4	443.3	434.8	422.0	398.0	379.5	376.7
82.5°	237.9	230.8	239.3	256.3	267.7	270.5	271.9	256.3	246.4	232.3	235.1
85°	104.8	106.2	113.3	124.6	126.0	127.5	127.5	124.6	113.3	111.9	109.0
87.5°	25.5	25.5	26.9	31.2	31.2	32.6	32.6	28.3	26.9	24.1	25.5
90°	30.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
92.5°	34.8	34.2	34.2	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
95°	39.4	39.4	39.4	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
97.5°	44.6	44.6	44.6	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
100°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
102.5°	55.9	55.9	55.9	55.9	55.9	55.9	55.9	56.4	55.9	55.9	55.9
105°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.9	62.0	62.0	62.0
107.5°	68.6	68.6	69.0	69.0	69.0	69.0	69.0	69.5	69.0	69.0	69.0
110°	75.1	75.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.1	83.1	84.0	84.0	84.0	84.0	84.6	84.6	84.0	84.0	84.0
115°	91.1	91.1	92.0	92.0	92.0	92.0	93.0	93.0	92.0	92.0	92.0
117.5°	100.5	100.5	101.0	101.4	101.4	101.4	102.4	102.4	101.4	101.4	101.4
120°	109.9	109.9	109.9	110.8	110.8	110.8	111.8	111.8	110.8	110.8	110.8
122.5°	120.7	120.7	121.2	121.6	121.6	121.6	122.6	122.6	122.1	122.1	121.6
125°	131.5	131.5	132.4	132.4	132.4	132.4	133.4	133.4	133.4	133.4	132.4
127.5°	143.2	143.2	144.2	144.2	144.2	144.2	145.1	145.1	145.1	145.1	144.2
130°	155.0	155.0	155.9	155.9	155.9	155.9	156.8	156.8	156.8	156.8	155.9
132.5°	167.2	167.2	167.6	167.6	167.6	168.1	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	180.3	180.3	180.3	180.3	180.3	180.3
137.5°	191.2	190.6	191.2	190.6	191.2	191.6	191.6	191.6	191.6	191.6	191.6
140°	202.9	201.9	202.9	201.9	202.9	202.9	202.9	202.9	202.9	202.9	202.9
142.5°	213.7	213.2	213.7	212.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
145°	224.5	224.5	224.5	223.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5
147.5°	235.8	235.3	235.8	234.8	235.8	235.8	235.8	235.8	235.8	235.8	235.8
150°	247.0	246.1	247.0	246.1	247.0	247.0	247.0	247.0	247.0	247.0	247.0
152.5°	256.0	255.5	256.4	255.5	256.0	256.0	256.4	256.0	256.0	256.0	256.0
155°	264.9	264.9	265.8	264.9	264.9	264.9	265.8	264.9	264.9	264.9	264.9
157.5°	272.4	272.4	273.3	272.4	272.4	272.4	273.3	272.4	272.4	272.4	272.4
160°	279.9	279.9	280.8	279.9	279.9	279.9	280.8	279.9	279.9	279.9	279.9
162.5°	286.0	286.0	286.9	286.0	286.0	286.0	286.9	286.0	286.0	286.0	286.0
165°	292.1	292.1	293.0	292.1	292.1	292.1	293.0	292.1	292.1	292.1	292.1
167.5°	295.8	295.8	296.8	295.8	295.8	295.8	296.8	295.8	295.8	295.8	295.8
170°	299.6	299.6	300.5	299.6	299.6	299.6	300.5	299.6	299.6	299.6	299.6
172.5°	302.0	302.0	302.8	302.0	302.4	302.0	302.8	302.0	302.0	302.0	302.0
175°	304.3	304.3	305.2	304.3	305.2	304.3	305.2	304.3	304.3	304.3	304.3
177.5°	305.2	305.2	305.7	305.2	305.7	305.2	305.7	305.2	305.2	305.2	305.2
180°	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2

(END OF REPORT)