

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: LUMARK

Report Number: P188103

Luminaire Tested: **QDCAST1B (4PANELS 15°TILT)**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188103
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P22244)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: QDCAST1B (4PANELS 15°TILT)
Description: LUMARK QUADCAST PARKING GARAGE/CANOPY FIXTURE W/4 ROTATING OPTICAL LIGHT PANELS
Light Source: (4) 4000K SMT LED OPTICAL PANELS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5105.9 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.23' x L: 1.23' x H: 0.08')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U3 - G1

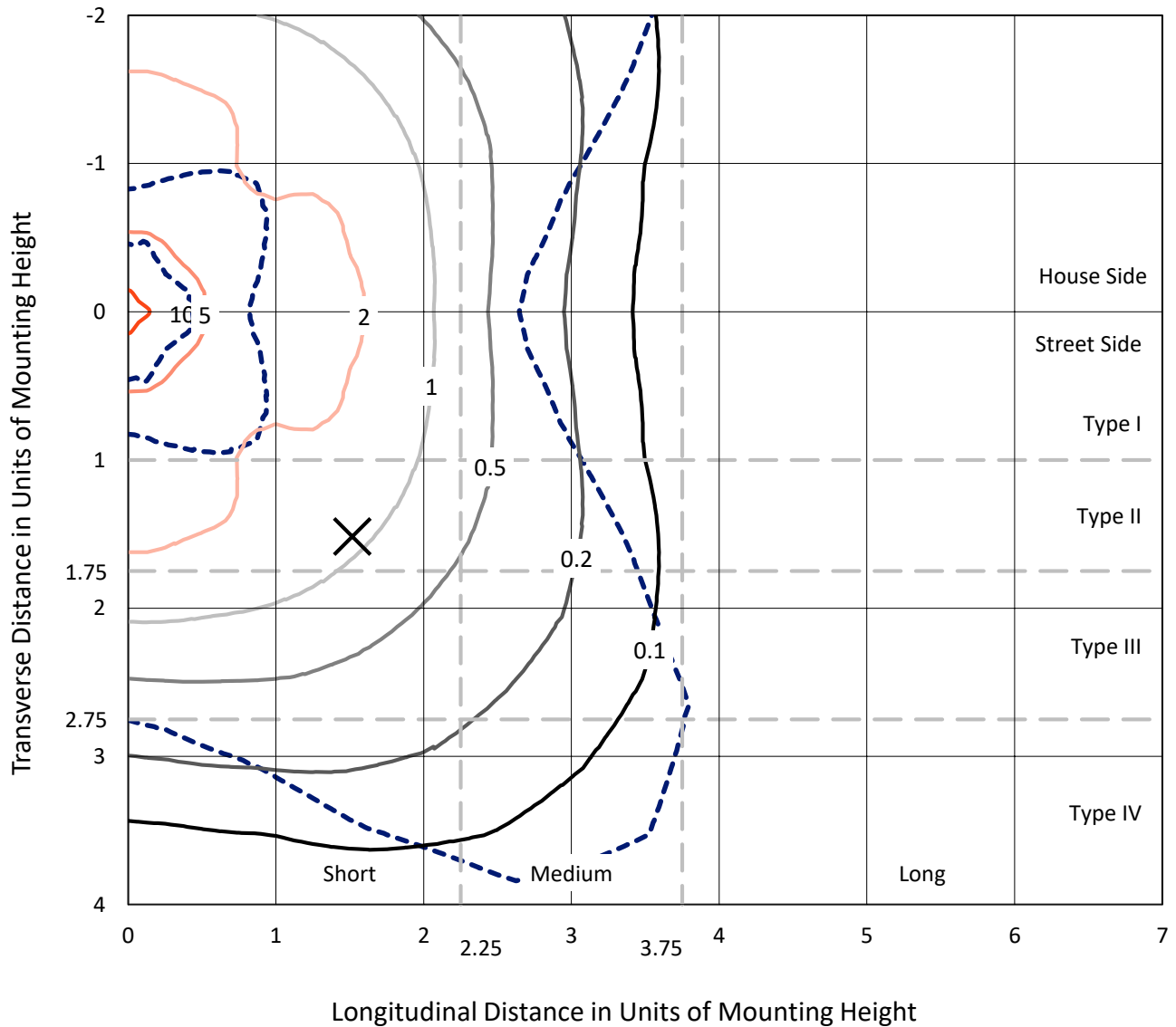
Input Watts (W): 54
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P188103
 CATALOG NUMBER: QDCAST1B (4PANELS 15°TILT)

