

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: P135523

Luminaire Tested: **LD6A10D010TE ERM6A10840 6LM111LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135523
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 ERM6A10840 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1229.0 lumens
Efficiency: N/A
Efficacy: 87.8 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

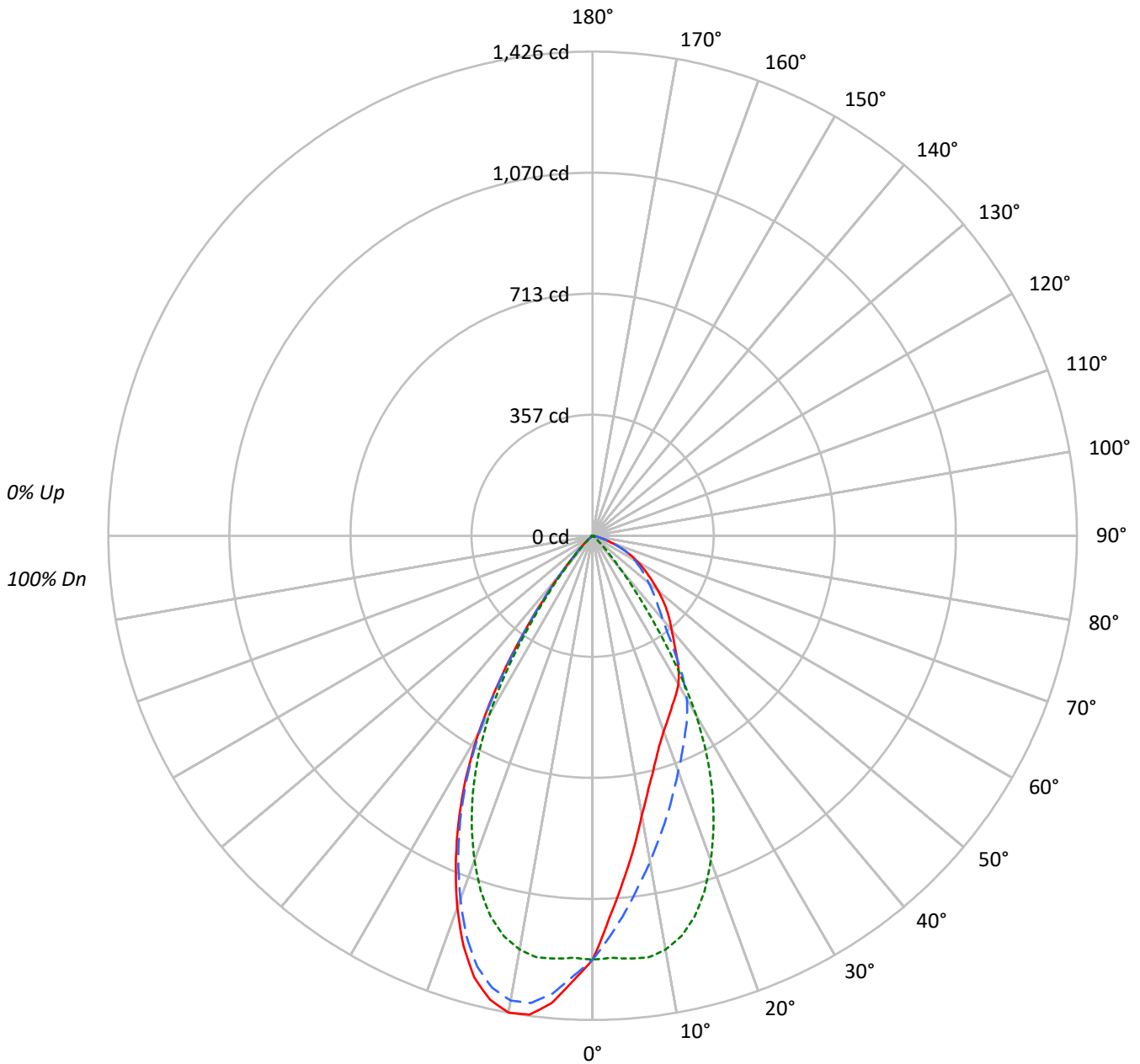
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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				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	88	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°	81446	81446	81446
5°	66924	81869	90448
10°	55323	81974	94462
15°	47388	78383	90945
20°	42490	70594	80869
25°	39851	60115	67414
30°	38081	45848	50752
35°	34335	25988	29421
40°	30813	10586	12451
45°	28463	3663	4207
50°	25567	1289	1370
55°	22589	773	671
60°	19964	665	548
65°	16441	525	386
70°	10968	477	324
75°	5974	429	202
80°	3193	939	0
85°	1273	1273	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	9.5
10°-20°	302.3	24.6
20°-30°	357.2	29.1
30°-40°	238.0	19.4
40°-50°	103.3	8.4
50°-60°	61.9	5.0
60°-70°	37.2	3.0
70°-80°	11.4	0.9
80°-90°	1.4	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°	775.8	63.1
0°-40°	1013.8	82.5
0°-60°	1179.0	95.9
0°-90°	1229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1229.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1248	1248	1248	1248	1248	
5°	1022	1111	1250	1353	1381	92
15°	702	850	1160	1314	1346	198
25°	554	644	835	922	936	256
35°	431	424	326	363	369	270
45°	308	261	40	46	46	237
55°	199	177	7	6	6	179
65°	106	106	3	2	2	105
75°	24	26	2	1	1	29
85°	2	2	2	0	0	3
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°	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4
2.5°	1126.7	1146.2	1154.6	1160.5	1138.5	1162.2	1154.6	1165.6	1169.0	1180.0	1190.1
5°	1021.9	1040.5	1049.8	1056.6	1039.7	1066.7	1065.9	1080.2	1092.1	1110.7	1123.3
7.5°	928.1	936.5	945.8	955.1	947.5	972.0	976.3	996.5	1014.3	1039.7	1063.3
10°	835.1	843.6	852.9	863.0	859.6	884.1	893.4	916.2	939.9	973.7	999.1
12.5°	760.7	769.2	777.6	787.8	786.1	810.6	822.4	846.9	875.7	909.5	938.2
15°	701.6	709.2	717.6	724.4	726.1	748.9	761.6	785.2	815.7	850.3	879.9
17.5°	650.0	658.4	666.1	672.0	673.7	694.8	707.5	728.6	758.2	791.2	819.9
20°	612.0	619.6	626.3	632.2	632.2	650.8	661.8	681.3	707.5	737.9	762.4
