

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: P821186

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

Issue Date: 7/23/2020



Test Information

Test Method: LM-79-08
Report Number: P821186
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-WQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3000K, 80 CRI LEDS AND WIDE DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

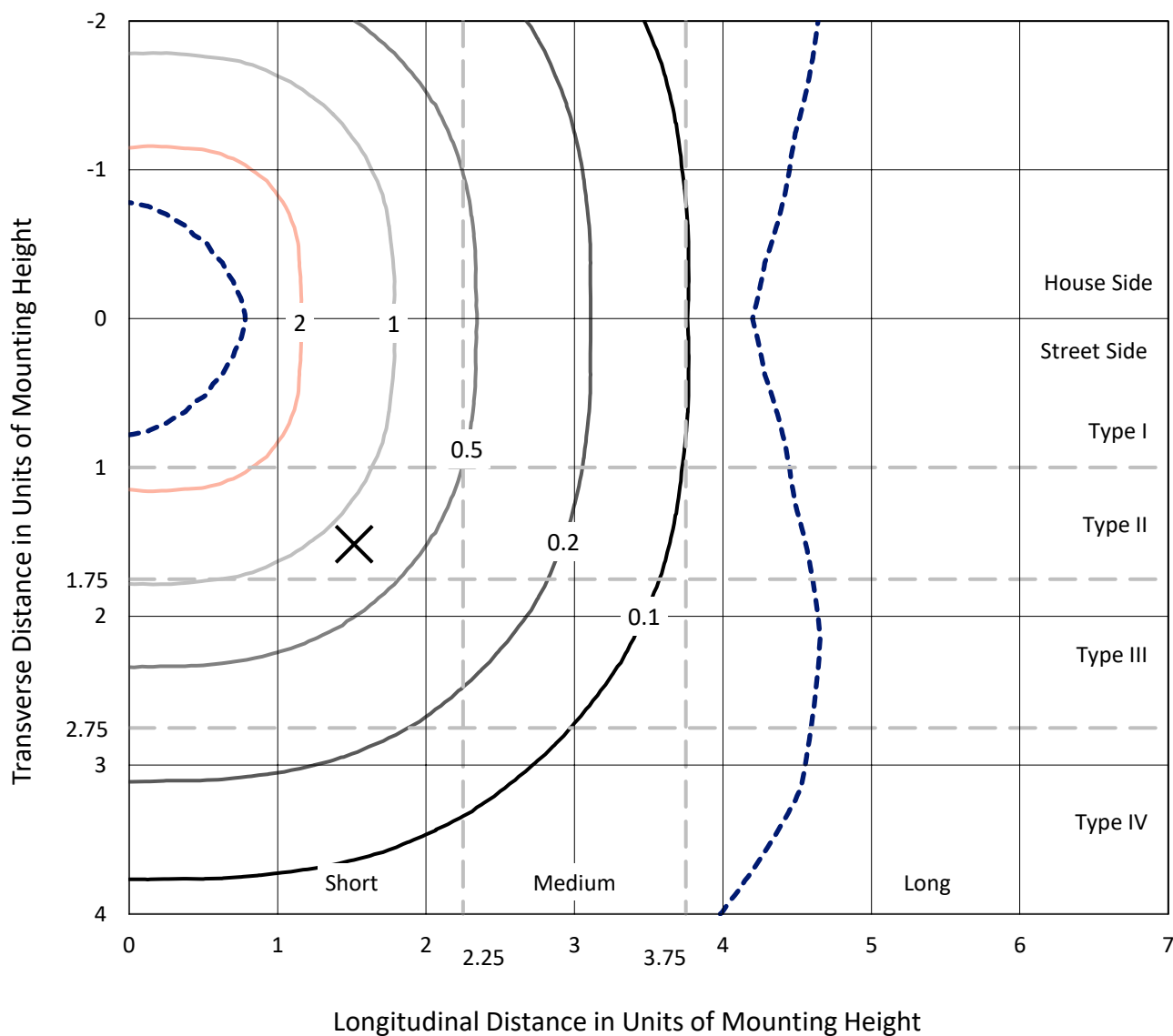
Lumens per Lamp: N/A
Luminaire Lumens: 9318.7 lumens
Efficiency: N/A
Efficacy: 127.7 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G2