Iso-Footcandle Lines of Horizontal Illumination

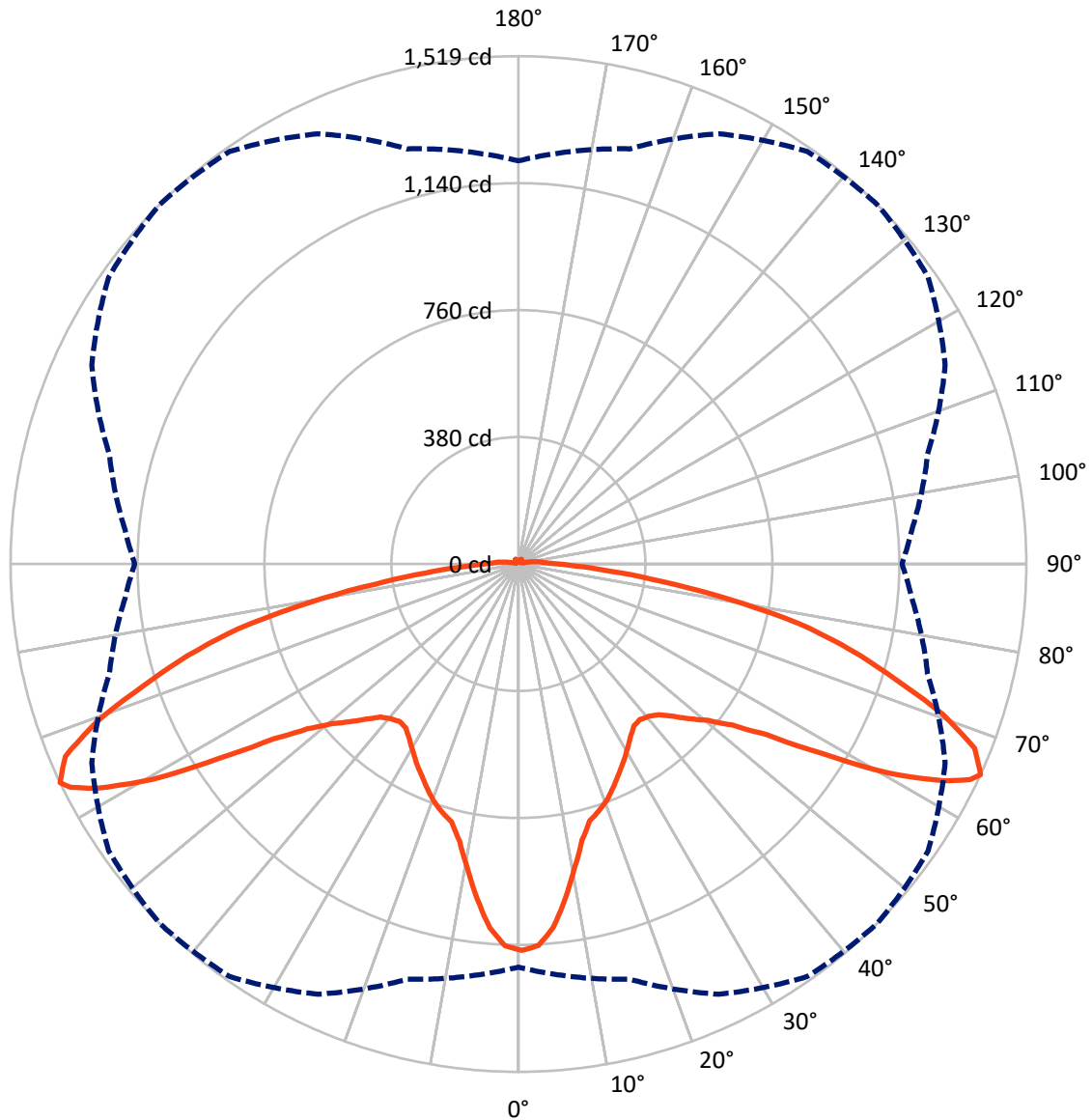
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.6 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P188103
CATALOG NUMBER: QDCAST1B (4PANELS 15°TILT)