22.5°	581.5	588.3	594.2	599.3	599.3	615.3	624.6	640.7	663.5	688.9	709.2
25°	553.6	560.4	565.5	569.7	568.9	584.1	591.7	603.5	622.9	644.1	659.3
27.5°	530.0	536.7	541.0	546.9	543.5	556.2	562.1	572.2	587.4	602.7	611.1
30°	505.5	512.2	516.4	521.5	518.1	529.1	532.5	537.6	547.7	555.3	556.2
32.5°	471.6	477.6	481.8	484.3	480.1	488.6	488.6	489.4	492.8	493.6	486.9
35°	431.1	435.3	438.7	439.5	434.5	439.5	438.7	432.8	431.1	424.3	410.8
37.5°	393.0	398.1	399.8	399.8	393.0	395.6	392.2	382.9	376.1	364.3	345.7
40°	361.8	366.0	366.8	366.0	359.2	360.1	355.0	344.0	334.7	320.3	296.7
42.5°	335.6	338.9	339.8	338.9	332.2	332.2	327.1	315.3	304.3	288.2	263.7
45°	308.5	311.9	313.6	311.9	306.0	306.0	300.1	289.1	278.1	261.2	236.7
47.5°	280.6	283.2	284.8	284.0	278.1	278.1	273.0	262.0	252.7	237.5	213.8
50°	251.9	255.3	257.0	256.1	251.0	251.0	246.8	236.7	229.1	215.5	194.4
52.5°	224.0	228.2	229.1	227.4	224.0	223.1	220.6	211.3	205.4	196.1	175.8
55°	198.6	202.0	202.0	202.0	197.8	196.9	195.3	187.6	184.3	176.7	159.8
57.5°	175.8	178.3	177.5	176.7	175.0	173.3	171.6	165.7	164.0	158.9	144.5
60°	153.0	155.5	154.7	153.8	152.1	150.5	148.8	144.5	144.5	141.2	129.3
62.5°	131.0	132.7	131.9	131.0	131.0	129.3	128.5	125.1	125.9	124.3	114.1
65°	106.5	109.0	108.2	108.2	109.0	109.0	108.2	106.5	106.5	105.7	97.2
67.5°	81.1	83.7	82.8	83.7	86.2	87.1	87.1	86.2	86.2	84.5	76.9
70°	57.5	59.2	59.2	60.0	62.5	63.4	65.9	63.4	63.4	61.7	55.8
72.5°	38.0	38.9	39.7	41.4	42.3	43.1	44.8	44.8	44.0	41.4	37.2
75°	23.7	24.5	24.5	25.4	26.2	27.0	28.7	27.9	27.0	26.2	22.8
77.5°	14.4	14.4	15.2	15.2	16.1	16.9	16.9	16.9	16.1	15.2	13.5
80°	8.5	8.5	8.5	9.3	9.3	9.3	9.3	9.3	9.3	8.5	7.6
82.5°	4.2	4.2	4.2	5.1	5.1	5.1	5.1	5.1	5.1	4.2	4.2
85°	1.7	1.7	1.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.7
87.5°	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8
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°	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4
2.5°	1200.3	1200.3	1197.7	1212.9	1232.4	1229.0	1229.8	1244.2	1250.1	1260.3	1269.6
5°	1145.3	1154.6	1161.4	1185.9	1213.8	1218.8	1228.1	1250.1	1263.6	1280.6	1296.6
7.5°	1090.4	1109.8	1125.9	1158.0	1194.3	1207.9	1224.8	1252.7	1270.4	1293.2	1315.2
10°	1033.7	1060.8	1084.5	1123.3	1165.6	1185.0	1206.2	1237.4	1261.1	1285.6	1310.1
12.5°	977.1	1010.1	1039.7	1082.8	1127.6	1151.2	1174.9	1207.9	1233.2	1258.6	1283.9
15°	921.3	956.8	988.1	1033.7	1079.4	1103.9	1127.6	1160.5	1187.6	1211.2	1236.6