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

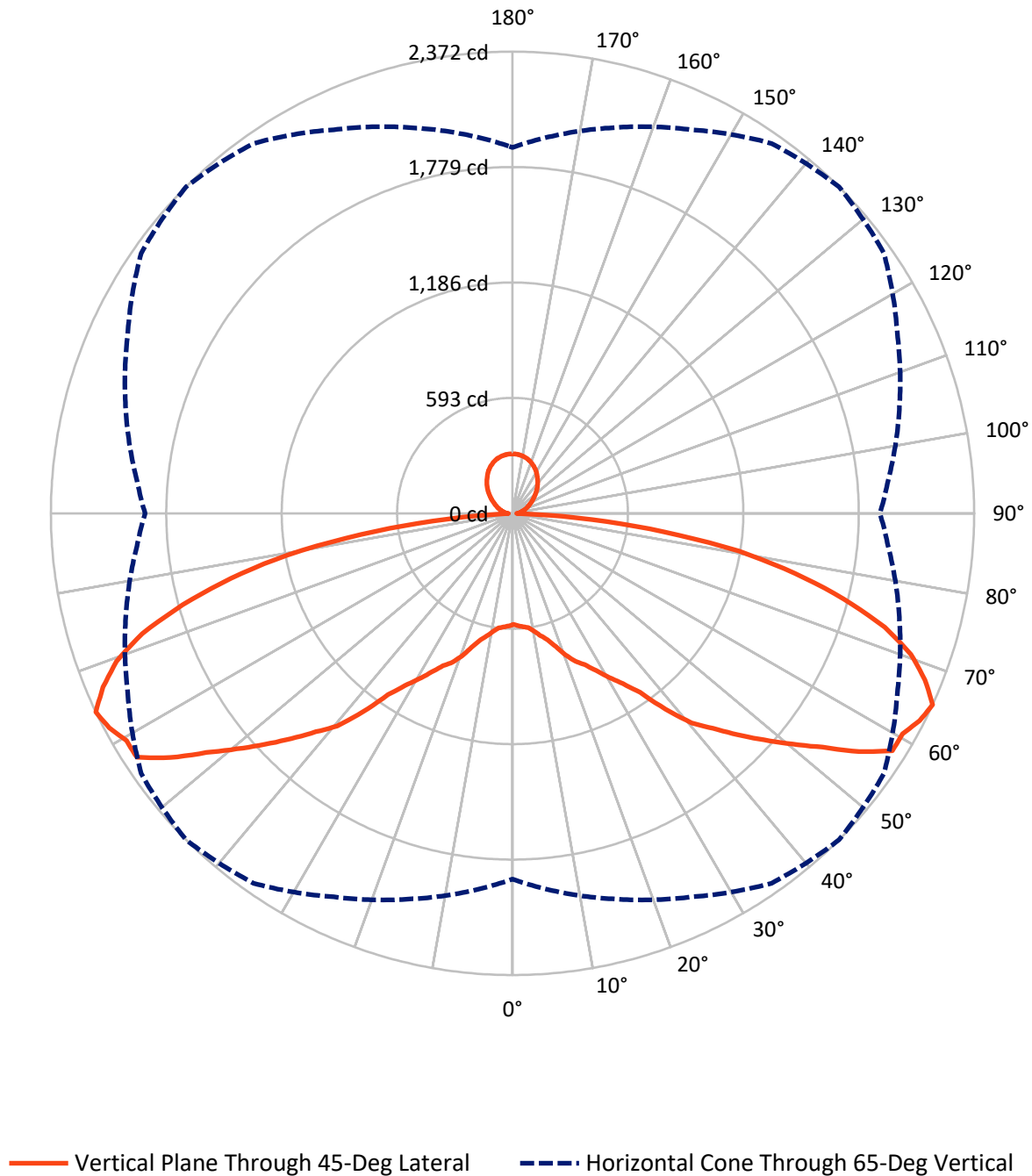
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.9 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



