

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: P821290

Luminaire Tested: **TT-D2-740-24VDC-WQ-UPL**

Issue Date: 7/23/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P821290  
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-D2-740-24VDC-WQ-UPL  
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT  
4000K, 70 CRI LEDS AND WIDE DISTRIBUTION  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

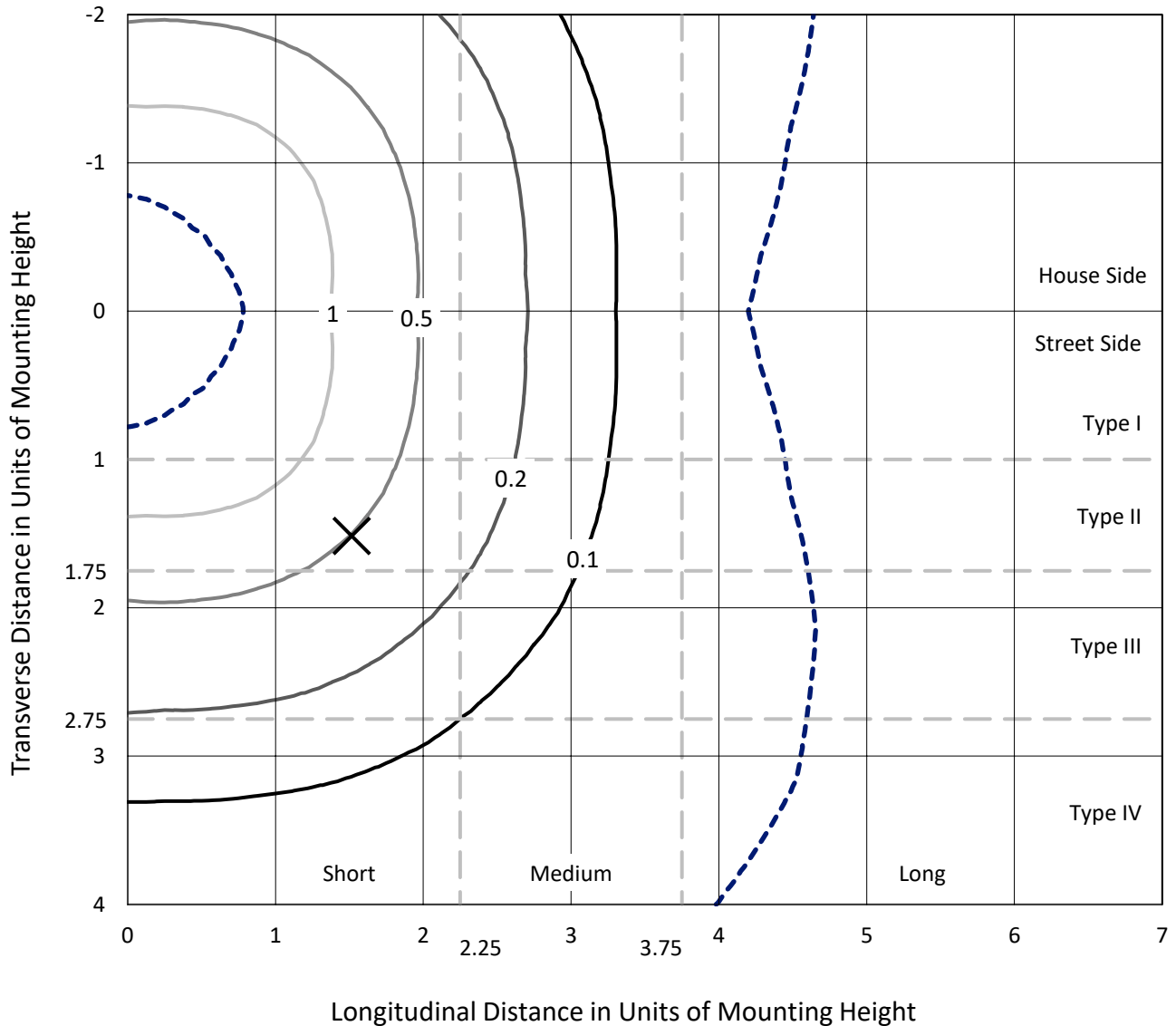
Lumens per Lamp: N/A  
Luminaire Lumens: 6162.7 lumens  
Efficiency: N/A  
Efficacy: 162.2 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')  
IES Classification: Type V - Short  
BUG Rating: B3 - U4 - G2

Input Watts (W): 38  
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

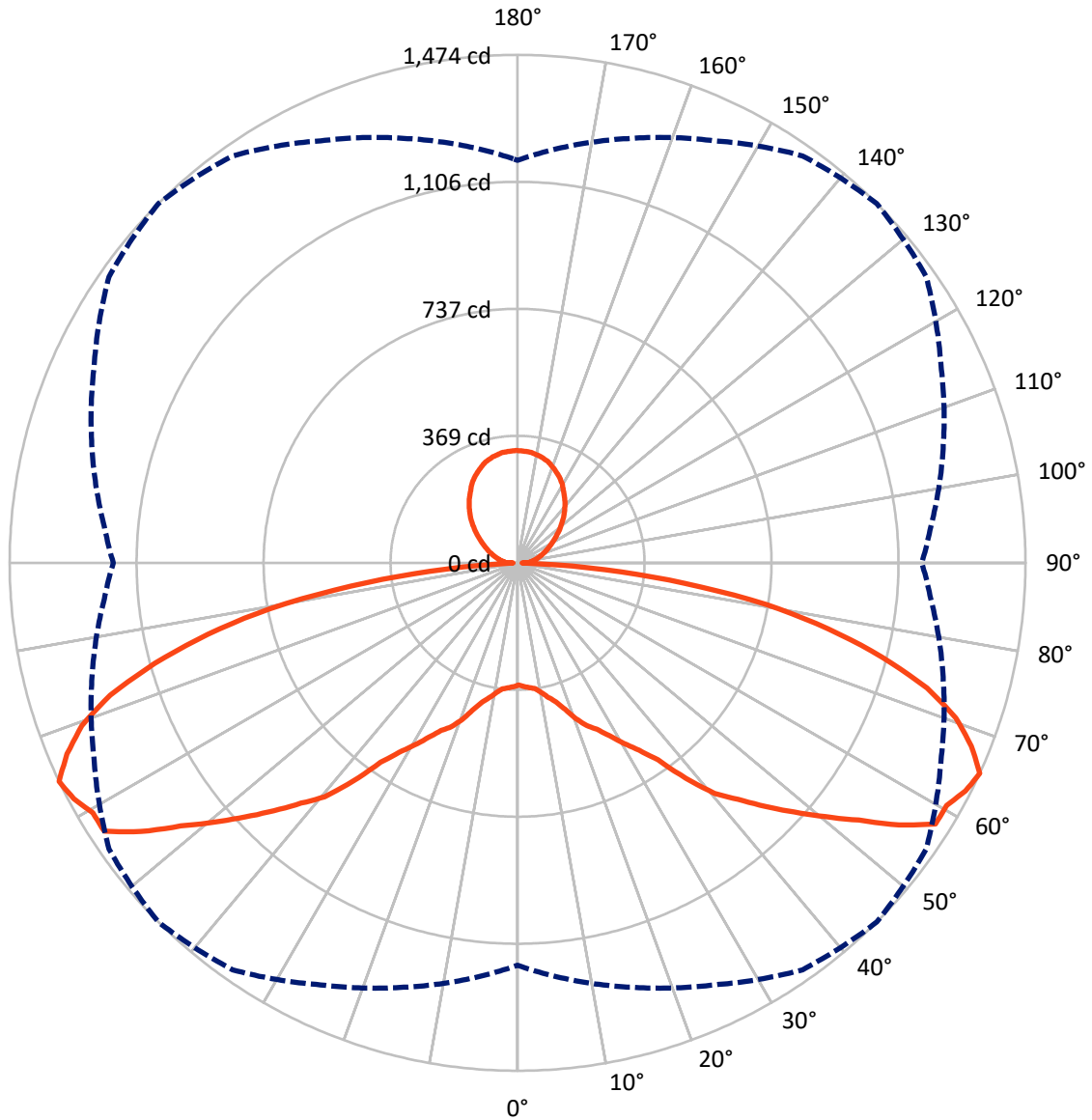
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.8 fc  
 Type V - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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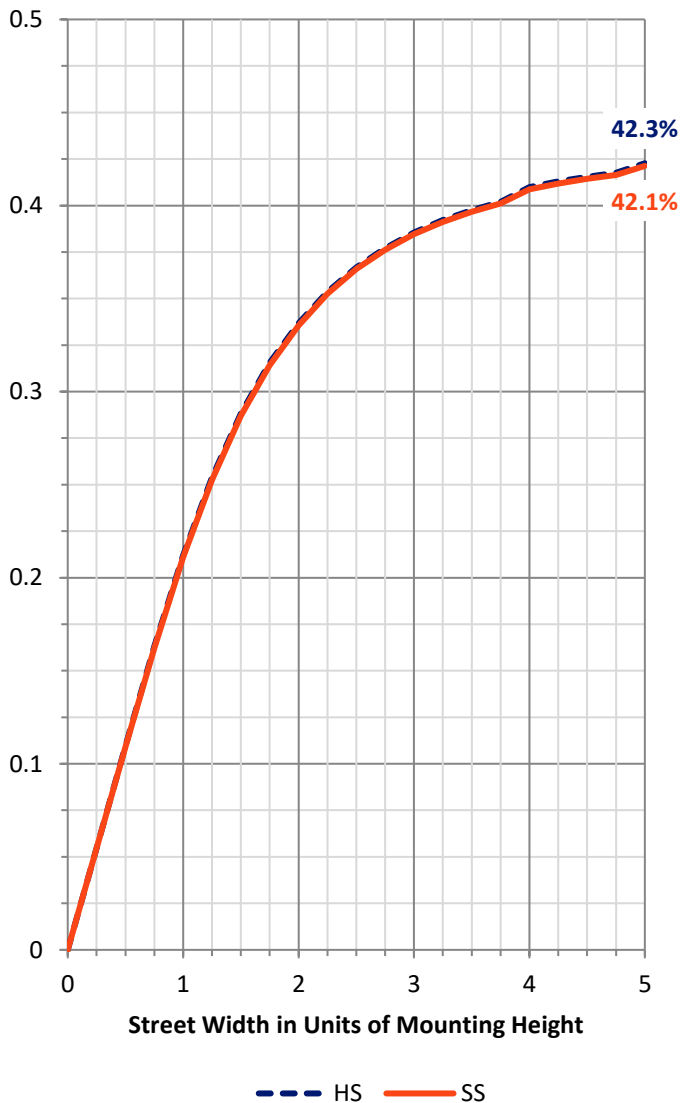
