

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: P135799

Luminaire Tested: **LD6A15D010TE ERM6A15940 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135799
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 ERM6A15940 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1473.6 lumens
Efficiency: N/A
Efficacy: 65.2 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

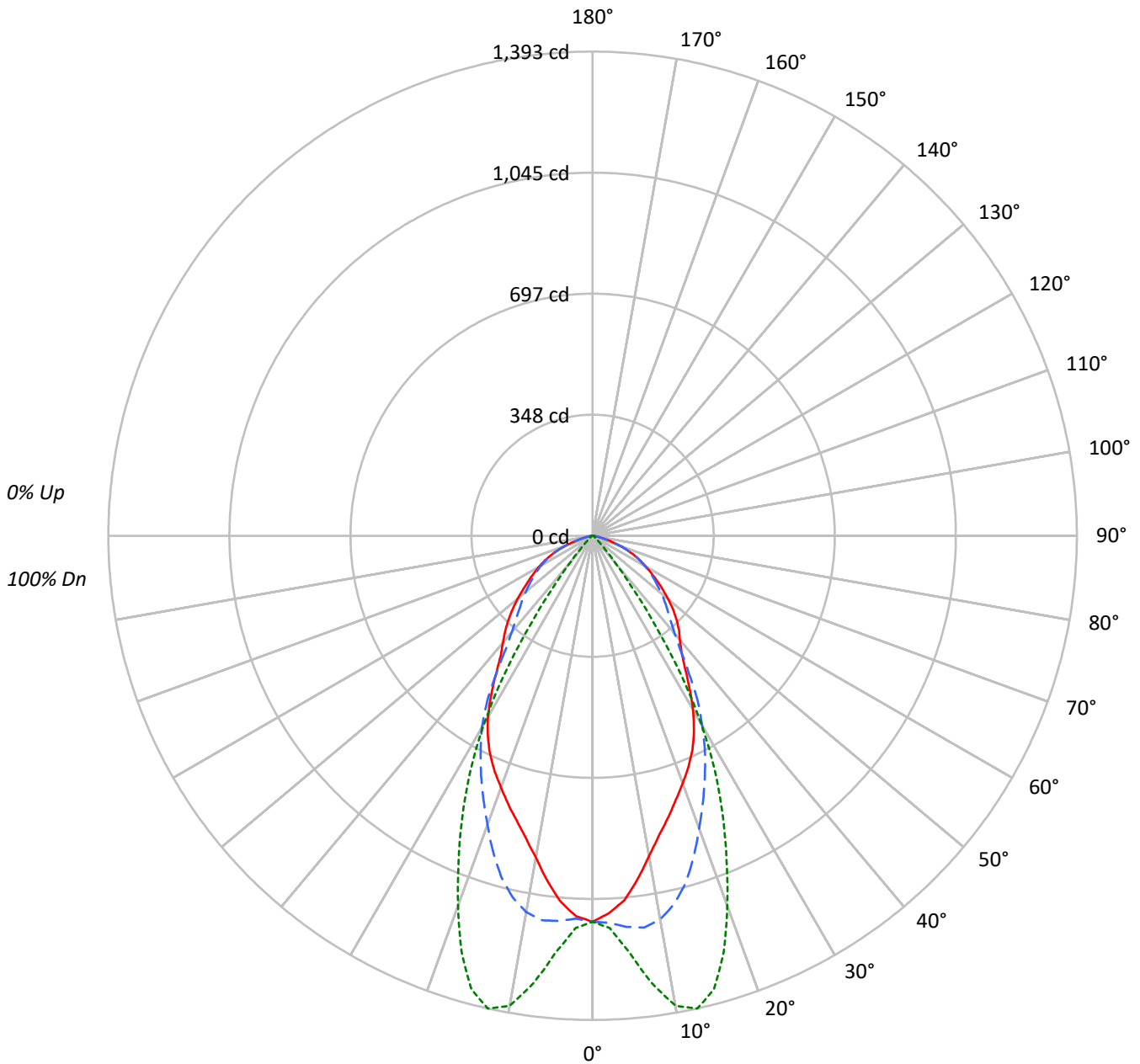
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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																			
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90																			
2	104	98	93	88	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°	72443	72443	72443
5°	68889	78673	69216
10°	61928	90951	62266
15°	56654	91162	57208
20°	52571	78634	53473
25°	48907	63736	50145
30°	43505	47151	45403
35°	36740	24929	38508
40°	33189	8338	34126
45°	31481	2888	31573
50°	28795	1238	28480
55°	25717	921	25490
60°	22913	926	23187
65°	20254	942	20423
70°	15603	782	15413
75°	9680	504	9175
80°	4922	376	4584
85°	2246	0	2246



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.8	7.3
10°-20°	294.1	20.0
20°-30°	354.0	24.0
30°-40°	275.1	18.7
40°-50°	184.1	12.5
50°-60°	138.5	9.4
60°-70°	88.9	6.0
70°-80°	28.5	1.9
80°-90°	2.7	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°	755.8	51.3
0°-40°	1030.9	70.0
0°-60°	1353.5	91.9
0°-90°	1473.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1473.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1110	1110	1110	1110	1110	
5°	1052	1130	1201	1112	1057	97
15°	839	1034	1350	1016	847	236
25°	679	763	885	759	697	310
35°	461	482	313	482	484	293
45°	341	305	31	298	342	262
55°	226	214	8	209	224	203
65°	131	132	6	129	132	129
75°	38	36	2	34	36	44
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°	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4
2.5°	1086.2	1095.3	1092.3	1106.4	1096.4	1095.3	1102.3	1106.4	1107.4	1114.5	1114.5
5°	1051.9	1062.0	1059.0	1077.1	1073.1	1077.1	1092.3	1103.4	1113.5	1129.6	1139.7
