

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: P821328

Luminaire Tested: **TT-D5-740-24VDC-MQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821328
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-1) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D5-740-24VDC-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
4000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

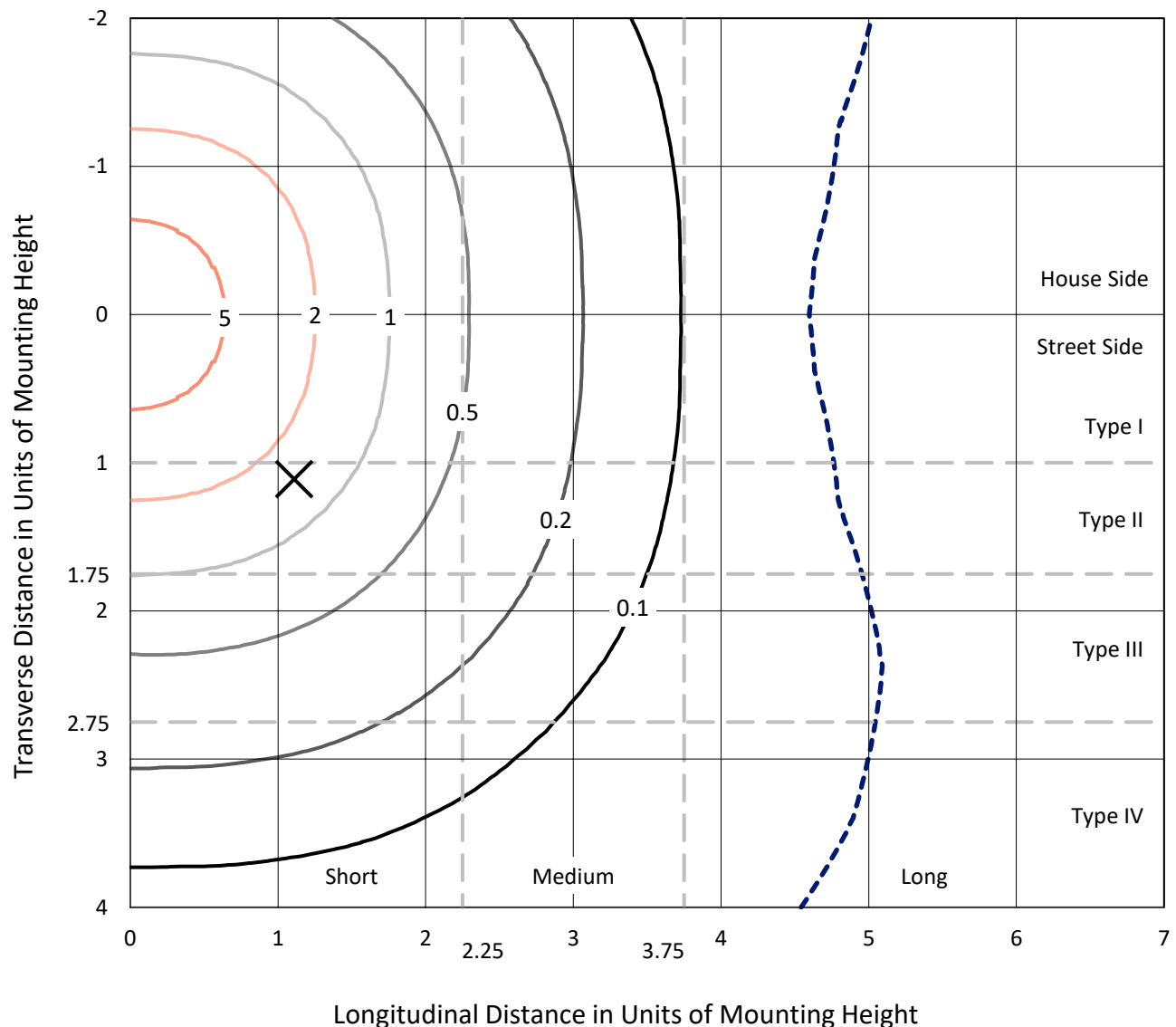
Lumens per Lamp: N/A
Luminaire Lumens: 10961.7 lumens
Efficiency: N/A
Efficacy: 150.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G3

