

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: P821175

Luminaire Tested: **TT-D5-830-24VDC-CQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821175
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-D5-830-24VDC-CQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3000K, 80 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

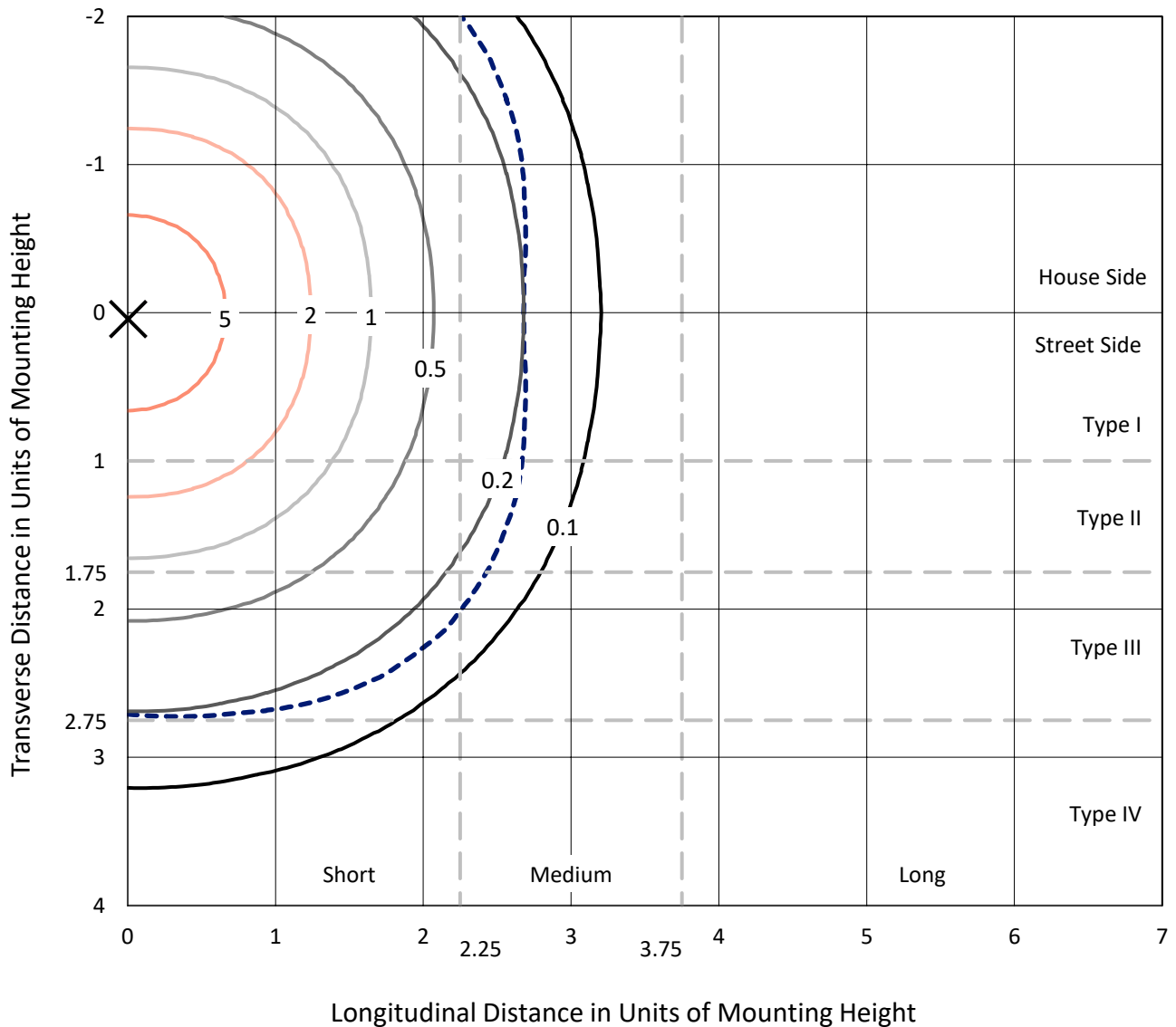
Lumens per Lamp: N/A
Luminaire Lumens: 9218.7 lumens
Efficiency: N/A
Efficacy: 126.3 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G1

Input Watts (W): 73
Input Voltage (V): NR
Input Current (A_{in}): 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

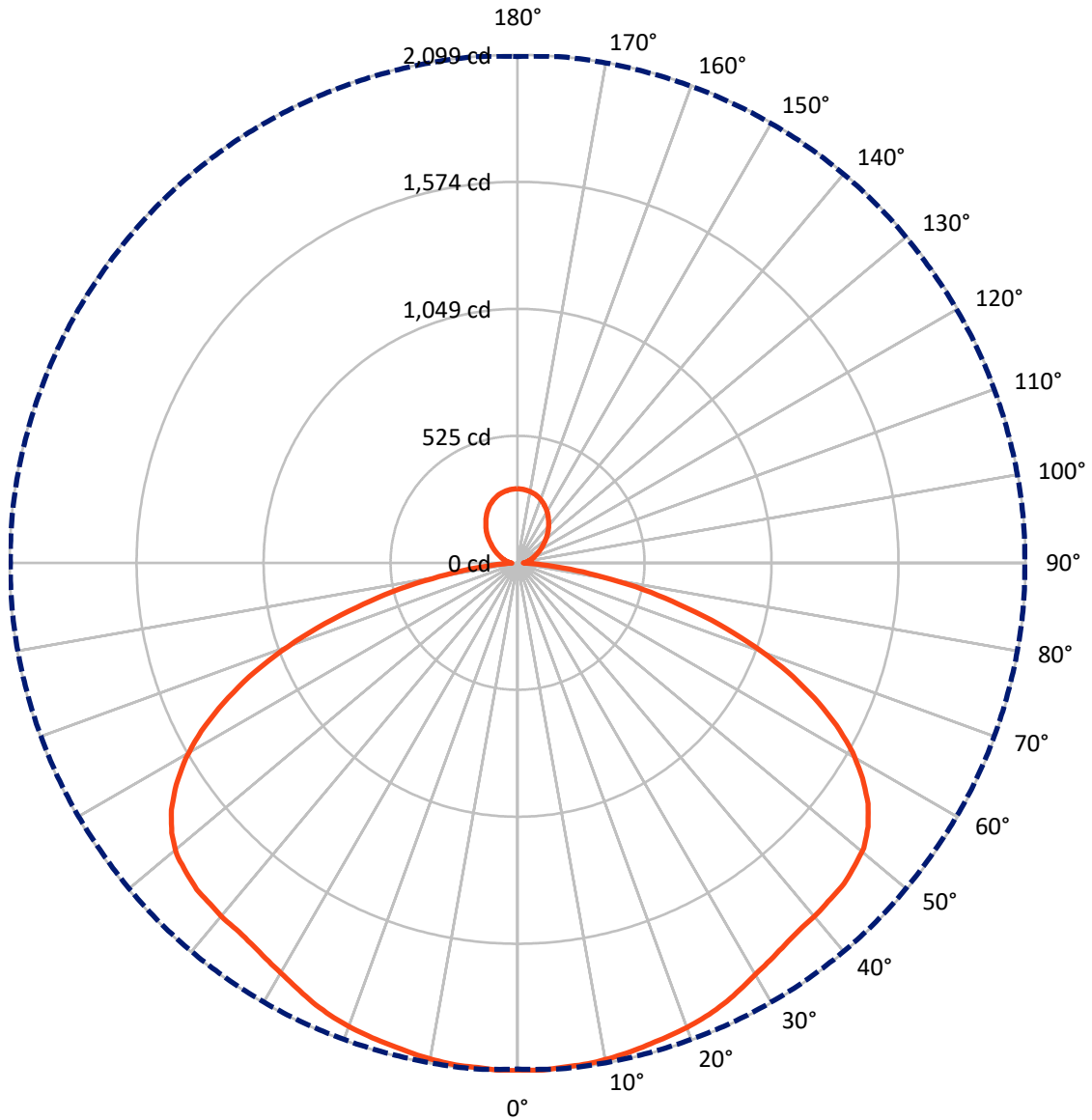
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 9.3 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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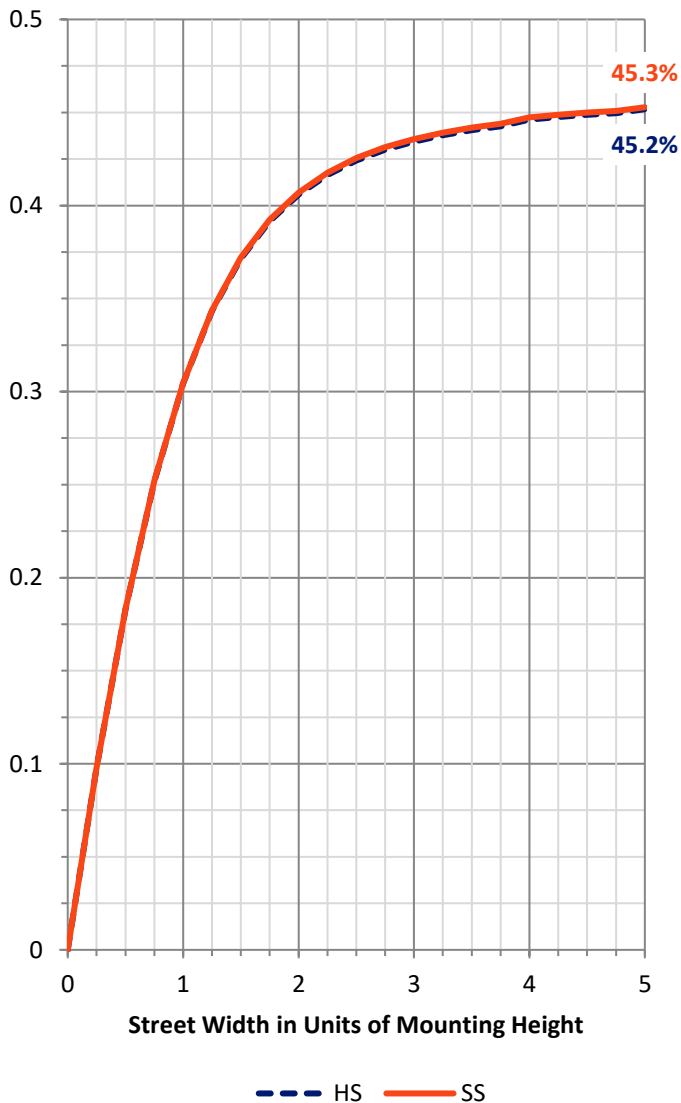
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4193.5	415.9	4609.4
