

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: P135794

Luminaire Tested: **LD6A15D010TE ERM6A15835 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135794
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23357-R2)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15835 6LM121LI
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED DOUBLE 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: 1567.0 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 0.86 / 1.02 / 0.97
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

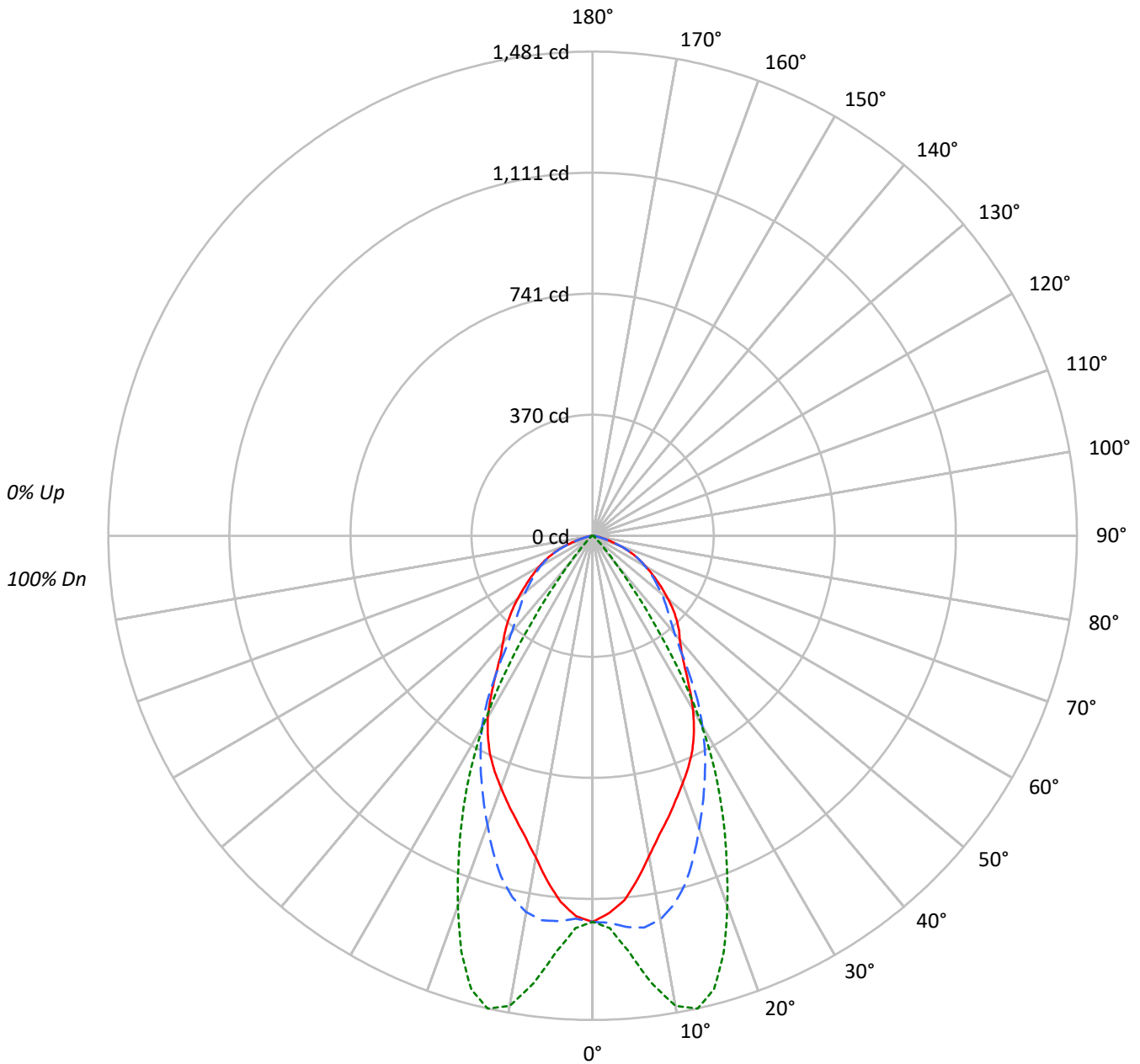
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90								
2	104	98	93	89	102	96	91	87	93	89	86	90	87	84	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72								
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53								
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49								
8	71	59	52	47	69	59	52	47	58	51	47	57	51	47	55	50	47	45								
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42								
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	77036	77036	77036
5°	73257	83657	73604
10°	65850	96714	66207
15°	60254	96936	60828
20°	55896	83619	56868
25°	52009	67767	53319
30°	46255	50142	48281
35°	39073	26506	40953
40°	35293	8866	36298
45°	33473	3072	33575
50°	30611	1309	30287
55°	27355	978	27105
60°	24374	979	24648
65°	21550	988	21705
70°	16595	820	16385
75°	10284	529	9730
80°	5260	413	4847
85°	2395	0	2395



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.6	7.3
10°-20°	312.7	20.0
20°-30°	376.4	24.0
30°-40°	292.5	18.7
40°-50°	195.8	12.5
50°-60°	147.3	9.4
60°-70°	94.5	6.0
70°-80°	30.3	1.9
80°-90°	2.9	0.2
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°	803.7	51.3
0°-40°	1096.3	70.0
0°-60°	1439.3	91.9
0°-90°	1567.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1567.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1181	1181	1181	1181	1181	
5°	1119	1201	1277	1183	1124	103
15°	892	1099	1435	1080	901	251
25°	722	812	941	807	741	329
35°	491	513	333	513	514	312
45°	363	324	33	317	364	279
55°	240	228	9	222	238	216