Luminous Intensity Polar Plot



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

REPORT NUMBER: P188103

CATALOG NUMBER: QDCAST1B (4PANELS 15°TILT)

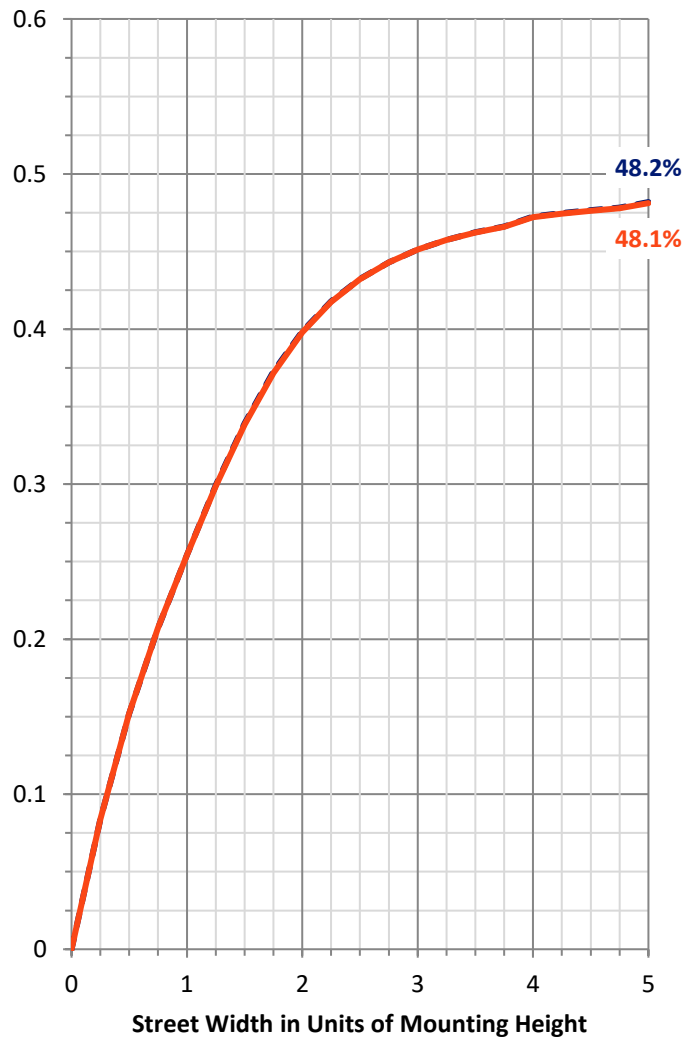
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2495.1	57.9	2553.0
	% Fixture	48.9	1.1	50.0
Street Side	Lumens	2495.1	57.9	2553.0
	% Fixture	48.9	1.1	50.0
Total	Lumens	4990.2	115.7	5105.9
	% Fixture	97.7	2.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.8	2.0
10°-20°	238.3	4.7
20°-30°	338.9	6.6
30°-40°	413.5	8.1
40°-50°	620.7	12.2
50°-60°	1035.7	20.3
60°-70°	1303.6	25.5
70°-80°	747.4	14.6
80°-90°	191.2	3.7
90°-100°	53.8	1.1
100°-110°	17.9	0.4
110°-120°	9.4	0.2
120°-130°	7.3	0.1
130°-140°	8.6	0.2
140°-150°	9.6	0.2
150°-160°	6.1	0.1
160°-170°	2.6	0.1
170°-180°	0.6	0.0
0°-90°	4990.2	97.7
0°-180°	5105.9	100.0



