

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P135677

Luminaire Tested: **LD6A15D010TE ERM6A15930 6LM111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135677
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23372)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15930 6LM111H
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1313.3 lumens
Efficiency: N/A
Efficacy: 58.1 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 0.96 / 0.92
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

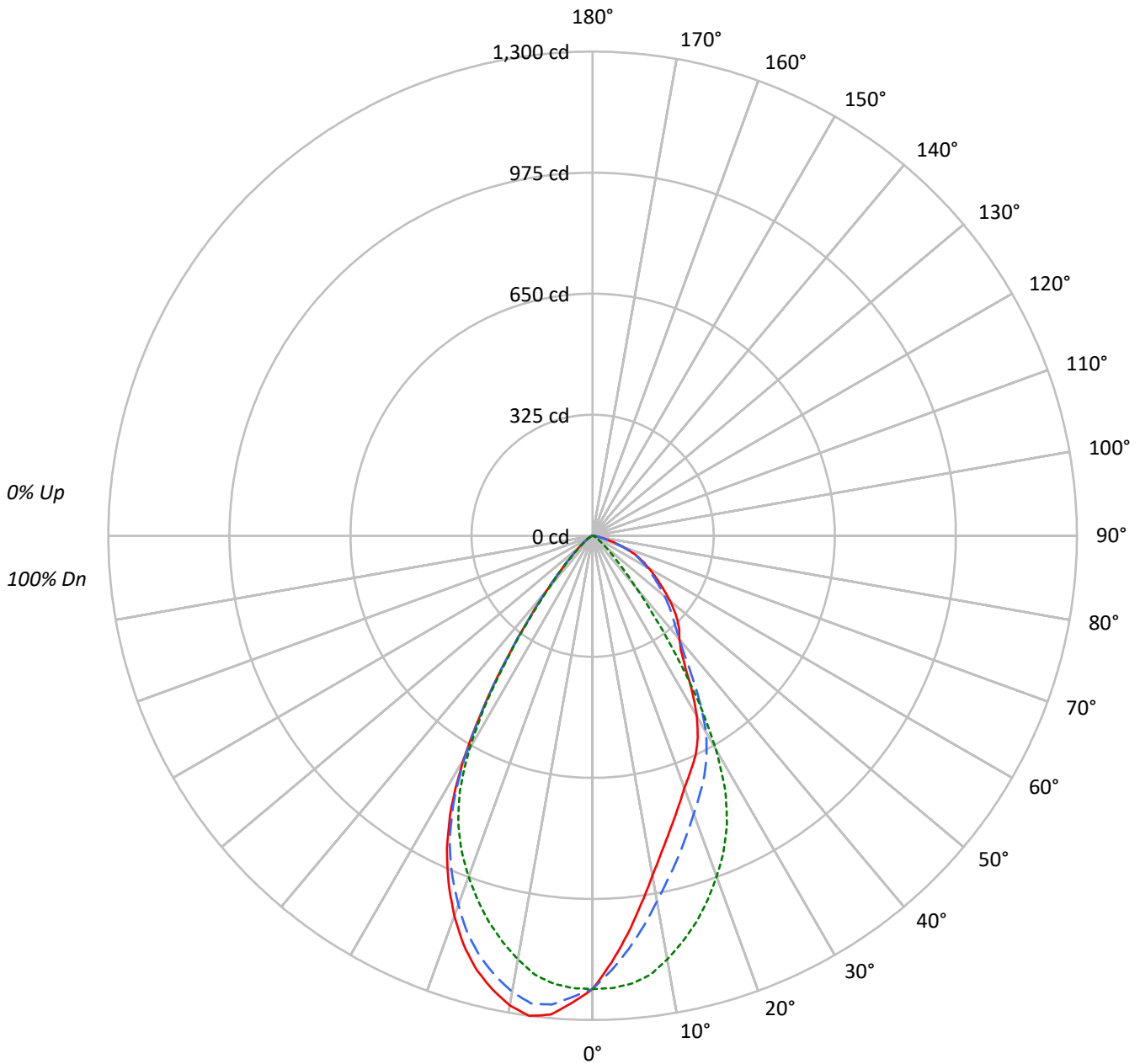
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91								
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83								
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75								
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68								
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	64	63								
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58								
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53								
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50								
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46								
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	79385	79385	79385
5°	70330	79040	84508
10°	61298	76489	84829
15°	54763	72533	81422
20°	49995	67581	75343
25°	46956	61418	66608
30°	42104	49886	52123
35°	34589	30870	31666
40°	30847	15185	16028
45°	29764	7575	8092
50°	27424	4019	4314
55°	24785	2411	2582
60°	22717	1657	1657
65°	20748	1312	1096
70°	16729	1068	801
75°	10360	731	353
80°	5861	526	0
85°	3144	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	8.5
10°-20°	289.8	22.1
20°-30°	368.8	28.1
30°-40°	264.2	20.1
40°-50°	131.8	10.0
50°-60°	79.8	6.1
60°-70°	48.8	3.7
70°-80°	16.8	1.3
80°-90°	1.8	0.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	770.1	58.6
0°-40°	1034.4	78.8
0°-60°	1246.0	94.9
0°-90°	1313.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1313.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1217	1217	1217	1217	1217	
5°	1074	1114	1207	1264	1290	98
15°	811	891	1074	1169	1206	228
25°	652	710	853	908	925	298
35°	434	468	388	398	398	277
45°	323	301	82	90	88	247
55°	218	205	21	23	23	196
65°	134	130	8	7	7	131
75°	41	37	3	1	1	47
85°	4	3	0	0	0	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8
2.5°	1147.5	1148.9	1151.7	1148.9	1150.3	1157.3	1154.6	1155.9	1160.2	1167.3	1163.0
5°	1073.9	1075.3	1082.4	1078.1	1081.0	1089.5	1089.5	1095.2	1103.6	1113.5	1113.5
