

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: P821257

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

Issue Date: 10/29/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P821257  
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND  
Test Lab: INNOVATION CENTER  
Issue Date: 10/29/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TT-D5-735-24VDC-RW-UPL  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
3500K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

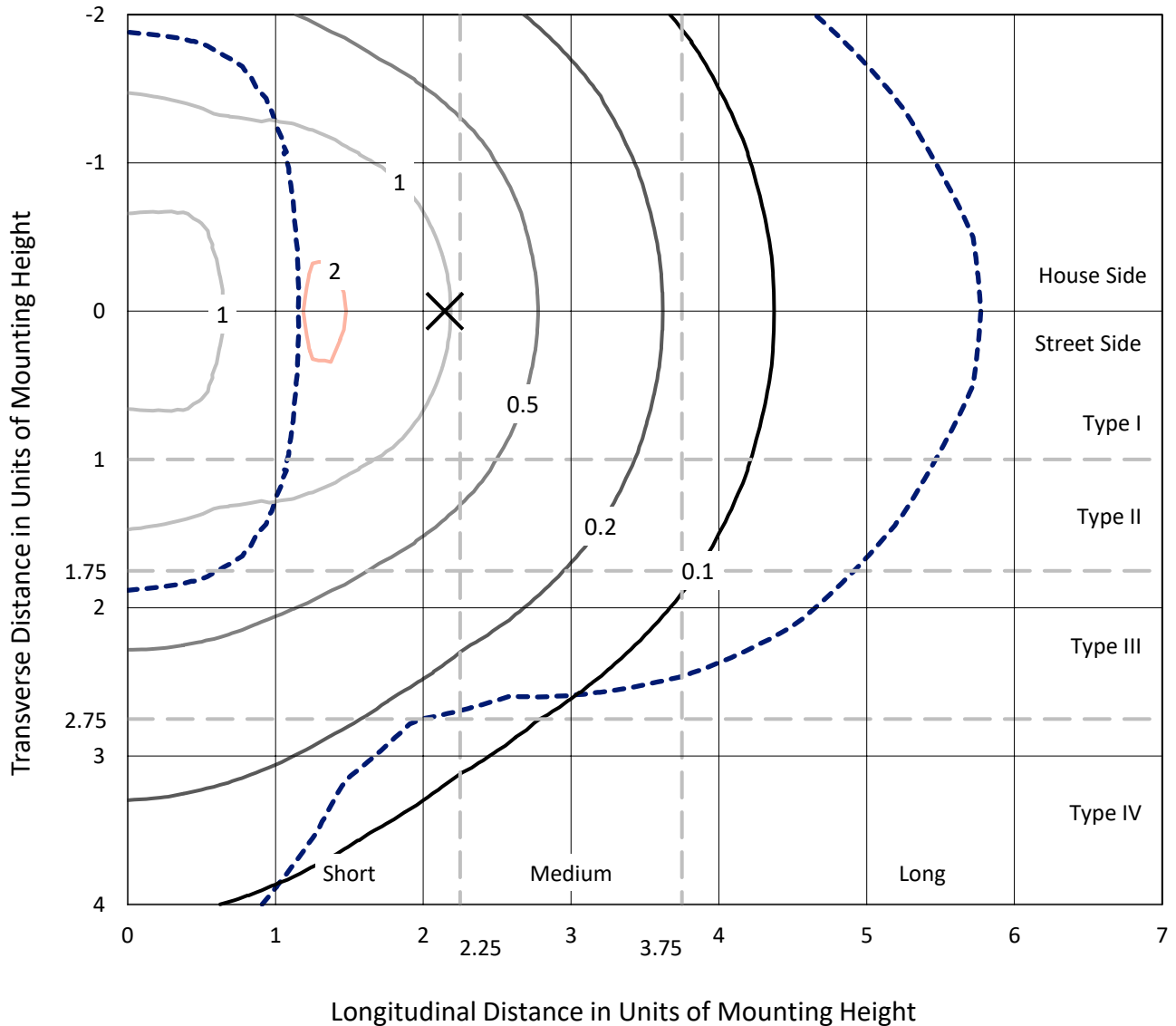
Lumens per Lamp: N/A  
Luminaire Lumens: 8033.7 lumens  
Efficiency: N/A  
Efficacy: 110.1 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U4 - G3