	% Fixture	45.5	4.5	50.0
Street Side	Lumens	4193.5	415.9	4609.4
	% Fixture	45.5	4.5	50.0
Total	Lumens	8387.0	831.7	9218.7
	% Fixture	91.0	9.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.5	2.2
10°-20°	584.1	6.3
20°-30°	929.0	10.1
30°-40°	1222.0	13.3
40°-50°	1495.7	16.2
50°-60°	1620.0	17.6
60°-70°	1393.7	15.1
70°-80°	783.5	8.5
80°-90°	159.3	1.7
90°-100°	42.6	0.5
100°-110°	66.0	0.7
110°-120°	91.9	1.0
120°-130°	119.0	1.3
130°-140°	138.7	1.5
140°-150°	140.5	1.5
150°-160°	121.9	1.3
160°-170°	82.2	0.9
170°-180°	28.9	0.3
0°-90°	8387.0	91.0
0°-180°	9218.7	100.0

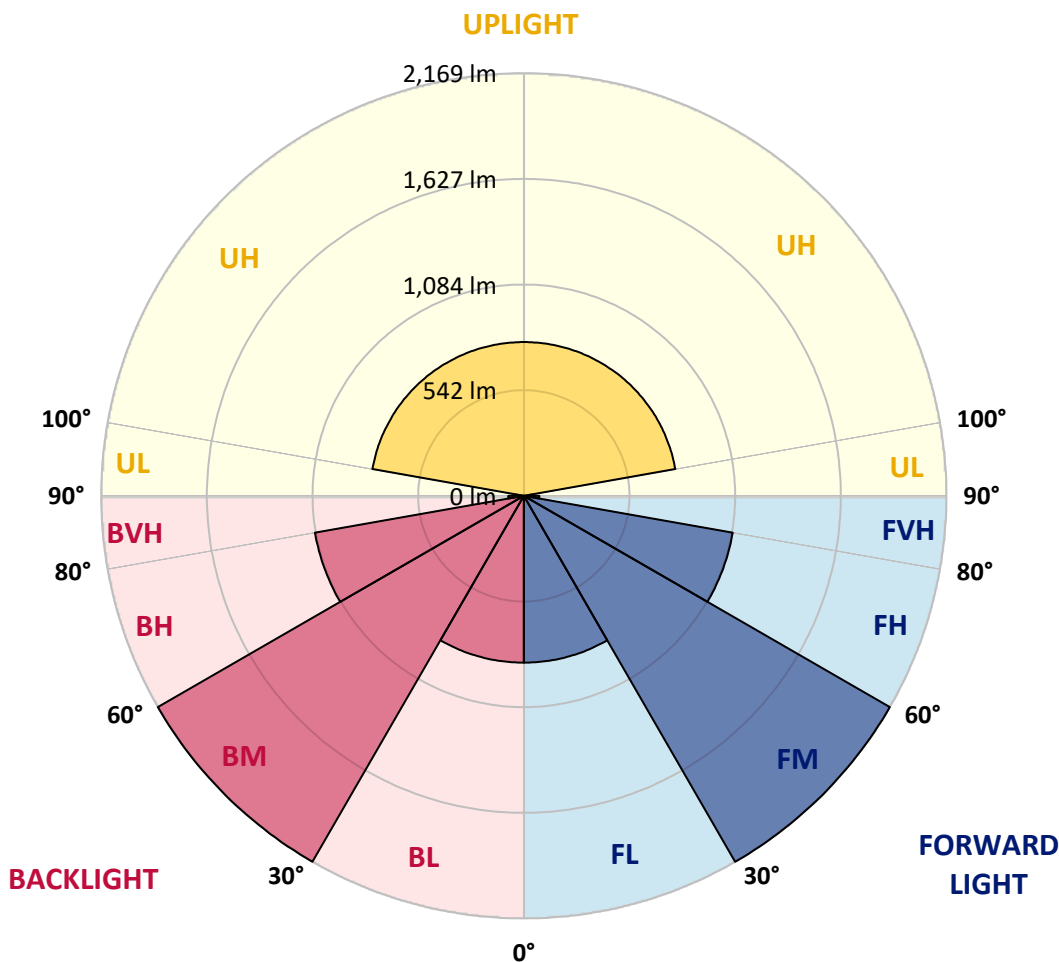


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	856.3	9.3			
FM (30°-60°)	2168.9	23.5			
FH (60°-80°)	1088.6	11.8			G1/1800
FVH (80°-90°)	79.7	0.9			G1/100
BL (0°-30°)	856.3	9.3	B2/1000		
BM (30°-60°)	2168.9	23.5	B2/2500		
BH (60°-80°)	1088.6	11.8	B3/2500		G1/1800
BVH (80°-90°)	79.7	0.9			G1/100
UL (90°-100°)	42.6	0.5		U2/50	
