

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: P135526

Luminaire Tested: **LD6A10D010TE ERM6A10935 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135526
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23399)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A10D010TE ERM6A10935 6LM111LI
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1105.3 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.93 / 0.89
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

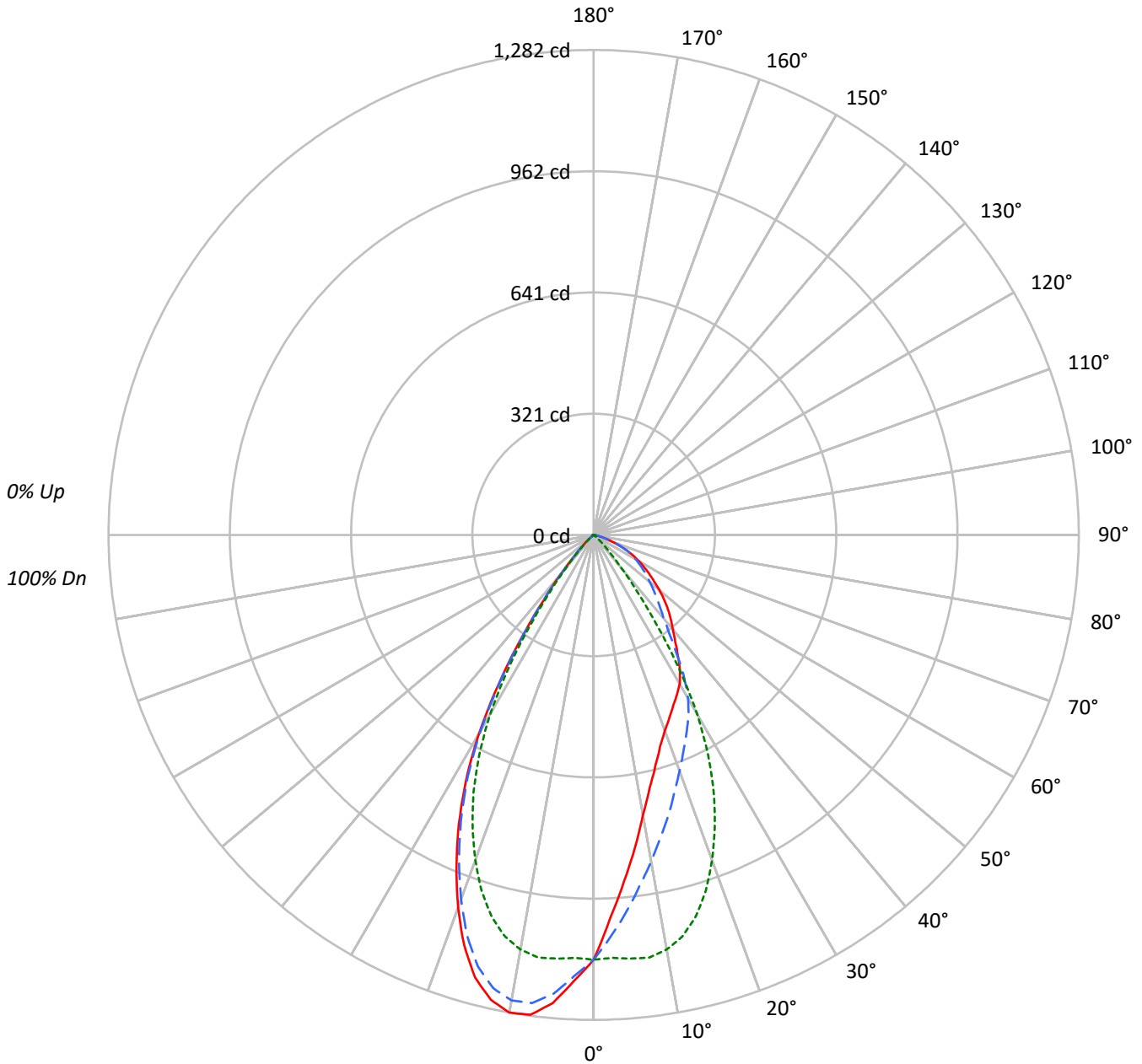
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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				100															
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92				92															
2	106	101	96	93	104	99	95	91	96	92	89	93	90	87	90	88	86	84				84															
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77				77															
4	95	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	71				71															
5	89	80	74	69	88	79	73	69	77	72	68	75	71	67	74	70	67	65				65															
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60				60															
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56				56															
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52				52															
9	72	62	55	51	71	61	55	51	60	55	51	59	54	50	58	54	50	49				49															
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46				46															

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	73246	73246	73246
5°	60185	73630	81345
10°	49752	73726	84955
15°	42612	70494	81787
20°	38206	63485	72725
25°	35841	54061	60633
30°	34247	41230	45644
35°	30878	23368	26458
40°	27704	9513	11199
45°	25594	3294	3783
50°	22999	1157	1228
55°	20315	694	603
60°	17954	600	496
65°	14773	463	355
70°	9862	439	305
75°	5369	403	176
80°	2855	864	0
85°	1198	1198	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.5	9.5
10°-20°	271.9	24.6
20°-30°	321.2	29.1
30°-40°	214.1	19.4
40°-50°	92.9	8.4
50°-60°	55.7	5.0
60°-70°	33.4	3.0
70°-80°	10.3	0.9
80°-90°	1.3	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°	697.7	63.1
0°-40°	911.8	82.5
0°-60°	1060.3	95.9
0°-90°	1105.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1105.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1123	1123	1123	1123	1123	
5°	919	999	1124	1217	1242	83
15°	631	765	1044	1181	1211	178
25°	498	579	751	829	842	230
35°	388	382	293	326	332	243
45°	277	235	36	41	41	213
55°	179	159	6	5	5	161
65°	96	95	3	2	2	94
75°	21	24	2	1	1	26
85°	2	2	2	0	0	2
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°	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7