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2638.6	442.7	3081.4
	% Fixture	42.8	7.2	50.0
<b>Street Side</b>	Lumens	2638.6	442.7	3081.4
	% Fixture	42.8	7.2	50.0
<b>Total</b>	Lumens	5277.3	885.5	6162.7
	% Fixture	85.6	14.4	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.4	0.6
10°-20°	121.7	2.0
20°-30°	249.9	4.1
30°-40°	444.0	7.2
40°-50°	748.5	12.1
50°-60°	1104.1	17.9
60°-70°	1295.8	21.0
70°-80°	1009.6	16.4
80°-90°	268.2	4.4
90°-100°	45.4	0.7
100°-110°	70.3	1.1
110°-120°	97.7	1.6
120°-130°	126.6	2.1
130°-140°	147.6	2.4
140°-150°	149.5	2.4
150°-160°	129.8	2.1
160°-170°	87.7	1.4
170°-180°	30.8	0.5
0°-90°	5277.3	85.6
0°-180°	6162.7	100.0

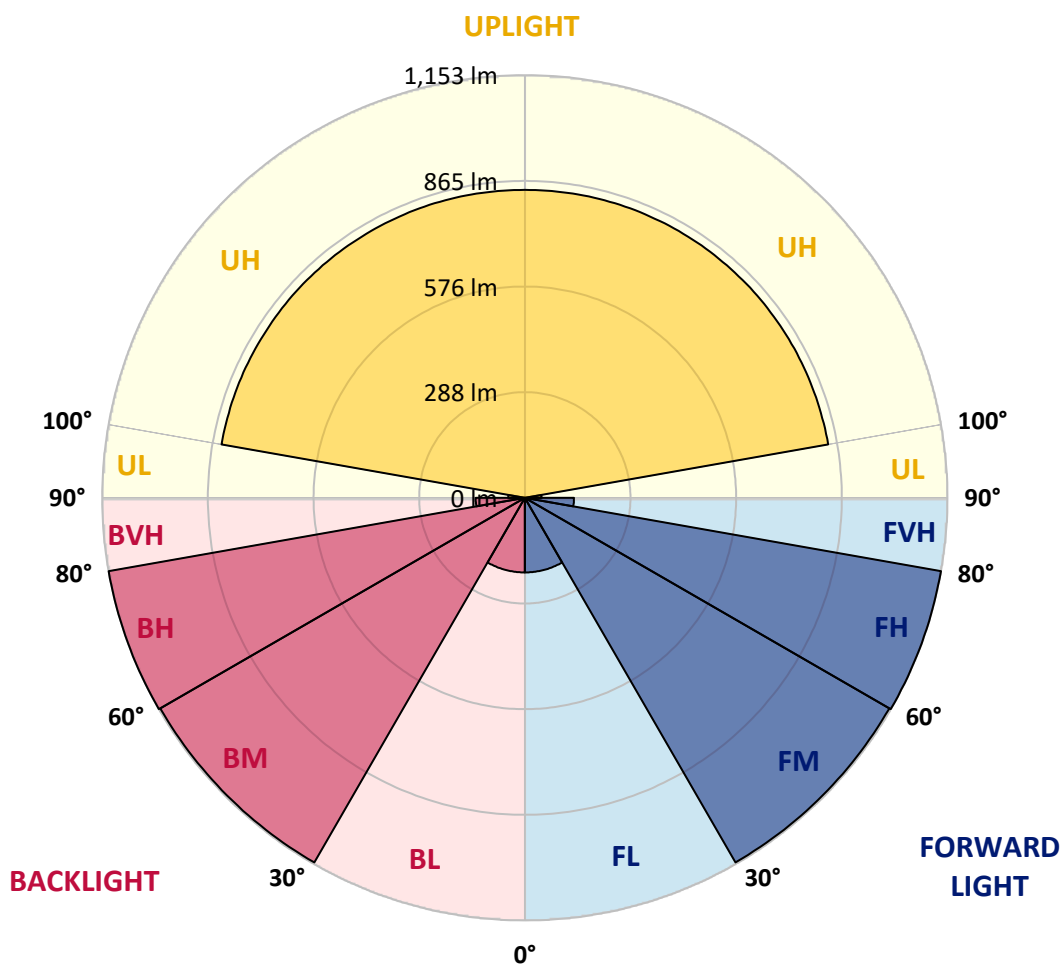


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	203.5	3.3			
FM (30°-60°)	1148.3	18.6			
FH (60°-80°)	1152.7	18.7			G1/1800
FVH (80°-90°)	134.1	2.2			G2/225
BL (0°-30°)	203.5	3.3	B1/500		
BM (30°-60°)	1148.3	18.6	B2/2500		
