

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: P821284

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

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821284
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-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
4000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

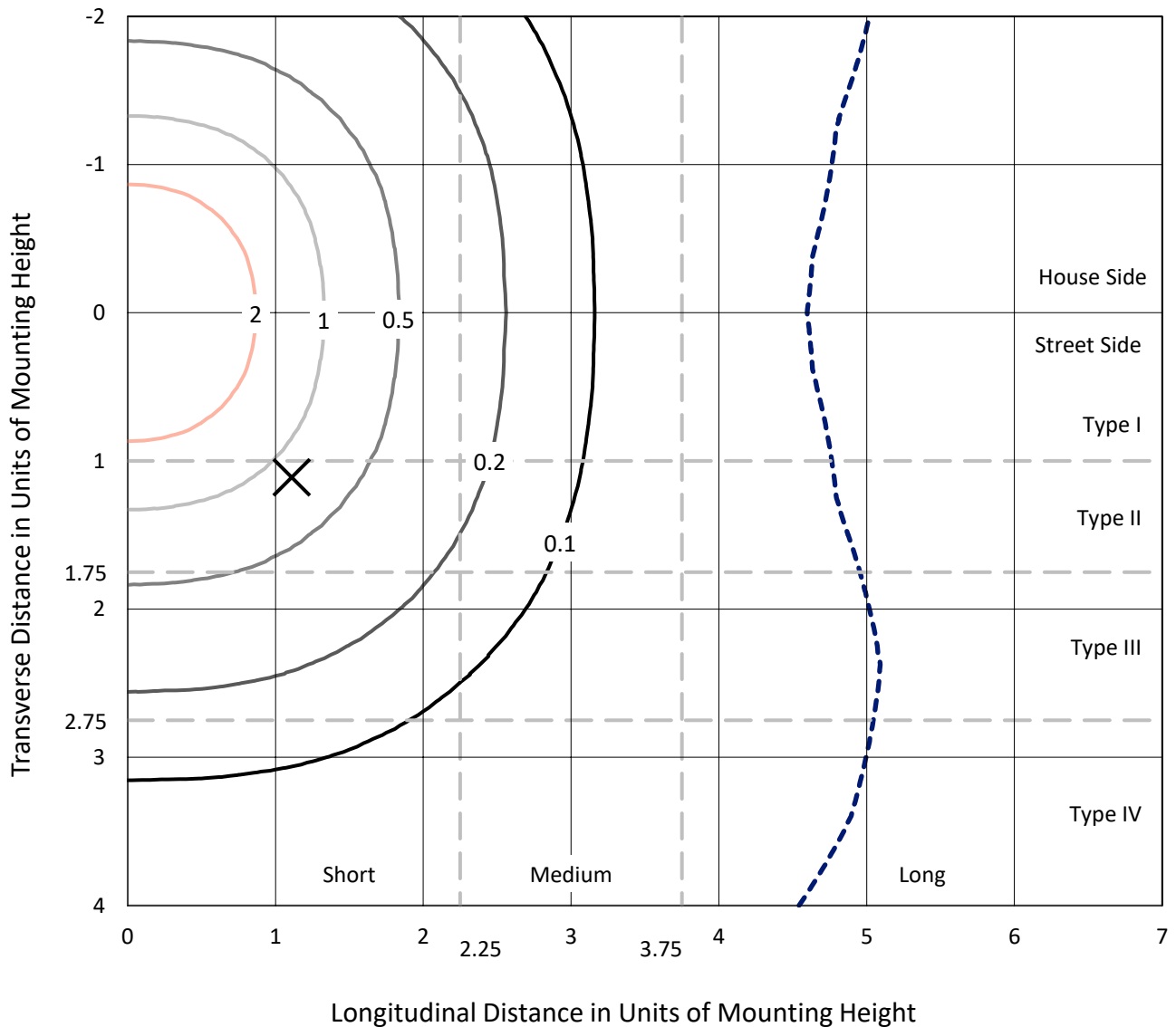
Lumens per Lamp: N/A
Luminaire Lumens: 6464.7 lumens
Efficiency: N/A
Efficacy: 170.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G2