7.5°	997.4	1000.3	1007.4	1004.5	1008.8	1020.1	1021.6	1030.0	1041.4	1055.5	1062.6
10°	925.3	928.2	935.3	933.8	939.5	950.8	956.5	964.9	979.1	996.1	1004.5
12.5°	864.5	867.3	873.0	873.0	880.0	891.3	897.1	908.4	922.5	940.9	952.2
15°	810.8	815.0	820.6	820.6	827.7	839.0	846.1	856.0	871.5	891.3	904.1
17.5°	764.1	765.4	771.2	771.2	778.2	789.5	796.6	806.5	822.1	840.4	854.6
20°	720.1	721.6	727.2	728.7	734.3	744.3	751.3	761.2	775.4	793.7	806.5
22.5°	686.2	689.0	693.3	694.7	697.6	707.4	715.9	723.0	735.7	751.3	764.1
25°	652.3	653.6	658.0	659.3	663.6	670.7	676.3	683.4	694.7	710.3	720.1
27.5°	611.3	615.5	616.9	618.3	622.5	628.2	633.8	639.5	649.4	662.2	670.7
30°	558.9	560.3	564.6	567.3	571.6	577.3	584.4	590.0	598.5	608.4	614.0
32.5°	498.1	499.5	503.7	506.6	513.6	519.3	524.9	529.2	534.8	540.4	540.4
35°	434.3	438.6	440.1	444.3	451.4	457.0	461.2	462.7	465.5	468.3	458.4
37.5°	389.1	391.9	394.7	397.6	403.2	407.5	410.3	410.3	408.9	406.1	393.4
40°	362.2	363.6	366.5	367.8	373.6	376.3	376.3	373.6	367.8	360.8	341.0
42.5°	343.8	345.2	346.7	348.0	350.9	352.3	350.9	345.2	338.2	328.2	305.6
45°	322.6	324.0	325.4	325.4	328.2	328.2	326.9	321.2	312.7	301.4	277.3
47.5°	297.1	298.5	300.0	301.4	302.8	302.8	301.4	295.7	287.3	277.3	251.9
50°	270.2	271.7	273.1	273.1	275.9	275.9	274.5	268.8	261.7	251.9	229.2
52.5°	243.3	244.8	244.8	247.6	247.6	247.6	246.2	240.6	234.9	227.8	206.6
55°	217.9	219.3	219.3	222.1	223.5	222.1	220.8	216.4	210.8	205.2	188.2
57.5°	195.3	196.6	196.6	198.1	199.5	198.1	196.6	193.9	191.0	185.3	171.2
60°	174.1	175.5	175.5	176.8	176.8	175.5	175.5	172.6	169.7	167.0	154.3
62.5°	154.3	154.3	154.3	155.6	155.6	154.3	154.3	151.4	149.9	148.6	138.7
65°	134.4	134.4	134.4	134.4	134.4	131.6	131.6	130.1	128.8	130.1	121.7
67.5°	111.8	111.8	110.3	110.3	110.3	107.6	107.6	107.6	106.1	107.6	100.5
70°	87.7	87.7	86.3	86.3	84.9	82.1	82.1	82.1	80.7	82.1	77.8
72.5°	62.3	63.6	60.9	60.9	59.4	56.5	58.0	56.5	58.0	58.0	55.2
75°	41.1	42.5	39.6	39.6	38.2	36.7	36.7	36.7	38.2	36.7	35.4
77.5°	25.5	26.9	25.5	25.5	24.0	22.7	22.7	22.7	22.7	22.7	21.2
80°	15.6	15.6	15.6	14.2	14.2	12.7	12.7	12.7	12.7	12.7	11.3
82.5°	8.5	8.5	8.5	8.5	8.5	7.1	7.1	7.1	7.1	7.1	5.6
85°	4.2	4.2	4.2	4.2	4.2	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8
2.5°	1175.7	1181.5	1177.2	1194.2	1191.3	1204.0	1202.6	1215.4	1214.0	1215.4	1218.2
5°	1130.5	1141.8	1143.2	1164.4	1165.9	1185.7	1189.9	1206.9	1209.7	1215.4	1222.4
7.5°	1081.0	1097.9	1103.6	1127.7	1136.1	1157.3	1165.9	1188.5	1194.2	1204.0	1212.6
10°	1027.2	1047.0	1055.5	1083.8	1095.2	1119.2	1130.5	1154.6	1163.0	1174.4	1184.2