2.5°	1013.3	1030.7	1038.3	1043.7	1023.9	1045.2	1038.3	1048.3	1051.3	1061.2	1070.3
5°	919.0	935.7	944.1	950.2	935.0	959.3	958.6	971.5	982.1	998.9	1010.3
7.5°	834.6	842.3	850.6	859.0	852.1	874.2	878.0	896.2	912.2	935.0	956.3
10°	751.0	758.6	767.0	776.1	773.0	795.1	803.5	824.0	845.3	875.7	898.5
12.5°	684.1	691.7	699.3	708.4	707.0	729.0	739.6	761.7	787.6	817.9	843.7
15°	630.9	637.7	645.4	651.4	653.0	673.5	684.9	706.2	733.6	764.7	791.3
17.5°	584.6	592.2	599.0	604.3	605.9	624.9	636.3	655.3	681.9	711.5	737.3
20°	550.3	557.2	563.3	568.6	568.6	585.3	595.2	612.7	636.3	663.6	685.7
22.5°	523.0	529.0	534.4	539.0	539.0	553.4	561.7	576.2	596.7	619.6	637.7
25°	497.9	504.0	508.6	512.3	511.6	525.3	532.1	542.7	560.3	579.3	592.9
27.5°	476.6	482.7	486.5	491.9	488.7	500.2	505.5	514.6	528.3	542.0	549.6
30°	454.6	460.7	464.4	469.0	466.0	475.9	478.9	483.4	492.6	499.4	500.2
32.5°	424.2	429.5	433.3	435.6	431.7	439.4	439.4	440.1	443.2	443.9	437.9
35°	387.7	391.4	394.6	395.3	390.7	395.3	394.6	389.2	387.7	381.6	369.4
37.5°	353.4	358.0	359.6	359.6	353.4	355.7	352.7	344.3	338.3	327.6	310.9
40°	325.3	329.1	329.9	329.1	323.0	323.9	319.3	309.4	301.0	288.1	266.8
42.5°	301.7	304.8	305.6	304.8	298.7	298.7	294.2	283.6	273.7	259.2	237.2
45°	277.4	280.5	282.0	280.5	275.2	275.2	269.9	260.0	250.1	234.9	212.9
47.5°	252.4	254.7	256.2	255.4	250.1	250.1	245.6	235.7	227.3	213.6	192.3
50°	226.6	229.6	231.1	230.3	225.7	225.7	222.0	212.9	206.0	193.9	174.9
52.5°	201.4	205.3	206.0	204.4	201.4	200.7	198.4	190.0	184.7	176.3	158.1
55°	178.6	181.7	181.7	181.7	177.9	177.1	175.6	168.7	165.7	158.9	143.7
57.5°	158.1	160.4	159.6	158.9	157.3	155.9	154.3	149.0	147.4	142.9	130.0
60°	137.6	139.9	139.1	138.3	136.8	135.3	133.8	130.0	130.0	127.0	116.3
62.5°	117.8	119.3	118.6	117.8	117.8	116.3	115.6	112.5	113.3	111.7	102.6
65°	95.7	98.0	97.3	97.3	98.0	98.0	97.3	95.7	95.7	95.0	87.4
67.5°	73.0	75.3	74.4	75.3	77.6	78.3	78.3	77.6	77.6	76.0	69.2
70°	51.7	53.2	53.2	54.0	56.3	57.0	59.3	57.0	57.0	55.4	50.2
72.5°	34.2	35.0	35.7	37.3	38.0	38.7	40.3	40.3	39.6	37.3	33.4
75°	21.3	22.0	22.0	22.8	23.6	24.3	25.9	25.1	24.3	23.6	20.6
77.5°	12.9	12.9	13.7	13.7	14.4	15.2	15.2	15.2	14.4	13.7	12.1
80°	7.6	7.6	7.6	8.4	8.4	8.4	8.4	8.4	8.4	7.6	6.9
82.5°	3.8	3.8	3.8	4.6	4.6	4.6	4.6	4.6	4.6	3.8	3.8
85°	1.6	1.6	1.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.6
87.5°	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7	0.7	0.7
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°	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7
2.5°	1079.4	1079.4	1077.2	1090.9	1108.3	1105.3	1106.0	1119.0	1124.3	1133.4	1141.7