Input Watts (W): 38
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

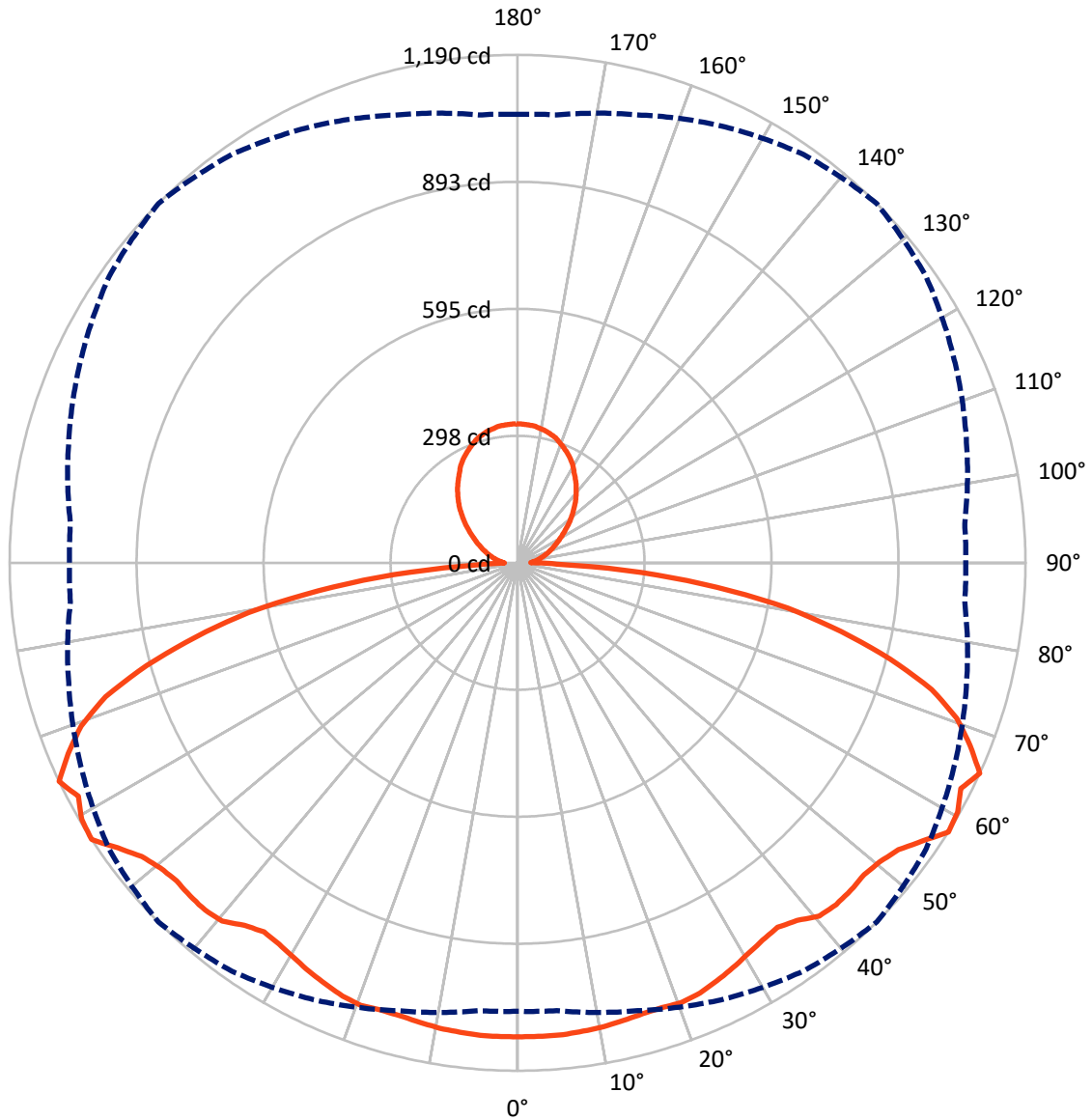
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 4.9 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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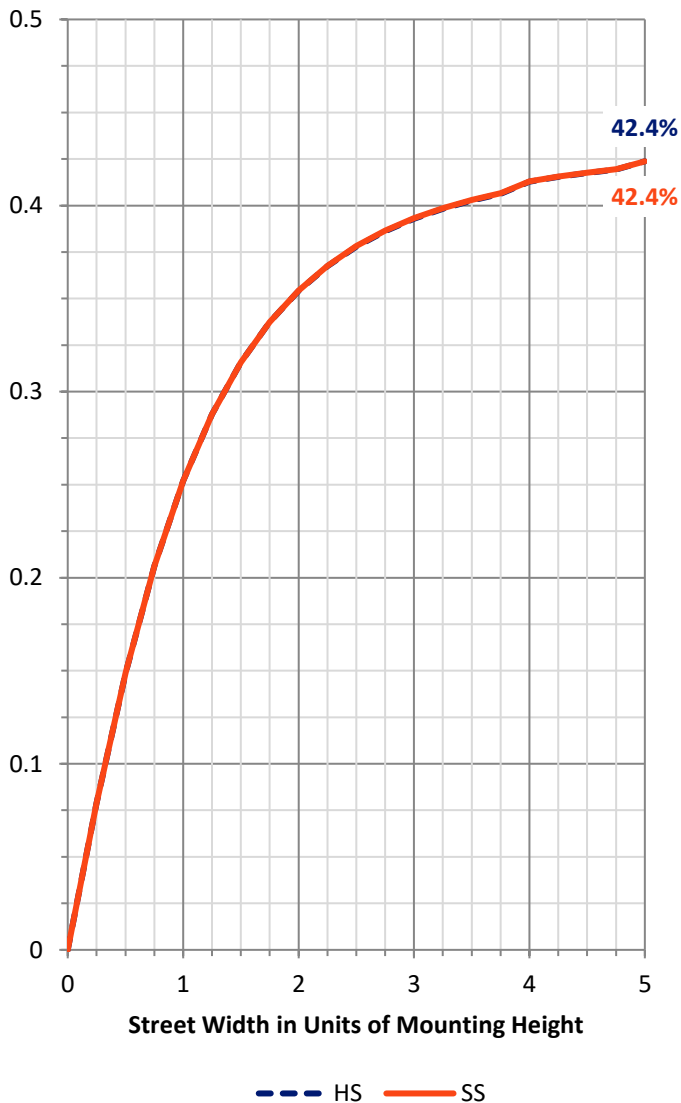
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2789.6	442.7	3232.4
	% Fixture	43.2	6.8	50.0
Street Side	Lumens	2789.6	442.7	3232.4
	% Fixture	43.2	6.8	50.0
Total	Lumens	5579.3	885.5	6464.7
	% Fixture	86.3	13.7	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.8	1.6
10°-20°	311.2	4.8
20°-30°	500.1	7.7
30°-40°	660.2	10.2
40°-50°	826.0	12.8
50°-60°	982.4	15.2
60°-70°	1065.5	16.5
70°-80°	848.1	13.1
80°-90°	280.0	4.3
90°-100°	45.4	0.7
100°-110°	70.3	1.1
110°-120°	97.7	1.5
120°-130°	126.6	2.0
130°-140°	147.6	2.3
140°-150°	149.5	2.3
150°-160°	129.8	2.0
160°-170°	87.7	1.4
170°-180°	30.8	0.5
0°-90°	5579.3	86.3
0°-180°	6464.7	100.0