BH (60°-80°)	1152.7	18.7	B3/2500		G1/1800
BVH (80°-90°)	134.1	2.2			G2/225
UL (90°-100°)	45.4	0.7		U2/50	
UH (100°-180°)	840.1	13.6		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°	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9	354.9
2.5°	360.7	360.7	360.7	359.9	359.9	359.9	359.9	360.7	360.7	360.7	360.7
5°	369.0	369.0	367.3	365.7	364.0	364.0	364.8	365.7	366.5	368.2	368.2
7.5°	374.0	374.0	373.1	371.5	369.0	369.0	369.8	371.5	372.3	372.3	371.5
10°	380.6	381.4	383.9	384.7	383.1	383.1	383.9	384.7	383.1	380.6	380.6
12.5°	396.3	397.2	400.5	403.0	403.0	401.3	402.2	403.8	399.7	395.5	396.3
15°	418.7	418.7	419.6	422.1	420.4	418.7	420.4	421.2	418.7	417.9	419.6
17.5°	448.6	448.6	443.6	447.8	448.6	447.8	449.4	445.3	442.8	446.1	447.8
20°	480.9	477.6	475.1	478.4	485.1	482.6	485.9	476.8	474.3	475.9	476.8
22.5°	501.7	504.1	505.8	507.5	516.6	513.3	516.6	506.6	505.0	501.7	499.2
25°	526.5	529.0	539.0	534.0	539.8	534.8	539.0	533.2	536.5	526.5	526.5
