

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: P821364

Luminaire Tested: **TT-D2-750-24VDC-WQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821364
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-3) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D2-750-24VDC-WQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT WITH UPLIGHT
5000K, 70 CRI LEDS AND WIDE DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

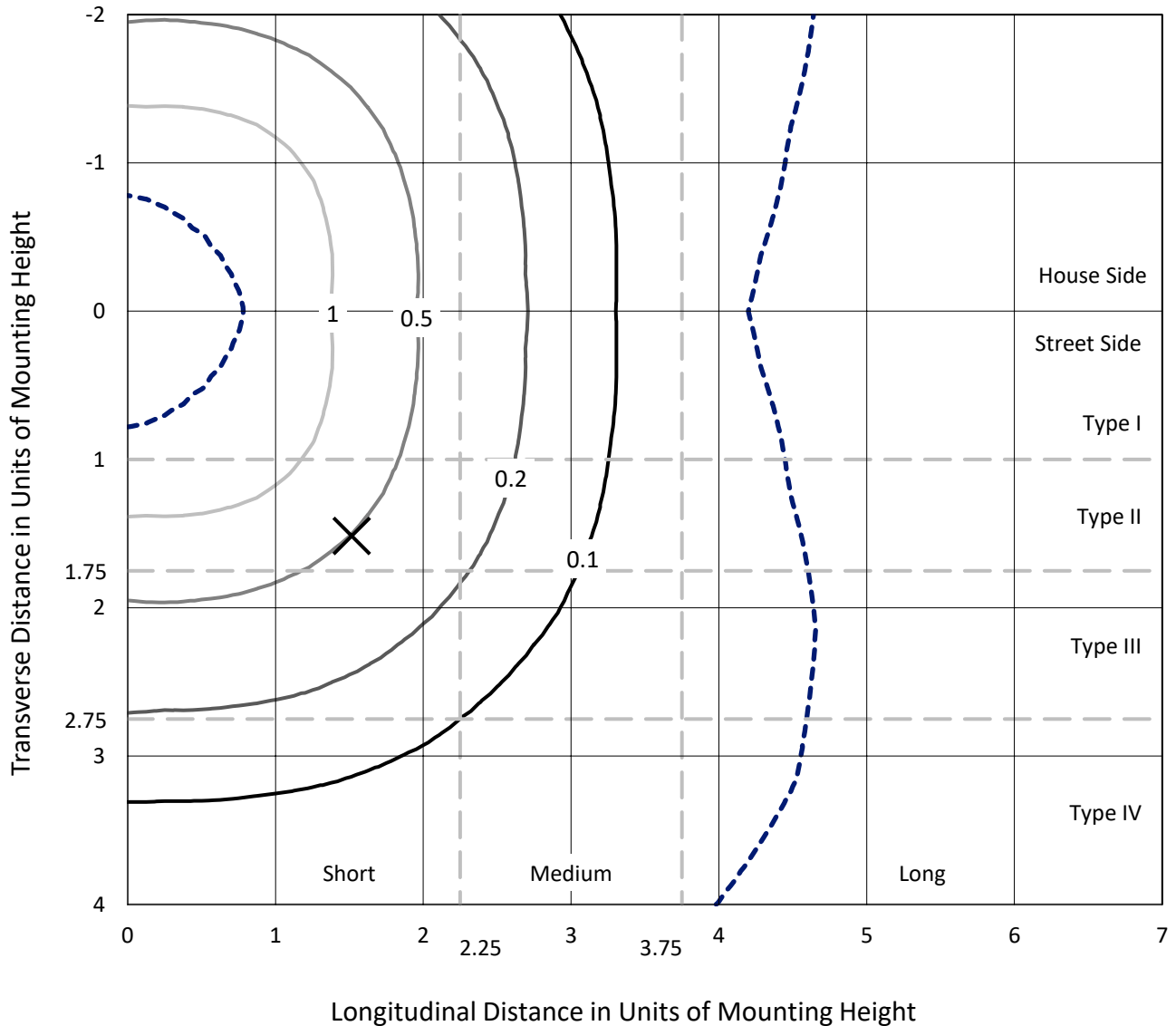
Lumens per Lamp: N/A
Luminaire Lumens: 6177.4 lumens
Efficiency: N/A
Efficacy: 162.6 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B3 - U4 - G2

Input Watts (W): 38
Input Voltage (V): NR
Input Current (A_{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