UH (100°-180°)	789.1	8.6		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°	2097.2	2097.2	2097.2	2097.2	2097.2	2097.2	2097.2	2097.2	2097.2	2097.2	2097.2
2.5°	2091.8	2098.5	2095.8	2095.8	2095.8	2095.8	2093.2	2095.8	2095.8	2097.2	2095.8
5°	2093.2	2091.8	2091.8	2093.2	2093.2	2094.5	2091.8	2093.2	2094.5	2094.5	2095.8
7.5°	2089.2	2090.5	2087.8	2090.5	2087.8	2089.2	2089.2	2090.5	2089.2	2090.5	2093.2
10°	2081.2	2082.5	2081.2	2081.2	2081.2	2083.8	2078.5	2082.5	2081.2	2082.5	2081.2
12.5°	2066.5	2073.2	2070.5	2073.2	2073.2	2073.2	2069.2	2071.8	2073.2	2073.2	2073.2
15°	2059.8	2061.2	2057.2	2062.5	2063.8	2065.2	2059.8	2062.5	2062.5	2063.8	2065.2
17.5°	2045.2	2051.8	2050.5	2054.5	2053.2	2057.2	2055.8	2054.5	2053.2	2055.8	2053.2
20°	2034.5	2041.1	2039.8	2043.8	2045.2	2049.2	2045.2	2045.2	2041.1	2042.5	2046.5
22.5°	2023.8	2026.5	2026.5	2030.5	2030.5	2034.5	2030.5	2029.1	2029.1	2027.8	2031.8
25°	2006.5	2007.8	2006.5	2010.5	2013.1	2015.8	2014.5	2011.8	2010.5	2010.5	2009.1
27.5°	1978.4	1983.8	1986.5	1991.8	1993.1	1997.1	1991.8	1991.8	1989.1	1986.5	1987.8