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

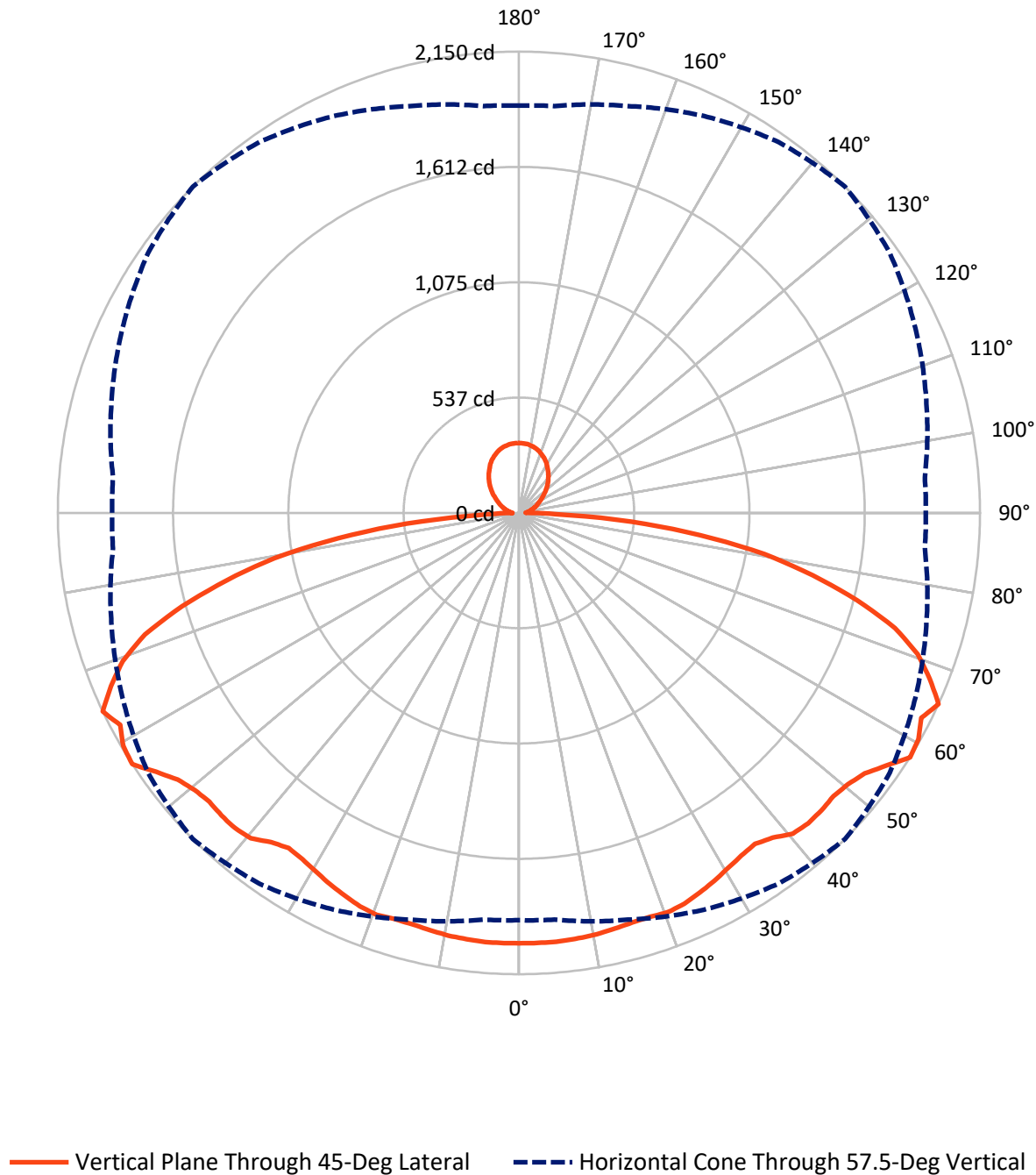
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 8.9 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