65°	140	141	6	137	141	137
75°	41	39	2	36	39	47
85°	3	3	0	3	3	5
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°	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8
2.5°	1155.1	1164.7	1161.5	1176.5	1165.8	1164.7	1172.2	1176.5	1177.6	1185.1	1185.1
5°	1118.6	1129.3	1126.1	1145.4	1141.1	1145.4	1161.5	1173.3	1184.0	1201.2	1212.0
7.5°	1058.5	1071.3	1073.5	1092.8	1094.9	1106.8	1132.5	1156.1	1178.7	1208.7	1234.5
10°	994.0	1006.9	1010.1	1031.6	1038.1	1054.2	1087.4	1117.5	1149.7	1191.6	1230.2
12.5°	938.2	951.1	955.4	976.9	984.4	1002.6	1038.1	1071.3	1107.8	1154.0	1200.2
15°	892.1	903.9	908.2	927.5	935.0	952.2	985.5	1017.7	1053.1	1099.2	1144.3
17.5°	847.0	858.8	862.0	879.2	884.5	899.6	929.6	957.5	987.6	1028.4	1069.2
20°	805.1	815.8	818.0	833.0	836.2	848.0	872.7	895.3	920.0	952.2	985.5
22.5°	765.4	776.1	777.2	790.1	791.2	800.8	821.2	838.4	855.6	881.3	904.9
25°	722.5	733.2	734.3	745.0	746.1	752.5	768.6	781.5	793.3	811.6	827.7
27.5°	670.9	681.7	684.9	692.4	693.5	697.8	711.7	720.3	732.1	743.9	750.4
30°	614.0	623.7	628.0	634.4	635.5	641.9	654.8	661.3	668.8	670.9	673.1
32.5°	550.7	561.4	565.7	571.1	574.3	580.8	592.6	595.8	597.9	596.9	585.0
35°	490.6	500.2	504.5	511.0	513.1	517.4	527.1	526.0	522.8	513.1	491.7
37.5°	445.5	453.0	457.3	461.6	462.7	464.8	470.2	465.9	457.3	441.2	413.3
40°	414.4	421.9	423.0	427.2	426.2	426.2	427.2	419.7	409.0	389.7	357.5
42.5°	390.7	397.2	397.2	401.5	398.3	396.1	396.1	387.5	373.6	353.2	321.0
45°	362.8	368.2	369.3	371.4	368.2	366.1	366.1	357.5	344.6	324.2	292.0
47.5°	333.9	339.2	339.2	342.4	339.2	337.1	337.1	329.6	317.8	299.5	269.4
50°	301.6	307.0	308.1	310.2	308.1	307.0	308.1	300.6	290.9	274.8	248.0
52.5°	270.5	275.9	275.9	278.0	275.9	275.9	277.0	271.6	263.0	250.1	226.5
55°	240.5	244.8	246.9	249.0	245.8	245.8	246.9	243.7	237.2	227.6	207.2
57.5°	212.5	216.8	217.9	220.1	217.9	219.0	220.1	216.8	213.6	206.1	190.0
60°	186.8	191.1	192.2	193.2	192.2	192.2	193.2	192.2	190.0	184.6	170.7
62.5°	163.2	166.4	167.5	169.6	167.5	166.4	168.5	167.5	166.4	163.2	153.5
65°	139.6	141.7	142.8	143.8	141.7	139.6	141.7	141.7	142.8	140.6	133.1