12.5°	976.3	997.4	1008.8	1038.5	1054.1	1078.1	1090.8	1116.3	1124.8	1139.0	1148.9
15°	928.2	950.8	963.6	993.2	1008.8	1035.7	1048.5	1073.9	1083.8	1097.9	1107.9
17.5°	878.6	901.3	915.4	943.7	963.6	986.2	1000.3	1025.8	1035.7	1048.5	1058.3
20°	830.6	853.2	865.9	894.2	912.6	935.3	948.0	973.4	980.5	993.2	1001.8
22.5°	785.2	806.5	817.8	847.5	863.1	882.9	895.6	918.2	926.7	936.7	942.3
25°	740.0	758.4	766.8	792.3	805.0	823.5	833.3	853.2	861.7	870.2	877.3
27.5°	689.0	698.9	701.8	721.6	731.5	748.5	752.7	771.2	778.2	783.9	789.5
30°	625.4	626.8	618.3	628.2	632.5	645.2	645.2	662.2	667.8	672.1	677.8
32.5°	544.8	536.2	516.4	513.6	510.8	517.9	515.0	529.2	534.8	537.7	541.9
35°	455.6	437.2	404.7	391.9	383.4	382.0	377.8	387.6	391.9	394.7	397.6
37.5°	377.8	350.9	309.8	287.3	273.1	267.4	261.7	267.4	270.2	273.1	275.9
40°	321.2	287.3	239.1	210.8	191.0	182.5	175.5	178.3	181.1	183.9	185.3
42.5°	280.2	241.9	189.6	155.6	135.8	125.9	118.8	120.3	121.7	123.1	125.9
45°	249.0	208.0	154.3	117.4	97.6	87.7	82.1	82.1	83.4	84.9	86.3
47.5°	223.5	179.7	125.9	90.5	72.1	62.3	56.5	56.5	58.0	58.0	59.4
50°	199.5	155.6	103.2	70.7	53.8	45.3	41.1	39.6	41.1	41.1	42.5
52.5°	179.7	137.2	86.3	56.5	41.1	34.0	29.7	29.7	29.7	29.7	29.7
55°	161.3	120.3	72.1	45.3	32.5	26.9	22.7	21.2	21.2	21.2	21.2
57.5°	147.2	107.6	62.3	38.2	26.9	21.2	18.4	16.9	16.9	16.9	16.9
60°	133.0	94.8	53.8	31.1	21.2	18.4	15.6	12.7	12.7	12.7	12.7
62.5°	118.8	82.1	45.3	26.9	18.4	14.2	12.7	9.9	9.9	9.9	9.9
65°	103.2	70.7	38.2	21.2	14.2	11.3	9.9	8.5	8.5	7.1	7.1
67.5°	84.9	56.5	31.1	18.4	12.7	9.9	8.5	7.1	5.6	5.6	5.6
70°	65.1	42.5	24.0	14.2	9.9	8.5	5.6	5.6	4.2	4.2	4.2
72.5°	46.7	29.7	16.9	11.3	7.1	5.6	5.6	4.2	4.2	4.2	2.9
75°	29.7	19.8	11.3	7.1	5.6	4.2	4.2	2.9	2.9	2.9	2.9
77.5°	18.4	12.7	8.5	5.6	4.2	2.9	2.9	2.9	1.4	1.4	1.4
80°	9.9	7.1	4.2	2.9	2.9	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	5.6	4.2	2.9	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0
85°	2.9	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8	1216.8
2.5°	1226.7	1233.8	1229.5	1232.4	1245.1	1239.4	1249.3	1249.3	1260.7	1260.7	1252.2
5°	1235.2	1243.7	1245.1	1249.3	1266.3	1263.5	1274.8	1277.6	1290.4	1293.2	1286.1
7.5°	1229.5	1239.4	1243.7	1250.7	1267.8	1266.3	1279.1	1284.7	1296.0	1300.3	1294.6
10°	1202.6	1214.0	1219.6	1226.7	1245.1	1243.7	1257.8	1264.9	1274.8	1279.1	1274.8
12.5°	1167.3	1180.0	1185.7	1192.8	1211.1	1209.7	1223.8	1230.9	1239.4	1245.1	1240.9
15°	1127.7	1136.1	1146.1	1153.1	1170.1	1168.7	1182.8	1189.9	1197.0	1204.0	1199.8