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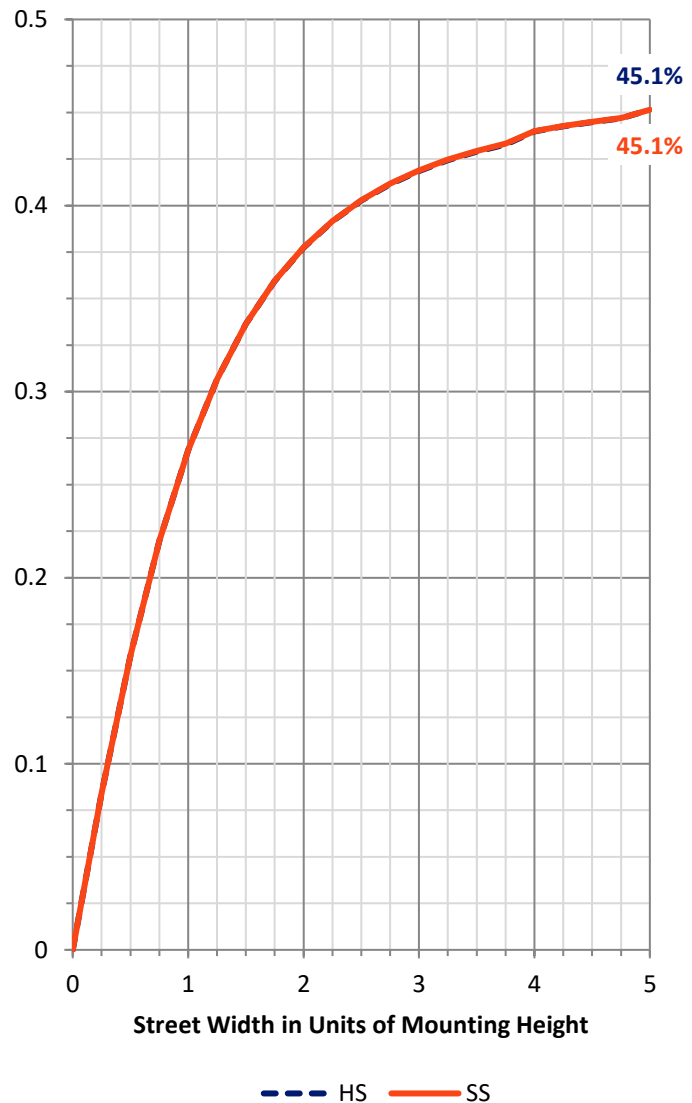
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5038.1	442.7	5480.9
	% Fixture	46.0	4.0	50.0
Street Side	Lumens	5038.1	442.7	5480.9
	% Fixture	46.0	4.0	50.0
Total	Lumens	10076.3	885.5	10961.7
	% Fixture	91.9	8.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.2	1.7
10°-20°	562.3	5.1
20°-30°	903.4	8.2
30°-40°	1192.7	10.9
40°-50°	1492.2	13.6
50°-60°	1774.9	16.2
60°-70°	1925.0	17.6
70°-80°	1532.2	14.0
80°-90°	502.3	4.6
90°-100°	45.4	0.4
100°-110°	70.3	0.6
110°-120°	97.7	0.9
120°-130°	126.6	1.2
130°-140°	147.6	1.3
140°-150°	149.5	1.4
150°-160°	129.8	1.2
160°-170°	87.7	0.8
170°-180°	30.8	0.3
0°-90°	10076.3	91.9
0°-180°	10961.7	100.0