7.5°	995.3	1007.5	1009.5	1027.7	1029.7	1040.8	1065.0	1087.2	1108.4	1136.7	1160.9
10°	934.8	946.9	949.9	970.1	976.2	991.4	1022.6	1050.9	1081.2	1120.6	1156.9
12.5°	882.3	894.4	898.4	918.6	925.7	942.8	976.2	1007.5	1041.8	1085.2	1128.6
15°	838.8	850.0	854.0	872.2	879.3	895.4	926.7	957.0	990.4	1033.7	1076.1
17.5°	796.5	807.6	810.7	826.8	831.8	845.9	874.2	900.5	928.7	967.1	1005.5
20°	757.2	767.2	769.2	783.4	786.4	797.5	820.7	841.9	865.1	895.4	926.7
22.5°	719.8	729.9	730.9	743.0	744.0	753.1	772.3	788.4	804.6	828.8	851.0
25°	679.4	689.5	690.5	700.6	701.6	707.7	722.8	735.0	746.0	763.1	778.3
27.5°	631.0	641.0	644.1	651.1	652.2	656.2	669.3	677.4	688.4	699.6	705.7
30°	577.5	586.5	590.5	596.6	597.6	603.7	615.8	621.9	629.0	631.0	632.9
32.5°	517.9	528.0	532.0	537.0	540.1	546.2	557.2	560.2	562.3	561.3	550.2
35°	461.3	470.4	474.5	480.5	482.5	486.6	495.7	494.7	491.6	482.5	462.3
37.5°	419.0	426.0	430.0	434.1	435.1	437.1	442.2	438.1	430.0	414.9	388.7
40°	389.7	396.8	397.8	401.7	400.7	400.7	401.7	394.7	384.6	366.5	336.2
42.5°	367.5	373.6	373.6	377.5	374.5	372.5	372.5	364.4	351.3	332.1	301.8
45°	341.2	346.3	347.3	349.2	346.3	344.3	344.3	336.2	324.0	304.9	274.6
47.5°	314.0	319.0	319.0	322.1	319.0	317.0	317.0	309.9	298.8	281.6	253.4
50°	283.7	288.7	289.7	291.8	289.7	288.7	289.7	282.7	273.5	258.4	233.2
52.5°	254.4	259.4	259.4	261.5	259.4	259.4	260.5	255.4	247.3	235.2	213.0
55°	226.1	230.2	232.2	234.2	231.2	231.2	232.2	229.1	223.1	214.0	194.8
57.5°	199.9	203.9	204.9	206.9	204.9	205.9	206.9	203.9	200.9	193.8	178.7
60°	175.6	179.7	180.7	181.7	180.7	180.7	181.7	180.7	178.7	173.6	160.5
62.5°	153.4	156.5	157.5	159.5	157.5	156.5	158.5	157.5	156.5	153.4	144.3
65°	131.2	133.3	134.3	135.3	133.3	131.2	133.3	133.3	134.3	132.3	125.2
67.5°	107.0	109.0	109.0	109.0	106.0	105.0	107.0	107.0	109.0	108.0	103.0
70°	81.8	82.8	82.8	82.8	78.7	78.7	79.8	79.8	81.8	81.8	78.7
72.5°	58.6	57.6	57.6	56.5	55.5	53.5	53.5	54.5	56.5	56.5	54.5
75°	38.4	37.4	36.4	36.4	35.4	33.3	33.3	34.4	35.4	36.4	35.4
77.5°	23.2	22.2	22.2	21.2	21.2	20.2	20.2	20.2	21.2	21.2	21.2