17.5°	859.6	899.3	928.1	971.2	1015.1	1039.7	1065.9	1096.3	1120.0	1140.2	1164.8
20°	799.6	836.8	863.0	902.7	942.5	965.3	989.8	1016.8	1038.0	1055.7	1078.5
22.5°	741.3	774.2	798.8	835.1	865.5	885.0	906.1	929.8	948.4	962.7	983.0
25°	684.7	710.9	729.4	758.2	782.7	797.9	815.7	835.1	851.2	863.0	881.6
27.5°	628.0	645.8	652.5	670.3	685.5	702.4	711.7	726.9	741.3	750.6	766.6
30°	562.9	568.9	562.9	568.0	572.2	579.8	590.8	608.6	615.3	621.3	637.3
32.5°	481.8	477.6	458.1	450.5	445.4	453.1	454.7	468.3	472.5	477.6	490.2
35°	396.4	381.2	349.9	330.5	318.7	319.5	311.9	326.3	328.8	333.9	343.2
37.5°	323.7	299.2	258.6	231.6	213.8	209.6	200.3	208.8	209.6	213.0	219.8
40°	270.5	235.8	190.2	158.1	138.6	130.2	120.9	124.3	124.3	126.8	131.0
42.5°	233.3	196.1	144.5	109.9	88.8	78.6	71.0	71.0	71.0	71.8	74.4
45°	205.4	164.0	112.4	76.9	57.5	47.3	39.7	39.7	38.9	38.9	40.6
47.5°	182.6	141.2	88.8	56.6	37.2	27.9	22.8	21.1	20.3	21.1	22.0
50°	164.0	123.4	73.5	43.1	26.2	18.6	14.4	12.7	11.8	11.8	11.8
52.5°	147.9	109.0	61.7	34.7	20.3	13.5	10.1	8.5	7.6	7.6	7.6
55°	134.4	96.4	53.3	28.7	16.9	11.8	8.5	6.8	5.9	5.9	5.9
57.5°	120.9	85.4	45.6	24.5	14.4	10.1	7.6	5.9	5.1	5.1	5.1
60°	107.3	74.4	39.7	20.3	11.8	8.5	6.8	5.1	4.2	4.2	4.2
62.5°	93.8	63.4	33.0	16.9	10.1	7.6	5.1	4.2	4.2	3.4	3.4
65°	77.8	51.6	27.0	14.4	8.5	5.9	5.1	3.4	3.4	3.4	3.4
67.5°	60.9	39.7	20.3	11.0	6.8	5.1	4.2	3.4	2.5	2.5	2.5
70°	43.1	27.9	15.2	8.5	5.9	4.2	3.4	2.5	2.5	2.5	1.7
72.5°	28.7	18.6	11.0	6.8	5.1	3.4	2.5	2.5	1.7	1.7	1.7
75°	18.6	11.8	7.6	5.1	3.4	3.4	2.5	1.7	1.7	1.7	0.8
77.5°	11.0	7.6	5.1	3.4	2.5	2.5	2.5	2.5	2.5	1.7	0.8
80°	5.9	4.2	3.4	2.5	1.7	2.5	2.5	2.5	2.5	1.7	0.8
82.5°	3.4	2.5	1.7	1.7	1.7	1.7	1.7	2.5	2.5	1.7	0.8
85°	1.7	1.7	0.8	0.8	0.8	1.7	1.7	1.7	1.7	0.8	0.8
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7	0.8	0.8
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°	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4	1248.4
2.5°	1277.2	1282.2	1283.9	1286.5	1300.8	1297.5	1310.1	1310.1	1320.3	1314.4	1320.3
5°	1310.1	1321.1	1326.2	1333.0	1353.2	1353.2	1368.5	1371.0	1384.5	1380.3	1386.2
7.5°	1331.3	1344.8	1351.6	1362.5	1384.5	1387.9	1402.3	1406.5	1422.6	1420.0	1423.4
10°	1327.0	1341.4	1349.9	1361.7	1384.5	1389.6	1402.3	1409.9	1425.1	1421.7	1423.4
12.5°	1300.8	1314.4	1323.7	1334.6	1358.3	1364.2	1375.2	1383.7	1398.0	1395.5	1395.5
15°	1251.8	1267.0	1274.6	1283.9	1306.8	1313.5	1322.0	1328.7	1344.8	1343.1	1340.6