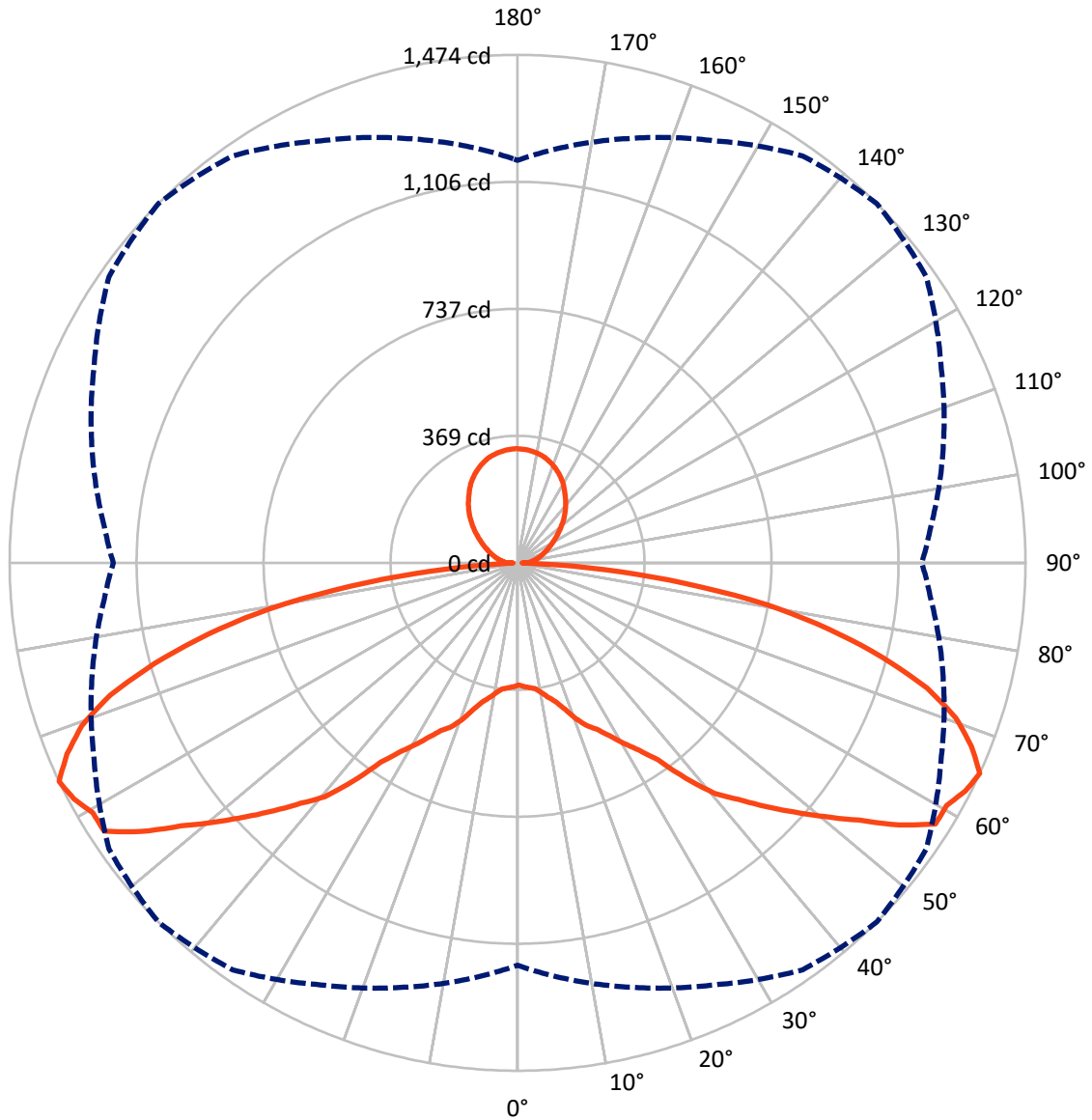
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 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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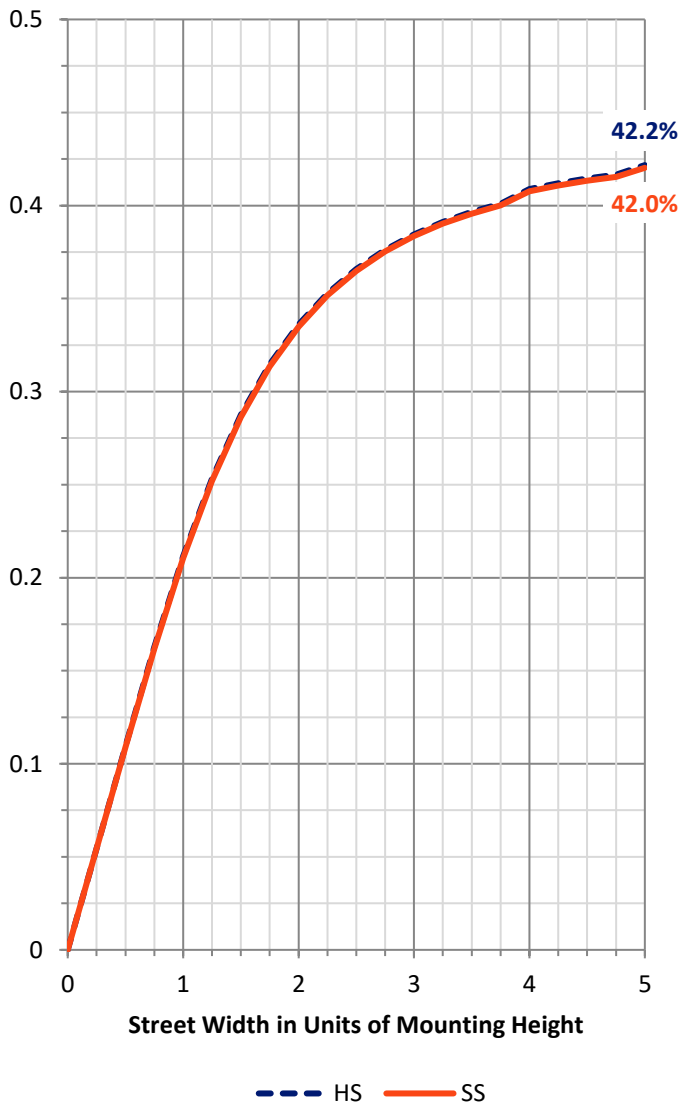
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2638.7	450.0	3088.7
	% Fixture	42.7	7.3	50.0
Street Side	Lumens	2638.7	450.0	3088.7
	% Fixture	42.7	7.3	50.0
Total	Lumens	5277.3	900.0	6177.4
	% Fixture	85.4	14.6	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	4.0
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	16.3
80°-90°	268.3	4.3
90°-100°	46.1	0.7
100°-110°	71.4	1.2
110°-120°	99.4	1.6
120°-130°	128.8	2.1
130°-140°	150.0	2.4
140°-150°	152.1	2.5
150°-160°	131.9	2.1
160°-170°	89.0	1.4
170°-180°	31.3	0.5
0°-90°	5277.3	85.4
0°-180°	6177.4	100.0