--- HS — SS

REPORT NUMBER: P188103

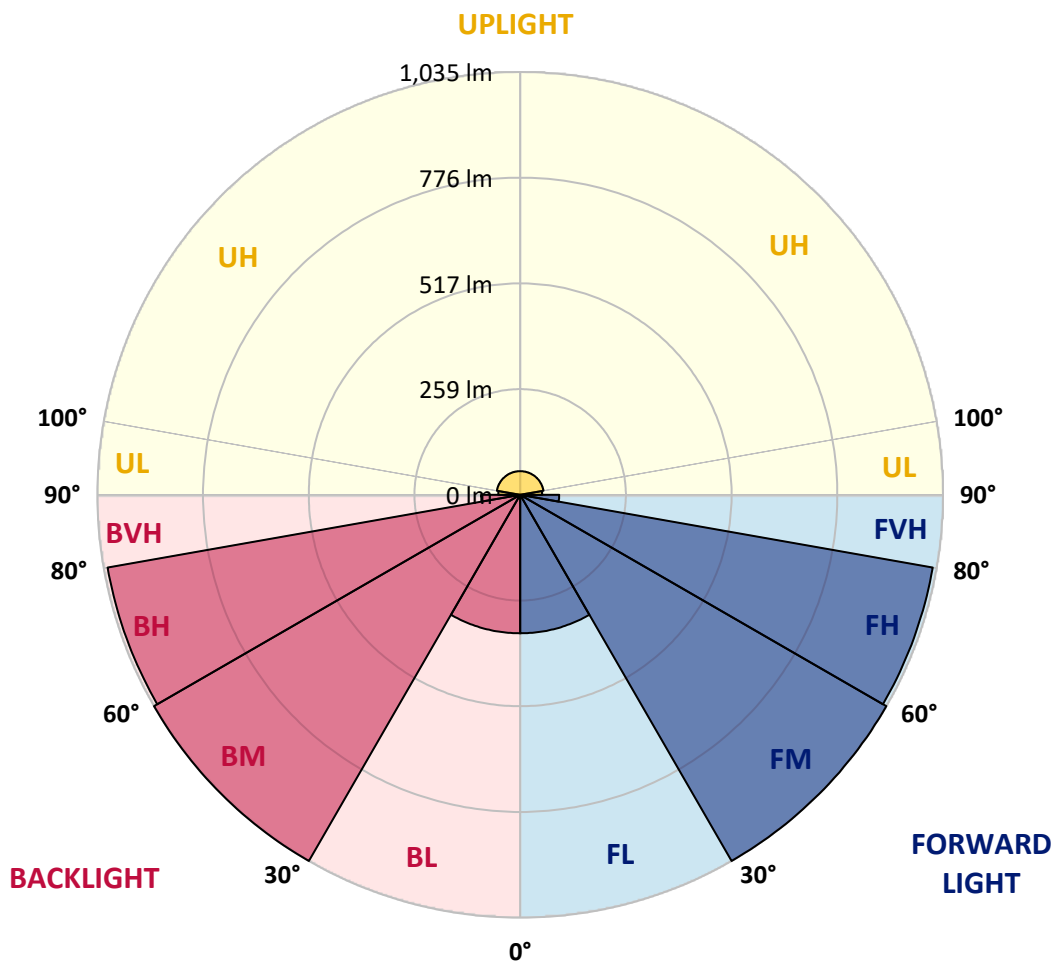
CATALOG NUMBER: QDCAST1B (4PANELS 15°TILT)

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	339.0	6.6			
FM	(30°-60°)	1035.0	20.3			
FH	(60°-80°)	1025.5	20.1			G1/1800
FVH	(80°-90°)	95.6	1.9			G1/100
BL	(0°-30°)	339.0	6.6	B1/500		
BM	(30°-60°)	1035.0	20.3	B2/2500		
BH	(60°-80°)	1025.5	20.1	B3/2500		G1/1800
BVH	(80°-90°)	95.6	1.9			G1/100
UL	(90°-100°)	53.8	1.1		U3/500	
UH	(100°-180°)	57.9	1.1		U3/500	