67.5°	113.8	115.9	115.9	115.9	112.7	111.6	113.8	113.8	115.9	114.9	109.5
70°	87.0	88.0	88.0	88.0	83.7	83.7	84.8	84.8	87.0	87.0	83.7
72.5°	62.3	61.2	61.2	60.1	59.0	56.9	56.9	58.0	60.1	60.1	58.0
75°	40.8	39.7	38.6	38.6	37.6	35.4	35.4	36.5	37.6	38.6	37.6
77.5°	24.7	23.6	23.6	22.5	22.5	21.5	21.5	21.5	22.5	22.5	22.5
80°	14.0	12.9	12.9	12.9	11.8	11.8	11.8	11.8	11.8	12.9	11.8
82.5°	7.5	6.4	6.4	6.4	6.4	6.4	5.4	6.4	6.4	6.4	6.4
85°	3.2	3.2	3.2	3.2	2.1	2.1	2.1	2.1	2.1	3.2	3.2
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8
2.5°	1181.9	1192.6	1185.1	1208.7	1192.6	1201.2	1213.0	1201.2	1204.4	1212.0	1196.9
5°	1218.4	1237.7	1239.9	1272.1	1259.2	1274.2	1290.3	1277.4	1279.6	1285.0	1265.6
7.5°	1256.0	1290.3	1306.4	1351.5	1348.3	1373.0	1392.3	1379.4	1379.4	1380.5	1351.5
10°	1266.7	1317.2	1347.2	1403.0	1411.6	1447.1	1468.5	1459.9	1457.8	1454.6	1414.8
12.5°	1243.1	1305.4	1344.0	1406.3	1423.4	1465.3	1484.6	1481.4	1478.2	1471.7	1425.6
15°	1188.3	1252.8	1293.5	1354.7	1376.2	1419.1	1435.2	1435.2	1432.0	1425.6	1376.2
17.5°	1107.8	1167.9	1205.5	1259.2	1280.7	1320.4	1331.1	1334.3	1331.1	1324.7	1279.6
20°	1016.6	1067.0	1097.1	1141.1	1158.3	1192.6	1199.1	1204.4	1202.3	1196.9	1157.2
22.5°	927.5	967.2	989.7	1028.4	1034.8	1063.8	1066.0	1070.3	1069.2	1067.0	1034.8
25°	845.9	872.7	885.6	914.6	916.8	938.2	937.1	941.4	940.4	940.4	915.7
27.5°	760.0	776.1	779.3	797.6	793.3	809.4	811.6	809.4	810.5	811.6	793.3
30°	674.1	677.4	667.7	669.9	658.0	667.7	658.0	665.6	665.6	668.8	658.0
32.5°	576.5	566.8	541.0	528.2	507.8	507.8	502.4	502.4	502.4	507.8	505.6
35°	472.3	448.7	409.0	381.1	352.1	344.6	343.5	332.8	334.9	342.4	347.8
37.5°	383.2	347.8	295.2	255.5	221.1	206.1	200.7	192.2	195.4	204.0	216.8
40°	319.9	277.0	215.8	169.6	135.3	118.1	109.5	104.1	107.3	118.1	134.2
42.5°	280.2	232.9	167.5	119.2	87.0	70.8	62.3	58.0	61.2	70.8	90.2
45°	251.2	201.8	135.3	88.0	59.0	44.0	36.5	33.3	35.4	44.0	60.1
47.5°	228.7	178.2	112.7	67.6	41.9	29.0	22.5	19.3	21.5	29.0	41.9
50°	208.3	158.9	95.5	53.7	32.2	21.5	15.0	12.9	15.0	20.4	31.1
52.5°	190.0	141.7	81.6	44.0	24.7	17.2	11.8	9.7	10.7	16.1	24.7
55°	173.9	128.8	71.9	37.6	21.5	15.0	10.7	8.6	10.7	14.0	21.5