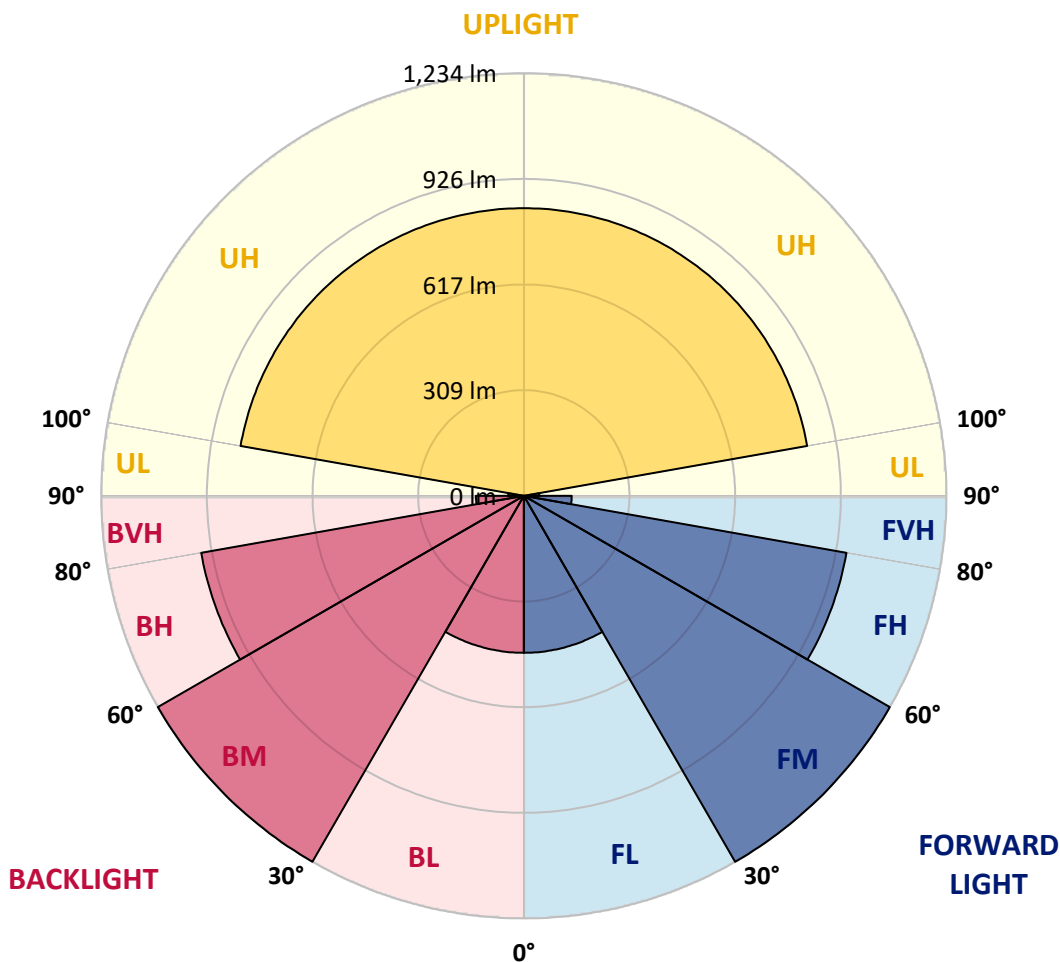


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	458.5	7.1			
FM (30°-60°)	1234.3	19.1			
FH (60°-80°)	956.8	14.8			G1/1800
FVH (80°-90°)	140.0	2.2			G2/225
BL (0°-30°)	458.5	7.1	B1/500		
BM (30°-60°)	1234.3	19.1	B2/2500		
BH (60°-80°)	956.8	14.8	B2/1000		G1/1800
BVH (80°-90°)	140.0	2.2			G2/225
UL (90°-100°)	45.4	0.7		U2/50	
UH (100°-180°)	840.1	13.0		U4/1000	