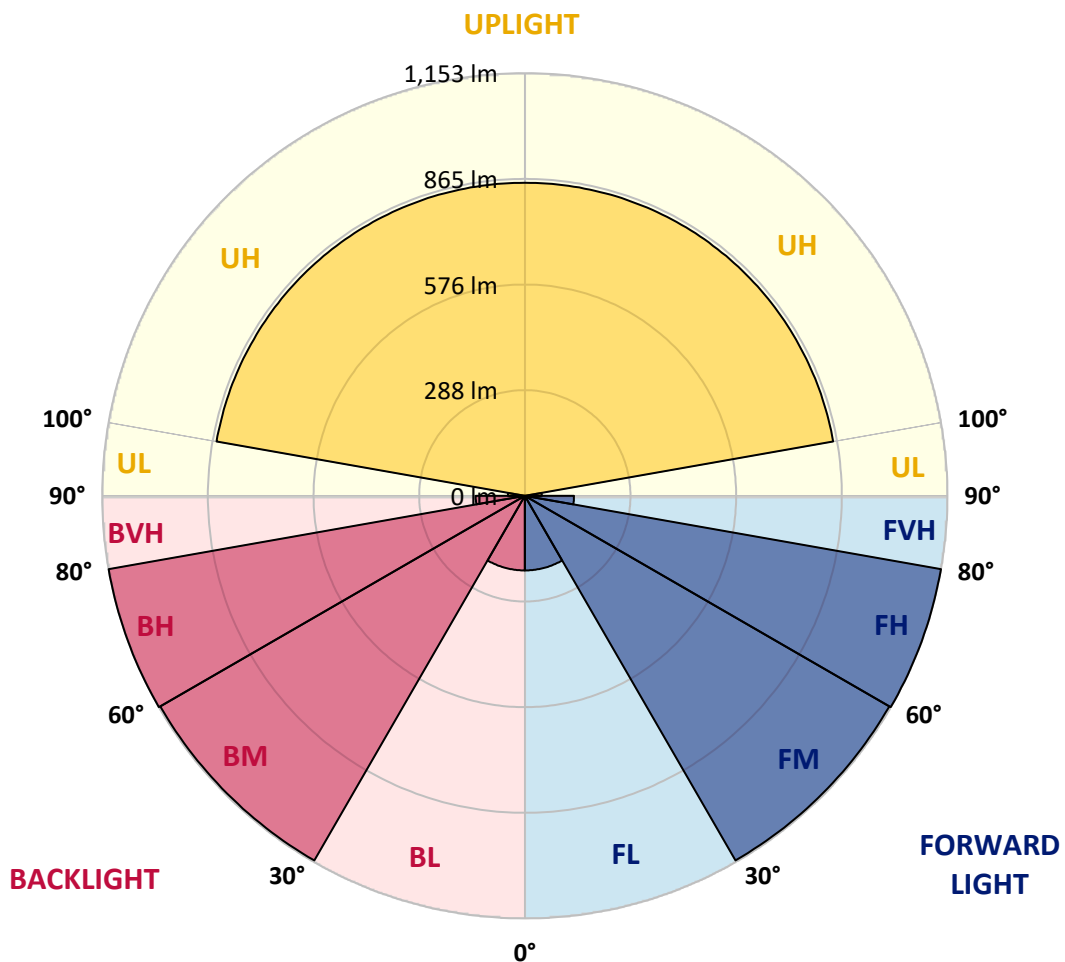


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

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°)	46.1	0.7		U2/50	
UH (100°-180°)	853.9	13.8		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°	32.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
92.5°	37.6	37.1	37.1	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6
95°	42.7	42.7	42.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
97.5°	48.3	48.3	48.3	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
100°	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
102.5°	60.5	60.5	60.5	60.5	60.5	60.5	60.5	61.0	60.5	60.5	60.5
105°	67.1	67.1	67.1	67.1	67.1	67.1	67.1	68.1	67.1	67.1	67.1
107.5°	74.2	74.2	74.7	74.7	74.7	74.7	74.7	75.2	74.7	74.7	74.7
110°	81.3	81.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3	82.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	89.9	89.9	90.9	90.9	90.9	90.9	91.4	91.4	90.9	90.9	90.9
115°	98.6	98.6	99.6	99.6	99.6	99.6	100.6	100.6	99.6	99.6	99.6
117.5°	108.8	108.8	109.2	109.8	109.8	109.8	110.8	110.8	109.8	109.8	109.8
120°	118.9	118.9	118.9	119.9	119.9	119.9	121.0	121.0	119.9	119.9	119.9
122.5°	130.6	130.6	131.1	131.6	131.6	131.6	132.6	132.6	132.1	132.1	131.6
125°	142.3	142.3	143.3	143.3	143.3	143.3	144.3	144.3	144.3	144.3	143.3
127.5°	155.0	155.0	156.0	156.0	156.0	156.0	157.0	157.0	157.0	157.0	156.0
130°	167.7	167.7	168.7	168.7	168.7	168.7	169.7	169.7	169.7	169.7	168.7