17.5°	1076.7	1085.2	1095.2	1100.8	1117.7	1117.7	1129.1	1134.8	1144.6	1150.3	1144.6
20°	1018.7	1028.6	1035.7	1039.9	1055.5	1054.1	1065.4	1071.0	1079.6	1083.8	1079.6
22.5°	957.8	966.4	972.0	974.9	987.6	986.2	994.7	1000.3	1007.4	1011.6	1007.4
25°	888.6	894.2	898.4	899.8	911.1	908.4	919.7	919.7	925.3	929.6	925.3
27.5°	799.4	803.7	806.5	805.0	813.5	809.3	819.2	812.1	823.5	826.3	822.1
30°	684.8	687.6	690.5	684.8	690.5	684.8	693.3	683.4	693.3	697.6	693.3
32.5°	549.0	549.0	551.8	544.8	547.5	541.9	546.2	543.3	546.2	550.4	546.2
35°	403.2	403.2	406.1	401.8	403.2	397.6	400.5	397.6	399.0	401.8	400.5
37.5°	280.2	278.7	282.9	280.2	281.5	278.7	280.2	277.3	278.7	280.2	278.7
40°	189.6	189.6	192.4	191.0	192.4	191.0	192.4	191.0	191.0	191.0	189.6
42.5°	127.4	128.8	130.1	130.1	131.6	130.1	131.6	130.1	130.1	130.1	128.8
45°	87.7	87.7	89.2	89.2	90.5	90.5	90.5	89.2	89.2	89.2	89.2
47.5°	60.9	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	62.3	60.9
50°	42.5	43.8	43.8	43.8	43.8	43.8	43.8	42.5	42.5	42.5	42.5
52.5°	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	29.7	29.7
55°	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
57.5°	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9
60°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
62.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
65°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
67.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
70°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.9	2.9	2.9	2.9	2.9	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1216.8	1216.8	1216.8	1216.8
2.5°	1248.0	1259.3	1255.0	1255.0
5°	1281.8	1294.6	1291.8	1290.4
7.5°	1291.8	1303.1	1300.3	1300.3
10°	1272.0	1283.3	1280.5	1280.5
12.5°	1239.4	1249.3	1248.0	1246.5
15°	1198.4	1208.3	1206.9	1205.5
17.5°	1143.2	1154.6	1153.1	1151.7
20°	1076.7	1086.6	1086.6	1085.2
22.5°	1004.5	1011.6	1013.0	1010.2
25°	922.5	928.2	928.2	925.3
27.5°	819.2	823.5	823.5	822.1
30°	691.9	693.3	694.7	691.9
32.5°	543.3	543.3	546.2	543.3
35°	396.1	396.1	399.0	397.6
37.5°	275.9	275.9	277.3	275.9
40°	188.2	188.2	189.6	188.2
42.5°	128.8	127.4	128.8	128.8
45°	87.7	87.7	89.2	87.7
47.5°	60.9	60.9	60.9	60.9
50°	42.5	42.5	42.5	42.5
52.5°	29.7	29.7	29.7	29.7
55°	21.2	22.7	22.7	22.7
57.5°	15.6	16.9	16.9	16.9
60°	12.7	12.7	12.7	12.7
62.5°	9.9	9.9	9.9	9.9
65°	7.1	7.1	7.1	7.1
67.5°	5.6	5.6	5.6	5.6
70°	4.2	4.2	4.2	4.2
72.5°	2.9	2.9	2.9	2.9
75°	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)