Coefficient of Utilization



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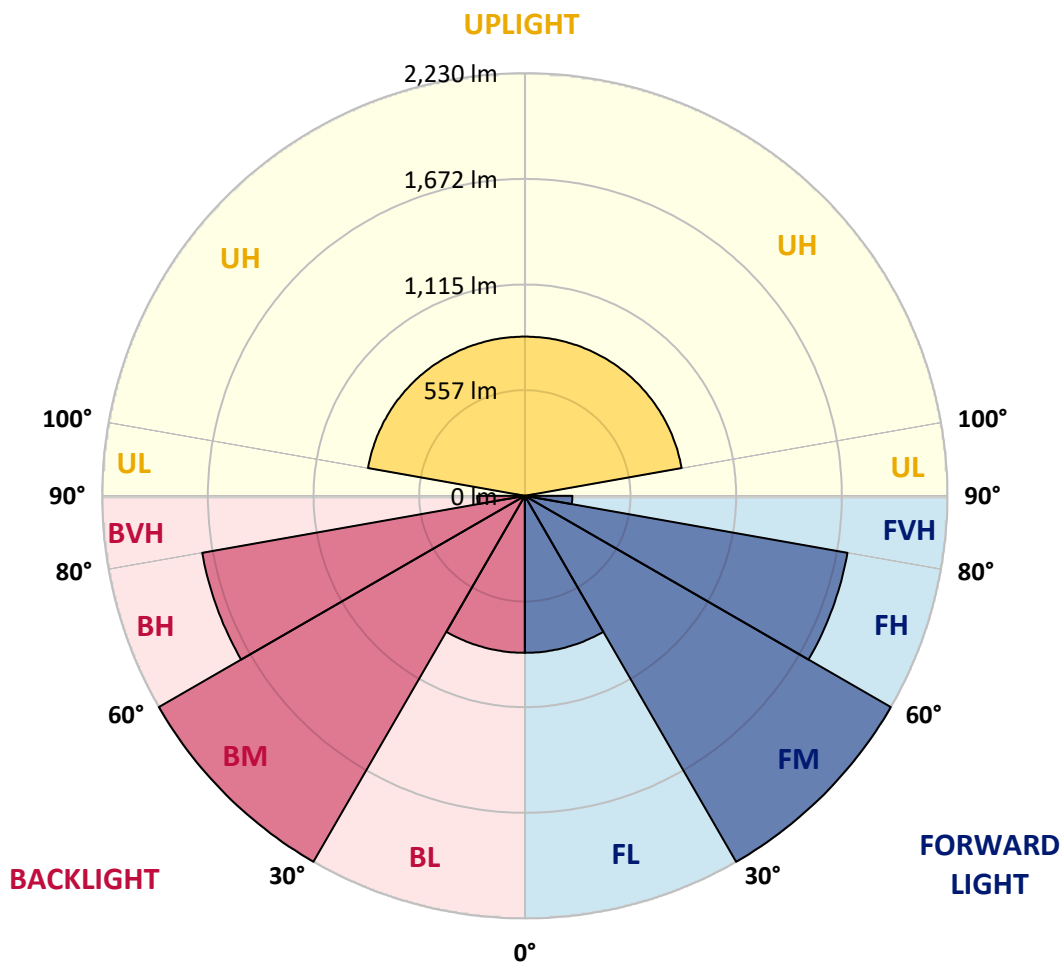
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	828.4	7.6			
FM	(30°-60°)	2229.9	20.3			
FH	(60°-80°)	1728.6	15.8			G1/1800
FVH	(80°-90°)	251.2	2.3			G3/500
BL	(0°-30°)	828.4	7.6	B2/1000		
BM	(30°-60°)	2229.9	20.3	B2/2500		
BH	(60°-80°)	1728.6	15.8	B3/2500		G1/1800
BVH	(80°-90°)	251.2	2.3			G3/500
UL	(90°-100°)	45.4	0.4		U2/50	
UH	(100°-180°)	840.1	7.7		U4/1000	