132.5°	180.9	180.9	181.4	181.4	181.4	181.4	182.4	182.4	182.4	182.4	181.9
135°	194.1	194.1	194.1	194.1	194.1	195.1	195.1	195.1	195.1	195.1	195.1
137.5°	206.8	206.3	206.8	206.3	206.8	207.3	207.3	207.3	207.3	207.3	207.3
140°	219.5	218.5	219.5	218.5	219.5	219.5	219.5	219.5	219.5	219.5	219.5
142.5°	231.2	230.7	231.2	230.2	231.2	231.2	231.2	231.2	231.2	231.2	231.2
145°	242.9	242.9	242.9	241.9	242.9	242.9	242.9	242.9	242.9	242.9	242.9
147.5°	255.1	254.6	255.1	254.1	255.1	255.1	255.1	255.1	255.1	255.1	255.1
150°	267.3	266.3	267.3	266.3	267.3	267.3	267.3	267.3	267.3	267.3	267.3
152.5°	277.0	276.5	277.5	276.5	277.0	277.0	277.5	277.0	277.0	277.0	277.0
155°	286.6	286.6	287.6	286.6	286.6	286.6	287.6	286.6	286.6	286.6	286.6
157.5°	294.8	294.8	295.8	294.8	294.8	294.8	295.8	294.8	294.8	294.8	294.8
160°	302.9	302.9	303.9	302.9	302.9	302.9	303.9	302.9	302.9	302.9	302.9
162.5°	309.5	309.5	310.5	309.5	309.5	309.5	310.5	309.5	309.5	309.5	309.5
165°	316.1	316.1	317.1	316.1	316.1	316.1	317.1	316.1	316.1	316.1	316.1
167.5°	320.2	320.2	321.2	320.2	320.2	320.2	321.2	320.2	320.2	320.2	320.2
170°	324.2	324.2	325.2	324.2	324.2	324.2	325.2	324.2	324.2	324.2	324.2
172.5°	326.8	326.8	327.8	326.8	327.2	326.8	327.8	326.8	326.8	326.8	326.8
175°	329.3	329.3	330.3	329.3	330.3	329.3	330.3	329.3	329.3	329.3	329.3
177.5°	330.3	330.3	330.8	330.3	330.8	330.3	330.8	330.3	330.3	330.3	330.3
180°	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3	331.3

(END OF REPORT)