BUG Rating: B3-U3-G1

Type V Short





REPORT NUMBER: P188103
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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1155.9	1155.9	1155.9	1155.9	1155.9	1155.9	1155.9	1155.9	1155.9	1155.9	1155.9
2.5°	1143.1	1144.3	1146.6	1144.3	1144.3	1143.1	1145.4	1146.6	1150.1	1141.9	1141.9
5°	1104.5	1105.7	1103.4	1097.5	1095.2	1091.7	1096.3	1101.0	1108.0	1103.4	1103.4
7.5°	1057.8	1058.9	1054.3	1036.7	1015.7	1009.8	1020.4	1040.2	1056.6	1056.6	1056.6
10°	1009.8	1009.8	997.0	965.4	932.7	923.4	931.5	964.3	993.5	1001.7	1002.8
12.5°	936.2	935.0	919.8	887.1	861.4	847.4	853.2	881.3	916.3	933.9	933.9
15°	874.3	871.9	852.1	828.7	811.2	797.1	801.8	821.7	849.7	873.1	877.8
17.5°	824.0	828.7	818.2	796.0	781.9	777.3	777.3	788.9	811.2	832.2	832.2
20°	794.8	797.1	794.8	774.9	763.2	755.0	758.6	767.9	788.9	800.6	797.1
22.5°	770.2	774.9	778.4	759.7	739.9	725.8	735.2	751.5	771.4	771.4	764.4
25°	750.4	755.0	763.2	746.9	715.3	696.6	710.6	734.0	752.7	745.7	738.7
27.5°	735.2	737.5	749.2	731.7	688.4	669.7	683.8	715.3	729.3	718.8	711.8
30°	720.0	724.7	731.7	710.6	661.5	641.7	654.5	688.4	706.0	697.8	691.9
32.5°	710.6	711.8	711.8	687.3	637.0	616.0	625.3	661.5	681.4	679.1	675.6
35°	698.9	700.1	690.8	660.4	617.1	594.9	601.9	633.5	661.5	672.1	670.9
37.5°	702.5	700.1	683.8	642.8	607.8	590.2	594.9	621.8	659.2	687.3	688.4
40°	742.2	739.9	697.8	646.3	612.5	599.6	600.8	633.5	689.6	743.4	750.4
42.5°	846.2	829.9	749.2	672.1	625.3	616.0	616.0	668.6	753.9	860.2	875.4
45°	993.5	979.5	827.5	720.0	655.7	649.9	653.4	724.7	846.2	1022.7	1035.6
47.5°	1116.2	1103.4	952.6	791.3	697.8	691.9	706.0	808.8	987.6	1144.3	1148.9
50°	1213.2	1201.5	1051.9	912.8	764.4	735.2	777.3	951.4	1095.2	1198.0	1196.9
52.5°	1228.4	1240.1	1155.9	1033.2	866.1	800.6	887.1	1092.8	1163.0	1220.2	1207.4
55°	1281.0	1291.5	1221.4	1150.1	1005.2	900.0	1046.1	1193.4	1199.2	1240.1	1228.4
57.5°	1358.2	1365.2	1295.0	1288.0	1139.6	1067.1	1202.7	1284.5	1256.5	1324.3	1325.4
60°	1433.0	1444.6	1382.7	1387.4	1318.4	1269.3	1345.3	1388.5	1381.5	1411.9	1399.1
62.5°	1352.3	1371.0	1375.7	1461.0	1457.5	1429.4	1478.5	1469.2	1364.0	1335.9	1313.7
64°	1268.2	1295.0	1328.9	1444.6	1508.9	1497.2	1507.8	1441.1	1314.9	1254.1	1222.6
65°	1206.2	1231.9	1285.7	1420.1	1506.6	1519.4	1496.1	1408.4	1267.0	1181.7	1147.8
67.5°	993.5	1033.2	1155.9	1330.1	1438.8	1472.7	1429.4	1316.1	1119.7	964.3	922.2
70°	762.1	801.8	967.8	1193.4	1314.9	1346.5	1307.9	1171.1	908.2	729.3	693.1
72.5°	544.7	583.2	743.4	1009.8	1171.1	1179.3	1163.0	976.0	697.8	535.3	511.9
75°	369.3	382.2	506.1	800.6	1008.7	1027.4	986.5	758.6	478.0	382.2	377.5