27.5°	554.7	559.7	565.5	563.0	570.5	568.0	570.5	562.2	563.0	558.9	557.2
30°	592.9	592.9	591.2	596.2	609.4	607.8	608.6	597.8	590.4	591.2	594.5
32.5°	631.0	626.0	628.5	643.4	651.7	648.4	650.1	645.1	628.5	625.2	627.7
35°	666.7	674.1	679.9	692.4	704.0	702.3	701.5	693.2	682.4	669.1	665.0
37.5°	722.2	730.5	746.3	768.7	789.4	793.5	782.7	772.0	747.1	728.0	718.1
40°	795.2	796.0	814.3	857.4	876.4	879.8	874.0	855.7	817.6	796.0	795.2
42.5°	859.0	853.2	883.1	919.6	937.0	938.6	934.5	919.6	883.1	852.4	858.2
45°	908.8	908.8	944.4	973.5	1001.7	1008.3	1000.8	969.3	945.3	909.6	907.1
47.5°	954.4	966.8	996.7	1032.3	1072.1	1081.3	1072.1	1034.8	994.2	967.7	953.6
50°	1009.1	1024.0	1045.6	1101.2	1145.9	1158.4	1145.1	1104.5	1045.6	1023.2	1014.9
52.5°	1073.0	1085.4	1119.4	1189.0	1222.2	1240.5	1229.7	1190.7	1121.1	1087.1	1080.4
55°	1149.2	1137.6	1190.7	1257.9	1319.2	1343.3	1321.7	1259.5	1199.0	1137.6	1149.2
57.5°	1188.2	1174.9	1249.6	1313.4	1398.8	1430.3	1403.8	1318.4	1249.6	1179.1	1187.4