17.5°	1178.3	1192.6	1198.6	1206.2	1228.1	1235.8	1242.5	1247.6	1262.8	1262.0	1257.7
20°	1088.7	1101.4	1106.4	1111.5	1130.9	1138.5	1143.6	1148.7	1161.4	1161.4	1155.5
22.5°	990.6	1001.6	1005.0	1009.2	1026.1	1033.7	1036.3	1040.5	1052.3	1052.3	1044.7
25°	886.7	896.0	897.7	901.0	915.4	922.2	923.0	925.5	937.4	937.4	929.8
27.5°	770.0	777.6	779.3	781.0	793.7	800.4	799.6	808.9	812.3	814.0	804.7
30°	639.0	651.7	644.9	652.5	656.8	663.5	661.0	670.3	672.8	675.4	663.5
32.5°	491.9	503.8	496.2	503.8	505.5	512.2	508.8	517.3	519.0	521.5	510.5
35°	344.9	354.2	347.4	349.9	355.8	362.6	358.4	366.0	367.7	368.5	360.1
37.5°	221.5	228.2	229.9	232.4	232.4	237.5	239.2	239.2	240.1	240.9	234.1
40°	132.7	137.8	138.6	137.8	140.3	144.5	145.4	144.5	145.4	146.2	142.0
42.5°	75.2	78.6	79.5	79.5	81.1	83.7	83.7	82.8	83.7	83.7	81.1
45°	41.4	43.1	44.0	43.1	44.0	45.6	45.6	45.6	45.6	45.6	44.8
47.5°	22.0	22.8	22.8	23.7	22.8	23.7	23.7	23.7	24.5	24.5	23.7
50°	11.8	12.7	12.7	12.7	12.7	13.5	13.5	13.5	13.5	13.5	12.7
52.5°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
55°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
57.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
60°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
62.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
65°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
67.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.8	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°	1248.4	1248.4	1248.4	1248.4
2.5°	1322.8	1327.0	1321.1	1311.8
5°	1390.4	1395.5	1389.6	1381.1
7.5°	1427.6	1435.2	1428.5	1422.6
10°	1429.3	1436.9	1429.3	1425.9
12.5°	1401.4	1409.0	1400.6	1398.9
15°	1348.2	1354.1	1345.6	1346.5
17.5°	1266.2	1271.3	1262.8	1265.3
20°	1163.1	1168.1	1159.7	1164.8
22.5°	1052.3	1055.7	1054.0	1053.2
25°	936.5	939.1	931.5	936.5
27.5°	809.7	811.4	812.3	811.4
30°	669.4	670.3	665.2	673.7
32.5°	515.6	514.8	513.1	520.7
35°	362.6	362.6	362.6	369.4
37.5°	235.8	235.0	235.8	240.9
40°	142.8	142.0	142.8	146.2
42.5°	81.1	81.1	82.0	83.7
45°	45.6	44.8	44.8	45.6
47.5°	24.5	24.5	23.7	24.5
50°	13.5	13.5	12.7	13.5
52.5°	7.6	7.6	7.6	7.6
55°	5.9	5.9	5.9	5.9
57.5°	5.1	5.1	5.1	5.1
60°	4.2	4.2	4.2	4.2
62.5°	3.4	3.4	3.4	3.4
65°	2.5	3.4	2.5	2.5
67.5°	2.5	2.5	2.5	2.5
70°	1.7	1.7	1.7	1.7
72.5°	1.7	1.7	1.7	1.7
75°	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8
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)