77.5°	252.5	254.8	312.1	555.2	807.6	860.2	786.6	531.8	317.9	292.2	292.2
80°	161.3	159.0	177.7	349.5	569.2	638.2	550.5	341.3	196.4	181.2	184.7
82.5°	119.2	116.9	118.0	213.9	371.7	433.6	357.7	203.4	123.9	116.9	118.0
85°	93.5	91.2	97.0	140.3	232.6	277.0	219.7	128.6	95.8	88.8	90.0
87.5°	69.0	69.0	80.6	105.2	150.8	170.6	140.3	101.7	79.5	64.3	65.5
90°	44.4	50.3	67.8	85.3	100.5	105.2	93.5	83.0	64.3	46.8	42.1
92.5°	35.1	35.1	54.9	66.6	72.5	78.3	69.0	65.5	52.6	33.9	33.9
95°	29.2	30.4	42.1	52.6	54.9	65.5	53.8	50.3	40.9	29.2	29.2
97.5°	25.7	26.9	33.9	40.9	44.4	50.3	44.4	39.7	32.7	25.7	24.5
100°	28.1	28.1	31.6	33.9	30.4	32.7	30.4	31.6	31.6	26.9	26.9
102.5°	21.0	19.9	21.0	21.0	19.9	21.0	19.9	19.9	21.0	19.9	19.9
105°	15.2	15.2	15.2	12.9	15.2	16.4	15.2	12.9	14.0	14.0	15.2
107.5°	10.5	11.7	11.7	11.7	11.7	14.0	11.7	10.5	11.7	11.7	10.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	9.4	9.4	10.5	10.5	10.5	11.7	10.5	10.5	10.5	10.5	9.4
112.5°	9.4	9.4	10.5	9.4	9.4	10.5	9.4	9.4	10.5	9.4	9.4
115°	8.2	8.2	9.4	9.4	10.5	8.2	10.5	9.4	9.4	8.2	8.2
117.5°	8.2	8.2	9.4	10.5	8.2	8.2	9.4	10.5	9.4	8.2	8.2
120°	7.0	8.2	9.4	9.4	7.0	8.2	8.2	9.4	9.4	8.2	8.2
122.5°	7.0	7.0	7.0	8.2	7.0	8.2	8.2	8.2	8.2	7.0	7.0
125°	7.0	7.0	7.0	8.2	8.2	8.2	8.2	8.2	8.2	7.0	7.0
127.5°	7.0	7.0	8.2	9.4	8.2	8.2	8.2	9.4	8.2	7.0	7.0
130°	7.0	7.0	9.4	10.5	9.4	8.2	9.4	10.5	9.4	7.0	7.0
132.5°	7.0	7.0	10.5	11.7	10.5	9.4	10.5	11.7	10.5	8.2	7.0
135°	8.2	9.4	11.7	11.7	11.7	10.5	11.7	11.7	11.7	10.5	9.4
137.5°	12.9	11.7	11.7	12.9	11.7	11.7	11.7	12.9	11.7	12.9	14.0
140°	15.2	14.0	11.7	12.9	12.9	14.0	12.9	12.9	12.9	15.2	16.4
142.5°	16.4	16.4	15.2	14.0	14.0	15.2	14.0	14.0	15.2	16.4	16.4
145°	15.2	15.2	16.4	17.5	16.4	15.2	16.4	17.5	16.4	15.2	15.2
147.5°	15.2	15.2	16.4	15.2	15.2	16.4	16.4	16.4	16.4	16.4	16.4
150°	14.0	14.0	14.0	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
152.5°	14.0	14.0	14.0	14.0	15.2	15.2	15.2	15.2	14.0	14.0	14.0
155°	12.9	12.9	12.9	12.9	12.9	12.9	12.9	14.0	12.9	14.0	14.0
157.5°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	12.9	12.9
160°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	11.7	11.7
162.5°	10.5	10.5	10.5	9.4	9.4	9.4	10.5	10.5	10.5	10.5	10.5
165°	9.4	9.4	9.4	9.4	8.2	9.4	9.4	9.4	9.4	9.4	9.4
167.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
170°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
172.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	7.0	5.8
175°	5.8	5.8	5.8	4.7	4.7	4.7	4.7	4.7	5.8	5.8	5.8
177.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
180°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7

(END OF REPORT)