5°	1030.0	1038.3	1044.4	1066.5	1091.6	1096.2	1104.5	1124.3	1136.4	1151.6	1166.0
7.5°	980.6	998.0	1012.6	1041.4	1074.1	1086.3	1101.4	1126.6	1142.5	1163.0	1182.8
10°	929.7	954.0	975.3	1010.3	1048.3	1065.7	1084.7	1112.9	1134.2	1156.2	1178.3
12.5°	878.7	908.4	935.0	973.7	1014.0	1035.3	1056.6	1086.3	1109.0	1131.9	1154.7
15°	828.6	860.5	888.6	929.7	970.7	992.7	1014.0	1043.7	1068.0	1089.3	1112.1
17.5°	773.0	808.8	834.6	873.4	913.0	935.0	958.6	985.9	1007.2	1025.4	1047.5
20°	719.1	752.6	776.1	811.9	847.6	868.1	890.2	914.4	933.5	949.4	970.0
22.5°	666.7	696.3	718.3	751.0	778.4	795.9	814.9	836.2	852.9	865.9	884.0
25°	615.7	639.3	656.0	681.9	703.9	717.6	733.6	751.0	765.5	776.1	792.9
27.5°	564.8	580.7	586.9	602.8	616.5	631.7	640.0	653.7	666.7	675.0	689.4
30°	506.3	511.6	506.3	510.9	514.6	521.4	531.3	547.3	553.4	558.7	573.2
32.5°	433.3	429.5	412.0	405.2	400.6	407.4	409.0	421.1	424.9	429.5	440.9
35°	356.6	342.9	314.7	297.2	286.6	287.3	280.5	293.4	295.7	300.3	308.6
37.5°	291.1	269.1	232.6	208.3	192.3	188.6	180.1	187.7	188.6	191.6	197.6
40°	243.3	212.1	171.0	142.1	124.7	117.0	108.7	111.7	111.7	114.0	117.8
42.5°	209.8	176.3	130.0	98.8	79.8	70.7	63.9	63.9	63.9	64.6	66.9
45°	184.7	147.4	101.1	69.2	51.7	42.6	35.7	35.7	35.0	35.0	36.4
47.5°	164.2	127.0	79.8	50.9	33.4	25.1	20.6	19.0	18.3	19.0	19.7
50°	147.4	111.0	66.1	38.7	23.6	16.7	12.9	11.4	10.6	10.6	10.6
52.5°	133.0	98.0	55.4	31.2	18.3	12.1	9.1	7.6	6.9	6.9	6.9
55°	120.9	86.7	47.9	25.9	15.2	10.6	7.6	6.1	5.3	5.3	5.3
57.5°	108.7	76.7	41.0	22.0	12.9	9.1	6.9	5.3	4.6	4.6	4.6
60°	96.6	66.9	35.7	18.3	10.6	7.6	6.1	4.6	3.8	3.8	3.8
62.5°	84.4	57.0	29.7	15.2	9.1	6.9	4.6	3.8	3.8	3.0	3.0
65°	70.0	46.4	24.3	12.9	7.6	5.3	4.6	3.0	3.0	3.0	3.0
67.5°	54.7	35.7	18.3	9.9	6.1	4.6	3.8	3.0	2.3	2.3	2.3
70°	38.7	25.1	13.7	7.6	5.3	3.8	3.0	2.3	2.3	2.3	1.6
72.5°	25.9	16.7	9.9	6.1	4.6	3.0	2.3	2.3	1.6	1.6	1.6
75°	16.7	10.6	6.9	4.6	3.0	3.0	2.3	1.6	1.6	1.6	0.7
77.5°	9.9	6.9	4.6	3.0	2.3	2.3	2.3	2.3	2.3	1.6	0.7
80°	5.3	3.8	3.0	2.3	1.6	2.3	2.3	2.3	2.3	1.6	0.7
82.5°	3.0	2.3	1.6	1.6	1.6	1.6	1.6	2.3	2.3	1.6	0.7
85°	1.6	1.6	0.7	0.7	0.7	1.6	1.6	1.6	1.6	0.7	0.7
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.6	1.6	0.7	0.7
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°	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7	1122.7
2.5°	1148.6	1153.2	1154.7	1157.0	1169.9	1166.9	1178.3	1178.3	1187.3	1182.0	1187.3
5°	1178.3	1188.1	1192.7	1198.7	1217.0	1217.0	1230.7	1233.0	1245.2	1241.3	1246.6
7.5°	1197.3	1209.4	1215.5	1225.3	1245.2	1248.2	1261.1	1264.9	1279.3	1277.0	1280.1
10°	1193.4	1206.3	1214.0	1224.6	1245.2	1249.7	1261.1	1267.9	1281.6	1278.6	1280.1