BUG Rating: B2-U4-G2
 Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4
2.5°	1112.0	1111.2	1112.0	1111.2	1111.2	1110.4	1111.2	1111.2	1111.2	1111.2	1111.2
5°	1111.2	1110.4	1110.4	1111.2	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4
7.5°	1107.9	1107.9	1108.7	1107.9	1107.9	1107.9	1107.9	1107.9	1107.9	1108.7	1108.7
10°	1105.4	1104.6	1105.4	1105.4	1104.6	1105.4	1104.6	1105.4	1105.4	1105.4	1105.4
12.5°	1102.1	1101.2	1102.1	1102.1	1101.2	1100.4	1101.2	1101.2	1102.1	1102.1	1102.1
15°	1096.3	1096.3	1097.9	1097.1	1097.1	1096.3	1097.9	1097.1	1096.3	1097.1	1097.1
17.5°	1092.1	1092.1	1093.8	1095.4	1095.4	1095.4	1095.4	1094.6	1093.0	1093.8	1092.1
20°	1093.0	1093.8	1094.6	1097.1	1098.8	1099.6	1099.6	1097.1	1094.6	1095.4	1094.6
22.5°	1090.5	1089.6	1090.5	1092.1	1094.6	1094.6	1094.6	1091.3	1090.5	1089.6	1089.6
25°	1080.5	1080.5	1082.2	1083.8	1085.5	1084.7	1085.5	1083.8	1082.2	1080.5	1080.5
27.5°	1068.9	1068.9	1071.4	1073.1	1074.7	1074.7	1073.9	1072.2	1071.4	1069.7	1068.9
30°	1057.3	1057.3	1059.8	1061.4	1063.9	1063.1	1063.1	1060.6	1058.1	1056.5	1056.5
32.5°	1044.9	1044.0	1046.5	1050.7	1054.0	1054.0	1054.0	1049.0	1045.7	1044.0	1043.2
35°	1034.1	1034.1	1037.4	1044.9	1049.0	1049.0	1047.3	1044.0	1036.6	1034.1	1034.1
37.5°	1030.8	1033.2	1042.4	1053.1	1061.4	1063.1	1060.6	1051.5	1041.5	1034.1	1031.6
40°	1041.5	1044.0	1055.6	1073.1	1085.5	1088.0	1085.5	1072.2	1054.8	1043.2	1042.4
42.5°	1043.2	1044.9	1059.0	1078.9	1090.5	1094.6	1090.5	1077.2	1058.1	1044.0	1043.2
45°	1037.4	1038.2	1054.8	1075.5	1089.6	1094.6	1089.6	1073.9	1054.0	1038.2	1037.4
47.5°	1029.9	1031.6	1049.8	1071.4	1088.8	1092.1	1088.0	1070.6	1048.2	1032.4	1029.9
50°	1024.1	1029.1	1045.7	1069.7	1090.5	1100.4	1090.5	1067.2	1044.9	1027.4	1024.1
52.5°	1027.4	1029.1	1050.7	1084.7	1112.9	1117.0	1112.0	1084.7	1049.0	1029.1	1026.6
55°	1037.4	1044.9	1068.1	1117.0	1142.7	1150.2	1139.4	1115.3	1068.9	1044.9	1037.4
57.5°	1050.7	1053.1	1086.3	1129.4	1167.6	1190.0	1168.4	1128.6	1088.8	1051.5	1049.8
60°	1039.9	1032.4	1073.9	1124.5	1175.9	1185.0	1172.6	1125.3	1072.2	1031.6	1039.1
62.5°	1010.9	1015.8	1049.8	1119.5	1155.1	1165.1	1151.8	1119.5	1048.2	1020.0	1008.4
65°	987.6	1017.5	1054.8	1104.6	1161.8	1190.0	1162.6	1102.9	1056.5	1012.5	985.2
67.5°	955.3	961.1	1016.7	1078.0	1129.4	1143.5	1128.6	1078.9	1011.7	957.0	961.1
70°	900.6	892.3	948.7	1020.0	1068.9	1091.3	1070.6	1016.7	946.2	890.6	898.1
72.5°	810.2	815.2	867.4	942.9	993.4	1015.0	994.3	937.1	865.7	820.1	815.2
75°	715.6	721.4	772.0	840.9	892.3	901.4	895.6	836.7	773.7	720.6	715.6
77.5°	607.8	613.6	655.1	730.6	761.3	775.4	762.9	734.7	653.5	612.8	606.2
80°	488.4	486.8	523.3	587.9	626.1	641.8	626.1	589.6	521.6	490.1	479.3
82.5°	349.1	350.8	384.8	429.6	466.0	471.0	463.6	433.7	381.5	354.9	340.0
85°	194.0	201.5	226.4	259.6	283.6	291.9	279.5	251.3	225.6	204.8	198.2
87.5°	46.4	50.6	58.9	74.6	83.8	92.0	83.8	77.9	55.6	50.6	46.4
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)