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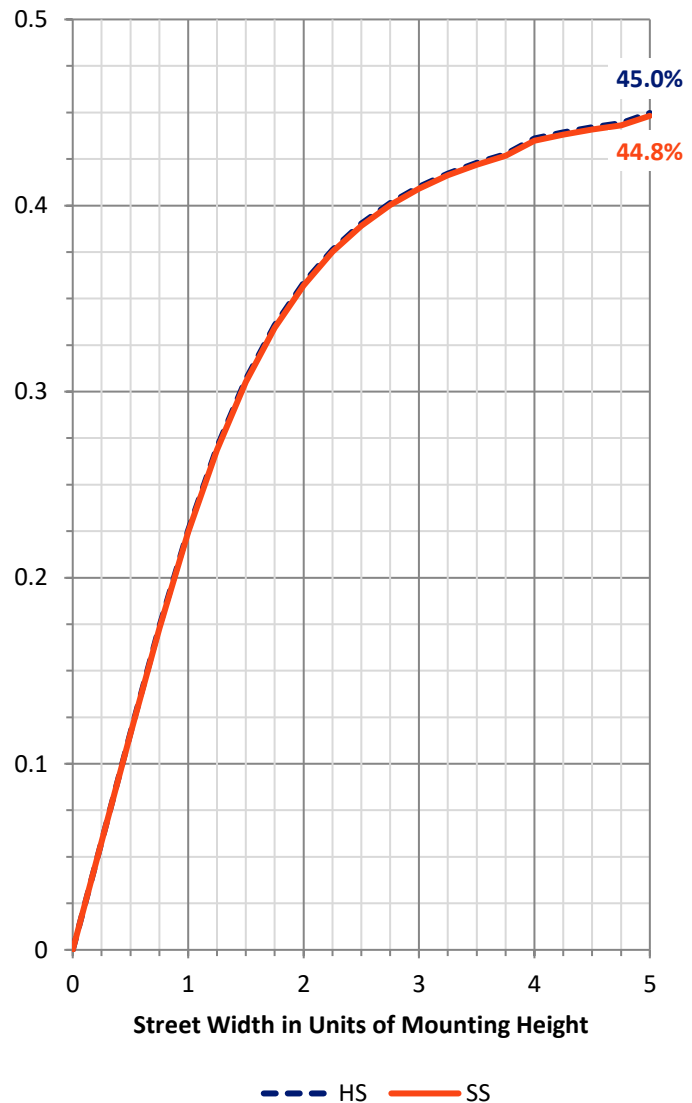
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4243.5	415.9	4659.4
	% Fixture	45.5	4.5	50.0
Street Side	Lumens	4243.5	415.9	4659.4
	% Fixture	45.5	4.5	50.0
Total	Lumens	8487.0	831.7	9318.7
	% Fixture	91.1	8.9	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.9	0.6
10°-20°	195.8	2.1
20°-30°	402.1	4.3
30°-40°	714.3	7.7
40°-50°	1204.1	12.9
50°-60°	1776.3	19.1
60°-70°	2084.7	22.4
70°-80°	1624.1	17.4
80°-90°	428.6	4.6
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°	8487.0	91.1
0°-180°	9318.7	100.0