57.5°	158.9	115.9	63.3	32.2	18.2	12.9	9.7	8.6	9.7	12.9	18.2
60°	143.8	103.1	55.8	27.9	16.1	11.8	8.6	7.5	8.6	10.7	16.1
62.5°	128.8	91.2	48.3	23.6	14.0	9.7	7.5	6.4	7.5	9.7	14.0
65°	111.6	77.3	40.8	20.4	11.8	8.6	6.4	6.4	6.4	8.6	11.8
67.5°	92.3	63.3	32.2	16.1	9.7	7.5	5.4	5.4	5.4	7.5	9.7
70°	70.8	47.2	24.7	12.9	7.5	5.4	4.3	4.3	4.3	5.4	7.5
72.5°	49.4	33.3	17.2	9.7	5.4	4.3	3.2	3.2	3.2	4.3	5.4
75°	31.1	21.5	11.8	6.4	4.3	3.2	2.1	2.1	2.1	3.2	4.3
77.5°	18.2	12.9	7.5	4.3	2.1	2.1	1.1	1.1	1.1	2.1	2.1
80°	9.7	7.5	4.3	2.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	5.4	3.2	2.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	2.1	1.1	1.1	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8	1180.8
2.5°	1192.6	1196.9	1195.9	1173.3	1171.2	1172.2	1157.2	1162.6	1167.9	1162.6	1163.7
5°	1250.6	1249.5	1236.6	1204.4	1191.6	1183.0	1158.3	1154.0	1150.8	1139.0	1134.7
7.5°	1326.8	1311.8	1285.0	1236.6	1209.8	1186.2	1149.7	1131.4	1118.6	1098.2	1086.4
10°	1379.4	1349.4	1309.6	1246.3	1205.5	1169.0	1121.8	1093.9	1072.4	1045.6	1028.4
12.5°	1386.9	1345.1	1298.9	1224.8	1177.6	1132.5	1081.0	1049.9	1025.2	996.2	980.1
15°	1338.6	1295.7	1247.4	1173.3	1126.1	1079.9	1030.5	999.4	974.7	946.8	932.9
17.5°	1247.4	1207.7	1164.7	1096.0	1055.2	1013.4	969.4	942.5	921.0	899.6	885.6
20°	1131.4	1100.3	1064.9	1006.9	974.7	940.4	906.0	884.5	868.4	850.2	839.5
22.5°	1016.6	993.0	967.2	921.0	897.4	872.7	845.9	830.9	819.1	805.1	797.6
25°	906.0	889.9	873.8	838.4	824.4	807.3	787.9	777.2	769.7	760.0	754.7
27.5°	791.2	785.8	781.5	759.0	753.6	741.8	728.9	722.5	717.1	710.6	706.4
30°	666.6	669.9	687.0	675.2	680.6	677.4	672.0	667.7	665.6	660.2	654.8
32.5°	526.0	548.5	573.2	576.5	592.6	600.1	599.0	600.1	601.1	596.9	592.6
35°	376.8	413.3	451.9	469.1	495.9	513.1	519.6	526.0	530.3	529.2	526.0
37.5°	251.2	300.6	346.7	376.8	412.2	435.8	449.8	460.5	467.0	469.1	469.1
40°	167.5	214.7	275.9	314.5	354.2	383.2	399.3	413.3	423.0	427.2	429.4
42.5°	118.1	168.5	230.8	274.8	315.6	346.7	365.0	380.0	389.7	395.0	397.2
45°	87.0	135.3	199.7	244.8	286.6	316.7	334.9	348.9	358.5	363.9	367.1
47.5°	66.6	113.8	176.1	222.2	264.1	292.0	309.2	322.0	330.6	334.9	337.1