30°	1957.1	1959.8	1959.8	1971.8	1971.8	1978.4	1971.8	1970.4	1969.1	1967.8	1965.1
32.5°	1937.1	1941.1	1945.1	1954.4	1961.1	1963.8	1959.8	1957.1	1950.4	1946.4	1945.1
35°	1921.1	1922.4	1930.4	1943.8	1951.8	1958.4	1953.1	1946.4	1937.1	1930.4	1935.8
37.5°	1909.1	1910.4	1922.4	1939.8	1954.4	1959.8	1951.8	1941.1	1926.4	1918.4	1915.7
40°	1898.4	1906.4	1919.7	1943.8	1959.8	1967.8	1961.1	1946.4	1925.1	1909.1	1907.7
42.5°	1893.1	1897.1	1917.1	1945.1	1967.8	1978.4	1969.1	1949.1	1922.4	1903.7	1902.4
45°	1879.7	1891.7	1910.4	1946.4	1971.8	1985.1	1971.8	1946.4	1914.4	1893.1	1889.1
47.5°	1869.1	1873.1	1902.4	1943.8	1974.4	1985.1	1971.8	1939.8	1899.7	1871.7	1869.1
50°	1843.7	1853.0	1882.4	1926.4	1962.4	1973.1	1957.1	1914.4	1869.1	1838.4	1833.0
52.5°	1805.0	1813.0	1847.7	1902.4	1937.1	1949.1	1925.1	1879.7	1826.4	1789.0	1789.0
55°	1745.0	1757.0	1793.0	1849.0	1893.1	1903.7	1875.7	1827.7	1767.7	1730.3	1729.0
57.5°	1672.9	1680.9	1719.6	1781.0	1823.7	1839.7	1811.7	1758.3	1698.3	1654.3	1650.3