Input Watts (W): 73  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

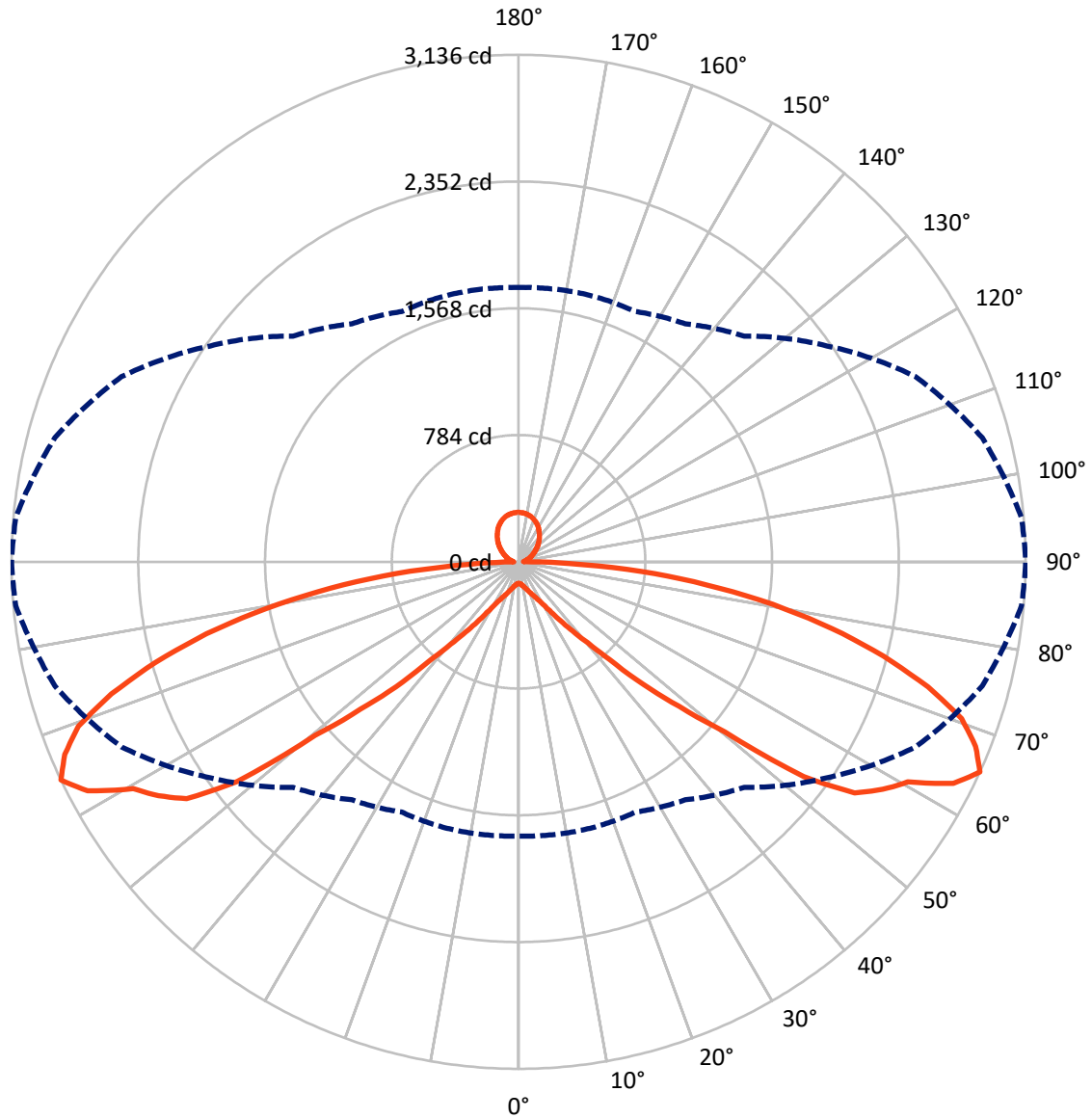
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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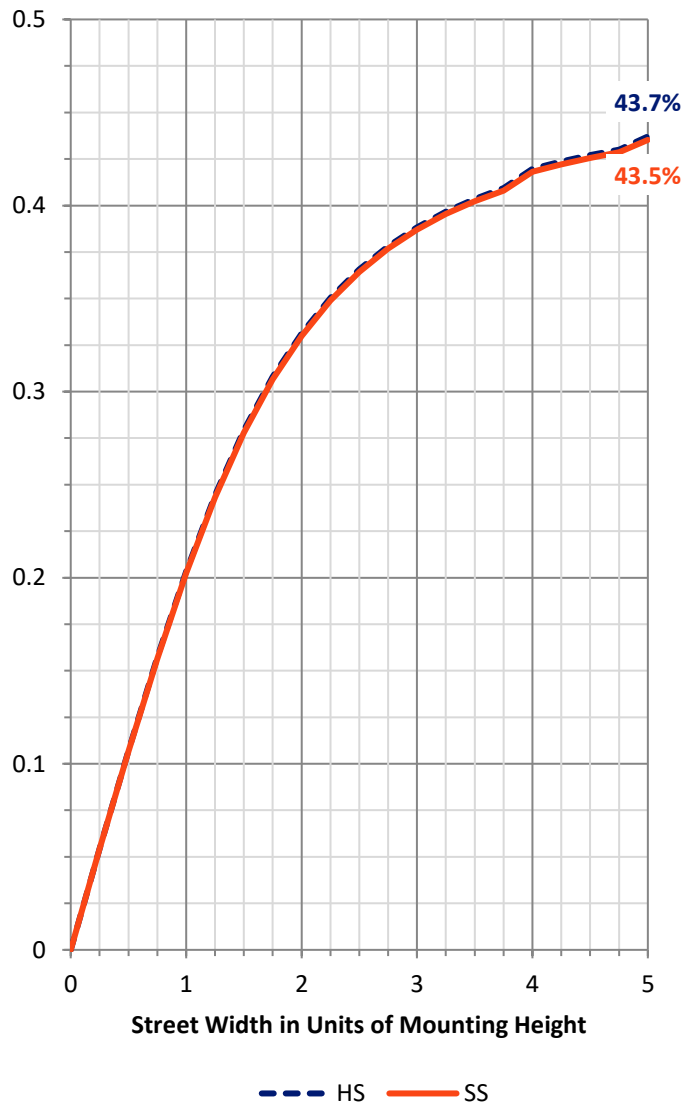
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3601.0	415.9	4016.9
	% Fixture	44.8	5.2	50.0
<b>Street Side</b>	Lumens	3601.0	415.9	4016.9
	% Fixture	44.8	5.2	50.0
<b>Total</b>	Lumens	7202.0	831.7	8033.7
	% Fixture	89.6	10.4	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	13.7	0.2
10°-20°	51.3	0.6
20°-30°	118.6	1.5
30°-40°	268.2	3.3
40°-50°	653.3	8.1
50°-60°	1469.0	18.3
60°-70°	2147.0	26.7
70°-80°	1870.8	23.3
80°-90°	610.0	7.6
90°-100°	42.6	0.5
100°-110°	66.0	0.8
110°-120°	91.9	1.1
120°-130°	119.0	1.5
130°-140°	138.7	1.7
140°-150°	140.5	1.7
150°-160°	121.9	1.5
160°-170°	82.2	1.0
170°-180°	28.9	0.4
0°-90°	7202.0	89.6
0°-180°	8033.7	100.0