50°	52.6	95.5	156.7	202.9	241.5	267.3	282.3	293.1	300.6	303.8	305.9
52.5°	42.9	82.7	140.6	184.6	221.1	243.7	255.5	264.1	270.5	272.7	274.8
55°	36.5	71.9	126.7	169.6	202.9	222.2	230.8	238.3	241.5	243.7	244.8
57.5°	32.2	63.3	114.9	155.7	185.7	201.8	208.3	213.6	214.7	216.8	217.9
60°	27.9	54.7	102.0	140.6	167.5	181.4	184.6	188.9	188.9	190.0	191.1
62.5°	23.6	47.2	89.1	125.6	149.2	161.0	163.2	164.2	164.2	164.2	165.3
65°	19.3	39.7	75.1	108.4	129.9	137.4	138.5	139.6	137.4	137.4	138.5
67.5°	16.1	31.1	60.1	89.1	106.3	112.7	111.6	111.6	108.4	108.4	109.5
70°	11.8	23.6	45.1	67.6	80.5	84.8	82.7	82.7	79.4	79.4	80.5
72.5°	8.6	17.2	31.1	46.2	55.8	58.0	55.8	55.8	53.7	53.7	54.7
75°	6.4	10.7	20.4	30.1	35.4	36.5	35.4	34.4	33.3	33.3	34.4
77.5°	4.3	7.5	11.8	17.2	20.4	21.5	20.4	20.4	19.3	20.4	20.4
80°	2.1	4.3	6.4	9.7	10.7	11.8	11.8	11.8	10.7	10.7	11.8
82.5°	1.1	2.1	3.2	4.3	5.4	6.4	5.4	5.4	5.4	5.4	5.4
85°	0.0	1.1	1.1	2.1	2.1	3.2	2.1	2.1	2.1	2.1	2.1
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°	1180.8	1180.8	1180.8	1180.8
2.5°	1161.5	1156.1	1148.6	1164.7
5°	1128.2	1117.5	1108.9	1123.9
7.5°	1075.6	1060.6	1048.8	1063.8
10°	1015.5	998.3	985.5	999.4
12.5°	962.9	945.7	935.0	945.7
15°	916.8	900.6	891.0	900.6
17.5°	871.7	857.7	849.1	859.9
20°	828.7	816.9	809.4	819.1
22.5°	789.0	778.3	771.8	781.5
25°	747.1	739.6	732.1	740.7
27.5°	701.0	692.4	688.1	693.5
30°	648.4	639.8	636.6	640.9
32.5°	586.1	577.5	574.3	577.5
35°	521.7	514.2	509.9	514.2
37.5°	467.0	460.5	457.3	460.5
40°	428.3	425.1	421.9	426.2
42.5°	398.3	395.0	392.9	396.1
45°	367.1	362.8	360.7	363.9
47.5°	336.0	331.7	329.6	331.7
50°	303.8	298.4	297.4	298.4
52.5°	271.6	267.3	265.1	266.2
55°	242.6	239.4	237.2	238.3
57.5°	216.8	212.5	211.5	212.5
60°	191.1	188.9	187.9	188.9
62.5°	165.3	164.2	165.3	165.3
65°	139.6	139.6	140.6	140.6
67.5°	111.6	113.8	114.9	114.9
70°	82.7	84.8	85.9	85.9
72.5°	55.8	58.0	59.0	60.1
75°	35.4	37.6	38.6	38.6
77.5°	21.5	22.5	22.5	23.6
80°	11.8	12.9	12.9	12.9
82.5°	6.4	6.4	6.4	7.5
85°	3.2	3.2	3.2	3.2
87.5°	0.0	1.1	1.1	1.1
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)