60°	1579.6	1590.2	1631.6	1690.3	1734.3	1747.7	1723.6	1670.3	1608.9	1562.2	1562.2
62.5°	1467.5	1479.5	1520.9	1580.9	1626.2	1646.3	1612.9	1562.2	1498.2	1452.8	1448.8
65°	1336.8	1347.4	1384.8	1447.5	1494.2	1508.8	1483.5	1430.1	1368.8	1326.1	1322.1
67.5°	1190.0	1204.7	1242.0	1295.4	1335.4	1354.1	1338.1	1290.1	1226.0	1182.0	1178.0
70°	1031.2	1041.9	1071.3	1120.6	1166.0	1179.3	1155.3	1123.3	1063.3	1023.2	1017.9
72.5°	861.8	871.2	895.2	941.9	973.9	991.2	977.9	936.5	888.5	855.1	860.5
75°	691.1	689.7	716.4	749.8	779.1	791.1	781.8	755.1	711.1	683.1	681.7
77.5°	520.3	533.6	543.0	571.0	595.0	604.3	591.0	569.7	536.3	513.6	517.6
80°	365.5	357.5	374.9	392.2	408.2	417.6	409.6	397.6	374.9	357.5	354.9
82.5°	224.1	217.5	225.5	241.5	252.1	254.8	256.1	241.5	232.1	218.8	221.5
85°	98.7	100.1	106.7	117.4	118.7	120.1	120.1	117.4	106.7	105.4	102.7
87.5°	24.0	24.0	25.3	29.3	29.3	30.7	30.7	26.7	25.3	22.7	24.0
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)