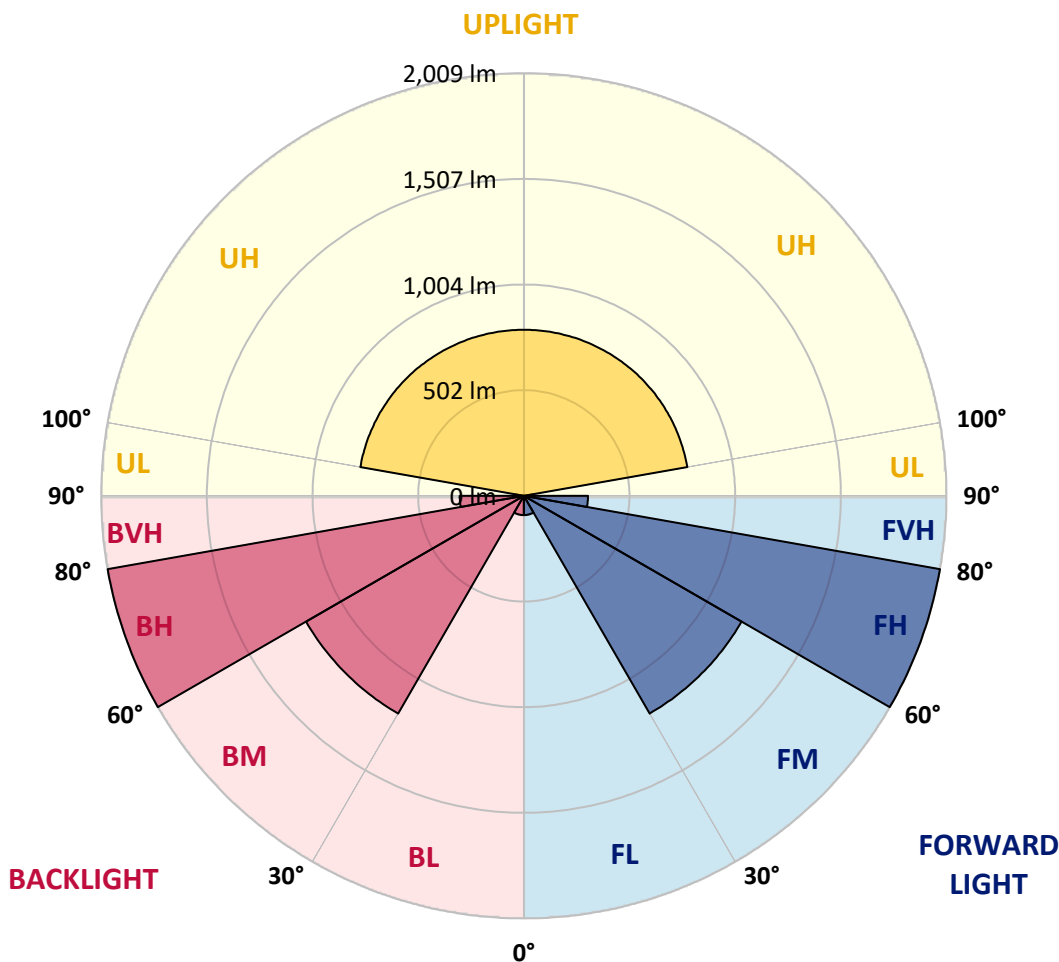


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	91.8	1.1			
FM (30°-60°)	1195.3	14.9			
FH (60°-80°)	2008.9	25.0			G2/5000
FVH (80°-90°)	305.0	3.8			G3/500
BL (0°-30°)	91.8	1.1	B0/110		
BM (30°-60°)	1195.3	14.9	B2/2500		
BH (60°-80°)	2008.9	25.0	B3/2500		G3/2500
BVH (80°-90°)	305.0	3.8			G3/500
UL (90°-100°)	42.6	0.5		U2/50	
UH (100°-180°)	789.1	9.8		U4/1000	