12.5°	1169.9	1182.0	1190.4	1200.3	1221.6	1226.9	1236.7	1244.3	1257.3	1255.0	1255.0
15°	1125.7	1139.5	1146.3	1154.7	1175.2	1181.3	1188.9	1195.0	1209.4	1207.9	1205.6
17.5°	1059.6	1072.6	1077.9	1084.7	1104.5	1111.3	1117.4	1122.0	1135.7	1134.9	1131.1
20°	979.0	990.5	995.0	999.6	1017.1	1023.9	1028.5	1033.0	1044.4	1044.4	1039.1
22.5°	890.9	900.7	903.9	907.6	922.9	929.7	932.0	935.7	946.4	946.4	939.6
25°	797.4	805.7	807.3	810.3	823.3	829.3	830.1	832.4	843.0	843.0	836.2
27.5°	692.5	699.3	700.9	702.4	713.7	719.9	719.1	727.4	730.5	732.0	723.7
30°	574.7	586.1	580.0	586.9	590.6	596.7	594.4	602.8	605.1	607.3	596.7
32.5°	442.4	453.0	446.2	453.0	454.6	460.7	457.6	465.2	466.7	469.0	459.1
35°	310.1	318.5	312.4	314.7	320.0	326.1	322.3	329.1	330.7	331.4	323.9
37.5°	199.2	205.3	206.7	209.0	209.0	213.6	215.1	215.1	215.9	216.6	210.6
40°	119.3	123.9	124.7	123.9	126.2	130.0	130.7	130.0	130.7	131.5	127.7
42.5°	67.7	70.7	71.4	71.4	73.0	75.3	75.3	74.4	75.3	75.3	73.0
45°	37.3	38.7	39.6	38.7	39.6	41.0	41.0	41.0	41.0	41.0	40.3
47.5°	19.7	20.6	20.6	21.3	20.6	21.3	21.3	21.3	22.0	22.0	21.3
50°	10.6	11.4	11.4	11.4	11.4	12.1	12.1	12.1	12.1	12.1	11.4
52.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
55°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
57.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
60°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
62.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
65°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
67.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
75°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
80°	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.7	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°	1122.7	1122.7	1122.7	1122.7
2.5°	1189.6	1193.4	1188.1	1179.7
5°	1250.4	1255.0	1249.7	1242.1
7.5°	1283.9	1290.7	1284.6	1279.3
10°	1285.4	1292.3	1285.4	1282.4
12.5°	1260.3	1267.2	1259.6	1258.0
15°	1212.4	1217.7	1210.2	1210.9
17.5°	1138.7	1143.3	1135.7	1138.0
20°	1046.0	1050.6	1042.9	1047.5
22.5°	946.4	949.4	947.9	947.2
25°	842.3	844.6	837.7	842.3
27.5°	728.2	729.7	730.5	729.7
30°	602.0	602.8	598.3	605.9
32.5°	463.7	462.9	461.4	468.3
35°	326.1	326.1	326.1	332.2
37.5°	212.1	211.3	212.1	216.6
40°	128.4	127.7	128.4	131.5
42.5°	73.0	73.0	73.7	75.3
45°	41.0	40.3	40.3	41.0
47.5°	22.0	22.0	21.3	22.0
50°	12.1	12.1	11.4	12.1
52.5°	6.9	6.9	6.9	6.9
55°	5.3	5.3	5.3	5.3
57.5°	4.6	4.6	4.6	4.6
60°	3.8	3.8	3.8	3.8
62.5°	3.0	3.0	3.0	3.0
65°	2.3	3.0	2.3	2.3
67.5°	2.3	2.3	2.3	2.3
70°	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6
75°	0.7	0.7	0.7	0.7
77.5°	0.7	0.7	0.7	0.7
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)