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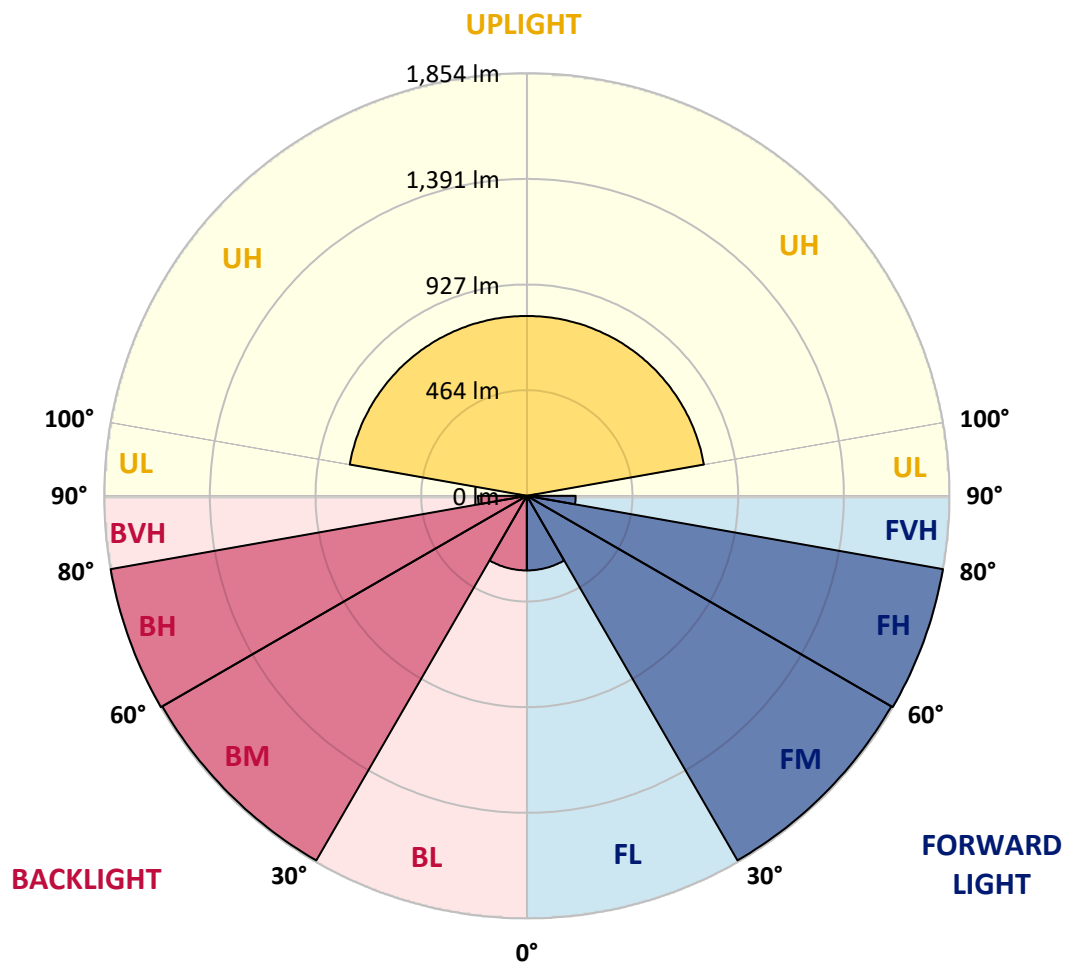
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	327.4	3.5			
FM	(30°-60°)	1847.4	19.8			
FH	(60°-80°)	1854.4	19.9			G2/5000
FVH	(80°-90°)	214.3	2.3			G2/225
BL	(0°-30°)	327.4	3.5	B1/500		
BM	(30°-60°)	1847.4	19.8	B2/2500		
BH	(60°-80°)	1854.4	19.9	B3/2500		G2/5000
BVH	(80°-90°)	214.3	2.3			G2/225
UL	(90°-100°)	42.6	0.5		U2/50	
UH	(100°-180°)	789.1	8.5		U4/1000	