BUG Rating: B3-U4-G3

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0
2.5°	2009.0	2007.5	2009.0	2007.5	2007.5	2006.0	2007.5	2007.5	2007.5	2007.5	2007.5
5°	2007.5	2006.0	2006.0	2007.5	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0	2006.0
7.5°	2001.5	2001.5	2003.0	2001.5	2001.5	2001.5	2001.5	2001.5	2001.5	2003.0	2003.0
10°	1997.0	1995.5	1997.0	1997.0	1995.5	1997.0	1995.5	1997.0	1997.0	1997.0	1997.0
12.5°	1991.0	1989.6	1991.0	1991.0	1989.6	1988.1	1989.6	1989.6	1991.0	1991.0	1991.0
15°	1980.6	1980.6	1983.6	1982.1	1982.1	1980.6	1983.6	1982.1	1980.6	1982.1	1982.1
17.5°	1973.1	1973.1	1976.1	1979.1	1979.1	1979.1	1979.1	1977.6	1974.6	1976.1	1973.1
20°	1974.6	1976.1	1977.6	1982.1	1985.1	1986.6	1986.6	1982.1	1977.6	1979.1	1977.6
22.5°	1970.1	1968.6	1970.1	1973.1	1977.6	1977.6	1977.6	1971.6	1970.1	1968.6	1968.6
25°	1952.1	1952.1	1955.1	1958.1	1961.1	1959.6	1961.1	1958.1	1955.1	1952.1	1952.1
27.5°	1931.1	1931.1	1935.6	1938.6	1941.6	1941.6	1940.1	1937.1	1935.6	1932.6	1931.1
30°	1910.1	1910.1	1914.6	1917.6	1922.1	1920.6	1920.6	1916.1	1911.6	1908.7	1908.7
32.5°	1887.7	1886.2	1890.7	1898.2	1904.2	1904.2	1904.2	1895.2	1889.2	1886.2	1884.7
35°	1868.2	1868.2	1874.2	1887.7	1895.2	1895.2	1892.2	1886.2	1872.7	1868.2	1868.2
37.5°	1862.2	1866.7	1883.2	1902.7	1917.6	1920.6	1916.1	1899.7	1881.7	1868.2	1863.7
40°	1881.7	1886.2	1907.2	1938.6	1961.1	1965.6	1961.1	1937.1	1905.7	1884.7	1883.2
42.5°	1884.7	1887.7	1913.1	1949.1	1970.1	1977.6	1970.1	1946.1	1911.6	1886.2	1884.7
45°	1874.2	1875.7	1905.7	1943.1	1968.6	1977.6	1968.6	1940.1	1904.2	1875.7	1874.2
47.5°	1860.7	1863.7	1896.7	1935.6	1967.1	1973.1	1965.6	1934.1	1893.7	1865.2	1860.7
50°	1850.2	1859.2	1889.2	1932.6	1970.1	1988.1	1970.1	1928.1	1887.7	1856.2	1850.2
52.5°	1856.2	1859.2	1898.2	1959.6	2010.5	2018.0	2009.0	1959.6	1895.2	1859.2	1854.7
55°	1874.2	1887.7	1929.6	2018.0	2064.5	2077.9	2058.5	2015.0	1931.1	1887.7	1874.2
57.5°	1898.2	1902.7	1962.6	2040.5	2109.4	2149.9	2110.9	2039.0	1967.1	1899.7	1896.7
60°	1878.7	1865.2	1940.1	2031.5	2124.4	2140.9	2118.4	2033.0	1937.1	1863.7	1877.2
62.5°	1826.3	1835.2	1896.7	2022.5	2086.9	2104.9	2080.9	2022.5	1893.7	1842.7	1821.8
65°	1784.3	1838.2	1905.7	1995.5	2098.9	2149.9	2100.4	1992.5	1908.7	1829.2	1779.8
67.5°	1725.9	1736.4	1836.7	1947.6	2040.5	2066.0	2039.0	1949.1	1827.8	1728.9	1736.4
70°	1627.0	1612.0	1713.9	1842.7	1931.1	1971.6	1934.1	1836.7	1709.4	1609.0	1622.5
72.5°	1463.7	1472.7	1567.1	1703.4	1794.8	1833.7	1796.3	1692.9	1564.1	1481.7	1472.7
75°	1292.9	1303.4	1394.8	1519.1	1612.0	1628.5	1618.0	1511.6	1397.8	1301.9	1292.9
77.5°	1098.1	1108.6	1183.5	1319.9	1375.3	1400.8	1378.3	1327.4	1180.5	1107.1	1095.2
80°	882.4	879.4	945.3	1062.2	1131.1	1159.6	1131.1	1065.2	942.3	885.4	865.9
82.5°	630.7	633.7	695.1	776.0	842.0	851.0	837.5	783.5	689.2	641.2	614.2