**BUG Rating: B3-U4-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	131.5	131.5	131.5	131.5	131.5	131.5	131.5	131.5	131.5	131.5	131.5
2.5°	133.2	133.2	134.9	134.9	134.9	134.9	134.9	134.9	134.9	134.9	134.9
5°	138.3	138.3	138.3	138.3	140.0	140.0	138.3	138.3	138.3	138.3	138.3
7.5°	146.9	145.2	146.9	146.9	146.9	145.2	145.2	145.2	143.5	143.5	143.5
10°	155.4	155.4	157.1	155.4	155.4	153.7	153.7	153.7	152.0	152.0	152.0
12.5°	167.4	167.4	167.4	167.4	165.7	165.7	164.0	162.3	160.5	160.5	160.5
15°	182.7	181.0	181.0	179.3	177.6	175.9	174.2	174.2	172.5	172.5	172.5
17.5°	198.1	198.1	196.4	194.7	191.3	189.6	189.6	187.9	186.2	186.2	186.2
20°	216.9	216.9	215.2	211.8	208.4	206.7	204.9	204.9	203.2	203.2	203.2
22.5°	239.1	237.4	234.0	230.6	227.2	225.4	223.7	222.0	222.0	222.0	222.0
25°	263.0	261.3	259.6	254.5	249.4	247.6	244.2	244.2	242.5	244.2	244.2
27.5°	292.1	290.3	286.9	281.8	275.0	271.6	269.8	269.8	271.6	271.6	273.3
30°	327.9	324.5	321.1	314.3	307.4	302.3	302.3	304.0	309.1	312.5	312.5
32.5°	370.6	368.9	363.8	357.0	345.0	341.6	345.0	355.2	362.1	367.2	370.6
35°	420.1	418.4	411.6	399.6	391.1	389.4	399.6	416.7	438.9	445.8	449.2
37.5°	474.8	476.5	468.0	454.3	445.8	449.2	469.7	502.1	524.3	539.7	543.1
40°	543.1	546.5	536.3	520.9	512.4	526.0	558.5	596.1	635.3	654.1	659.3
42.5°	623.4	628.5	614.8	599.5	594.4	616.6	662.7	724.2	794.2	816.4	824.9
45°	722.4	725.9	708.8	695.1	691.7	731.0	809.5	912.0	1023.0	1074.3	1082.8
47.5°	840.3	838.6	823.2	806.1	809.5	865.9	983.8	1122.1	1239.9	1318.5	1335.6
50°	975.2	966.7	954.7	934.2	956.4	1038.4	1187.0	1354.4	1552.5	1622.5	1653.2
52.5°	1110.1	1094.8	1084.5	1070.9	1110.1	1216.0	1424.4	1716.4	2015.3	2175.9	2208.3
55°	1231.4	1219.4	1214.3	1216.0	1277.5	1429.5	1702.8	2076.8	2365.4	2498.7	2522.6
57.5°	1351.0	1344.1	1339.0	1349.2	1446.6	1644.7	1952.1	2302.3	2539.7	2638.7	2655.8
60°	1463.7	1470.5	1467.1	1497.8	1615.7	1815.5	2081.9	2426.9	2655.8	2746.3	2765.1
62.5°	1588.3	1593.5	1593.5	1627.6	1723.3	1899.2	2170.7	2573.8	2864.2	2997.4	3017.9
65°	1695.9	1699.4	1706.2	1707.9	1796.7	1972.6	2327.9	2708.7	2968.3	3122.0	3135.7
67.5°	1776.2	1779.6	1771.1	1762.6	1830.9	1989.7	2315.9	2691.7	2922.2	3038.4	3048.6
70°	1841.1	1825.7	1801.8	1759.1	1781.3	1900.9	2216.9	2555.0	2787.3	2891.5	2906.9
72.5°	1849.7	1836.0	1760.8	1665.2	1637.9	1742.1	2042.7	2346.7	2546.5	2645.5	2647.2
75°	1798.4	1762.6	1637.9	1494.4	1443.2	1542.2	1800.1	2076.8	2237.4	2321.0	2329.6
77.5°	1625.9	1591.8	1434.6	1270.7	1212.6	1298.0	1516.6	1740.4	1894.1	1976.0	1981.2
80°	1320.2	1308.3	1164.8	1014.5	944.5	994.0	1185.3	1361.2	1485.9	1583.2	1591.8
82.5°	973.5	963.3	854.0	722.4	666.1	707.1	843.7	973.5	1089.6	1168.2	1173.3
85°	608.0	587.5	519.2	427.0	389.4	416.7	507.2	594.4	698.5	760.0	763.4
87.5°	203.2	194.7	167.4	138.3	116.1	121.3	148.6	181.0	264.7	292.1	309.1
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)