60°	1191.5	1197.3	1253.7	1358.2	1417.1	1430.3	1422.0	1365.7	1256.2	1202.3	1186.6
62.5°	1181.6	1217.2	1265.3	1373.1	1426.2	1458.5	1430.3	1374.8	1270.3	1223.0	1182.4
65°	1168.3	1204.0	1275.3	1351.6	1441.9	1474.3	1447.7	1355.7	1278.6	1204.0	1173.3
67.5°	1145.1	1132.7	1220.6	1322.5	1401.3	1420.4	1403.8	1324.2	1219.7	1131.0	1147.6
70°	1071.3	1060.5	1136.0	1247.9	1323.4	1349.9	1330.0	1249.6	1137.6	1063.0	1073.0
72.5°	961.8	965.2	1038.1	1145.1	1226.4	1242.9	1232.2	1144.3	1042.3	969.3	956.0
75°	834.2	842.4	912.1	1009.1	1082.9	1092.9	1082.1	1013.3	911.3	847.4	830.0
77.5°	685.7	698.2	754.6	851.6	900.5	922.9	905.5	854.1	758.7	701.5	684.1
80°	531.5	535.7	575.5	653.4	718.1	733.0	716.4	655.9	580.4	537.3	524.9
82.5°	348.3	354.9	390.5	450.2	492.5	488.4	492.5	445.3	394.7	353.2	332.5
85°	155.1	168.3	192.4	220.6	247.9	255.4	247.9	223.9	192.4	165.0	161.7
87.5°	10.8	12.4	14.9	15.8	17.4	13.3	13.3	13.3	11.6	13.3	10.8
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)