85°	350.6	364.1	409.0	468.9	512.4	527.4	504.9	453.9	407.5	370.0	358.1
87.5°	83.9	91.4	106.4	134.8	151.3	166.3	151.3	140.8	100.4	91.4	83.9
90°	32.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0
92.5°	37.0	37.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
95°	42.0	42.0	42.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0
97.5°	48.0	48.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
100°	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0
102.5°	60.0	59.0	60.0	60.0	59.0	59.0	59.0	60.0	60.0	60.0	59.0
105°	66.0	66.0	66.0	66.0	66.0	66.0	66.0	67.0	66.0	66.0	66.0
107.5°	73.0	73.0	73.0	74.0	74.0	74.0	74.0	74.0	73.0	74.0	73.0
110°	80.0	80.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0	81.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	89.0	89.0	89.0	89.0	89.0	90.0	90.0	90.0	90.0	90.0	89.0
115°	97.0	97.0	98.0	98.0	98.0	98.0	99.0	99.0	98.0	98.0	98.0
117.5°	107.0	107.0	107.0	107.0	107.0	108.0	108.0	108.0	108.0	108.0	107.0
120°	117.0	117.0	117.0	118.0	118.0	118.0	119.0	119.0	118.0	118.0	118.0
122.5°	129.0	128.0	129.0	129.0	129.0	129.0	130.0	130.0	130.0	130.0	129.0
125°	140.0	140.0	141.0	141.0	141.0	141.0	142.0	142.0	142.0	142.0	141.0
127.5°	153.0	153.0	153.0	153.0	153.0	154.0	154.0	154.0	154.0	154.0	154.0
130°	165.0	165.0	166.0	166.0	166.0	166.0	167.0	167.0	167.0	167.0	166.0
132.5°	179.0	178.0	179.0	178.0	178.0	179.0	179.0	180.0	179.0	180.0	179.0
135°	191.0	191.0	191.0	191.0	191.0	192.0	192.0	192.0	192.0	192.0	192.0
137.5°	204.0	203.0	204.0	203.0	203.0	204.0	204.0	204.0	204.0	204.0	204.0
140°	216.0	215.0	216.0	215.0	216.0	216.0	216.0	216.0	216.0	216.0	216.0
142.5°	228.0	227.0	228.0	227.0	227.0	228.0	228.0	228.0	228.0	228.0	228.0
145°	239.0	239.0	239.0	238.0	239.0	239.0	239.0	239.0	239.0	239.0	239.0
147.5°	250.0	249.0	250.0	249.0	249.0	250.0	250.0	250.0	250.0	250.0	250.0
150°	263.0	262.0	263.0	262.0	263.0	263.0	263.0	263.0	263.0	263.0	263.0
152.5°	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0	273.0
155°	282.0	282.0	283.0	282.0	282.0	282.0	283.0	282.0	282.0	282.0	282.0
157.5°	290.0	290.0	290.0	290.0	290.0	290.0	291.0	291.0	290.0	291.0	290.0
160°	298.0	298.0	299.0	298.0	298.0	298.0	299.0	298.0	298.0	298.0	298.0
162.5°	306.0	305.0	306.0	305.0	306.0	306.0	306.0	306.0	306.0	306.0	306.0
165°	311.0	311.0	312.0	311.0	311.0	311.0	312.0	311.0	311.0	311.0	311.0
167.5°	316.0	315.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0	316.0
170°	319.0	319.0	320.0	319.0	319.0	319.0	320.0	319.0	319.0	319.0	319.0
172.5°	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0
175°	324.0	324.0	325.0	324.0	325.0	324.0	325.0	324.0	324.0	324.0	324.0
177.5°	325.0	325.0	326.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0	325.0
180°	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0	326.0

(END OF REPORT)