BUG Rating: B3-U4-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	570.9	570.9	570.9	570.9	570.9	570.9	570.9	570.9	570.9	570.9	570.9
2.5°	580.3	580.3	580.3	578.9	578.9	578.9	578.9	580.3	580.3	580.3	580.3
5°	593.6	593.6	590.9	588.3	585.6	585.6	586.9	588.3	589.6	592.3	592.3
7.5°	601.6	601.6	600.3	597.6	593.6	593.6	594.9	597.6	598.9	598.9	597.6
10°	612.3	613.6	617.6	619.0	616.3	616.3	617.6	619.0	616.3	612.3	612.3
12.5°	637.6	639.0	644.3	648.3	648.3	645.6	647.0	649.6	643.0	636.3	637.6
15°	673.6	673.6	675.0	679.0	676.3	673.6	676.3	677.6	673.6	672.3	675.0
17.5°	721.7	721.7	713.7	720.3	721.7	720.3	723.0	716.3	712.3	717.7	720.3
20°	773.7	768.4	764.4	769.7	780.4	776.4	781.7	767.0	763.0	765.7	767.0
22.5°	807.0	811.0	813.7	816.4	831.1	825.7	831.1	815.0	812.4	807.0	803.0
25°	847.1	851.1	867.1	859.1	868.4	860.4	867.1	857.7	863.1	847.1	847.1
27.5°	892.4	900.4	909.8	905.8	917.8	913.8	917.8	904.4	905.8	899.1	896.4
30°	953.8	953.8	951.1	959.1	980.5	977.8	979.1	961.8	949.8	951.1	956.4
32.5°	1015.1	1007.1	1011.1	1035.1	1048.5	1043.2	1045.8	1037.8	1011.1	1005.8	1009.8
35°	1072.5	1084.5	1093.8	1113.9	1132.5	1129.9	1128.5	1115.2	1097.8	1076.5	1069.8
37.5°	1161.9	1175.2	1200.6	1236.6	1269.9	1276.6	1259.3	1241.9	1201.9	1171.2	1155.2
40°	1279.3	1280.6	1309.9	1379.3	1410.0	1415.3	1406.0	1376.6	1315.3	1280.6	1279.3
42.5°	1382.0	1372.6	1420.7	1479.4	1507.4	1510.0	1503.4	1479.4	1420.7	1371.3	1380.6
45°	1462.0	1462.0	1519.4	1566.1	1611.4	1622.1	1610.1	1559.4	1520.7	1463.3	1459.3
47.5°	1535.4	1555.4	1603.4	1660.8	1724.8	1739.5	1724.8	1664.8	1599.4	1556.7	1534.0
50°	1623.4	1647.4	1682.1	1771.5	1843.5	1863.5	1842.2	1776.8	1682.1	1646.1	1632.8
52.5°	1726.1	1746.1	1800.8	1912.9	1966.2	1995.6	1978.3	1915.6	1803.5	1748.8	1738.1
55°	1848.9	1830.2	1915.6	2023.6	2122.3	2161.0	2126.3	2026.3	1928.9	1830.2	1848.9
57.5°	1911.6	1890.2	2010.3	2113.0	2250.4	2301.1	2258.4	2121.0	2010.3	1896.9	1910.2
60°	1916.9	1926.2	2016.9	2185.0	2279.7	2301.1	2287.7	2197.0	2020.9	1934.2	1908.9
62.5°	1900.9	1958.2	2035.6	2209.0	2294.4	2346.4	2301.1	2211.7	2043.6	1967.6	1902.2
65°	1879.5	1936.9	2051.6	2174.3	2319.7	2371.8	2329.1	2181.0	2057.0	1936.9	1887.5
67.5°	1842.2	1822.2	1963.6	2127.7	2254.4	2285.1	2258.4	2130.3	1962.2	1819.5	1846.2
70°	1723.5	1706.1	1827.5	2007.6	2129.0	2171.7	2139.7	2010.3	1830.2	1710.1	1726.1
72.5°	1547.4	1552.7	1670.1	1842.2	1972.9	1999.6	1982.3	1840.9	1676.8	1559.4	1538.0
75°	1342.0	1355.3	1467.3	1623.4	1742.1	1758.2	1740.8	1630.1	1466.0	1363.3	1335.3
77.5°	1103.2	1123.2	1213.9	1370.0	1448.7	1484.7	1456.7	1374.0	1220.6	1128.5	1100.5
80°	855.1	861.7	925.8	1051.2	1155.2	1179.2	1152.5	1055.2	933.8	864.4	844.4
82.5°	560.3	570.9	628.3	724.3	792.4	785.7	792.4	716.3	635.0	568.3	534.9
85°	249.4	270.8	309.5	354.8	398.9	410.9	398.9	360.2	309.5	265.5	260.1
87.5°	17.3	20.0	24.0	25.3	28.0	21.3	21.3	21.3	18.7	21.3	17.3
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)