80°	13.1	12.2	12.2	12.2	11.1	11.1	11.1	11.1	11.1	12.2	11.1
82.5°	7.1	6.1	6.1	6.1	6.1	6.1	5.1	6.1	6.1	6.1	6.1
85°	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4
2.5°	1111.5	1121.6	1114.5	1136.7	1121.6	1129.6	1140.8	1129.6	1132.6	1139.7	1125.6
5°	1145.8	1164.0	1166.0	1196.3	1184.1	1198.3	1213.4	1201.3	1203.3	1208.4	1190.2
7.5°	1181.1	1213.4	1228.5	1271.0	1267.9	1291.1	1309.3	1297.2	1297.2	1298.2	1271.0
10°	1191.2	1238.7	1266.9	1319.4	1327.5	1360.8	1380.9	1372.9	1370.9	1367.9	1330.5
12.5°	1169.0	1227.5	1263.9	1322.5	1338.6	1378.0	1396.1	1393.1	1390.1	1384.0	1340.6
15°	1117.5	1178.1	1216.5	1274.0	1294.2	1334.5	1349.7	1349.7	1346.7	1340.6	1294.2
17.5°	1041.8	1098.3	1133.7	1184.1	1204.3	1241.7	1251.7	1254.8	1251.7	1245.7	1203.3
20°	956.0	1003.4	1031.7	1073.1	1089.3	1121.6	1127.6	1132.6	1130.6	1125.6	1088.3
22.5°	872.2	909.6	930.8	967.1	973.1	1000.4	1002.4	1006.5	1005.5	1003.4	973.1
25°	795.5	820.7	832.9	860.1	862.1	882.3	881.3	885.4	884.3	884.3	861.1
27.5°	714.7	729.9	732.9	750.1	746.0	761.1	763.1	761.1	762.1	763.1	746.0
30°	633.9	637.0	627.9	630.0	618.8	627.9	618.8	625.9	625.9	629.0	618.8
32.5°	542.1	533.0	508.8	496.7	477.4	477.4	472.5	472.5	472.5	477.4	475.5
35°	444.2	422.0	384.6	358.4	331.1	324.0	323.0	313.0	315.0	322.1	327.0
37.5°	360.4	327.0	277.6	240.3	208.0	193.8	188.8	180.7	183.7	191.8	203.9
40°	300.8	260.5	202.9	159.5	127.2	111.1	103.0	97.9	100.9	111.1	126.2
42.5°	263.5	219.1	157.5	112.1	81.8	66.6	58.6	54.5	57.6	66.6	84.8
45°	236.2	189.8	127.2	82.8	55.5	41.4	34.4	31.3	33.3	41.4	56.5
47.5°	215.1	167.6	106.0	63.6	39.3	27.3	21.2	18.1	20.2	27.3	39.3
50°	195.8	149.4	89.9	50.5	30.3	20.2	14.1	12.2	14.1	19.2	29.3
52.5°	178.7	133.3	76.7	41.4	23.2	16.1	11.1	9.1	10.1	15.1	23.2
55°	163.6	121.1	67.6	35.4	20.2	14.1	10.1	8.1	10.1	13.1	20.2
57.5°	149.4	109.0	59.6	30.3	17.1	12.2	9.1	8.1	9.1	12.2	17.1
60°	135.3	96.9	52.5	26.2	15.1	11.1	8.1	7.1	8.1	10.1	15.1
62.5°	121.1	85.8	45.4	22.2	13.1	9.1	7.1	6.1	7.1	9.1	13.1
65°	105.0	72.7	38.4	19.2	11.1	8.1	6.1	6.1	6.1	8.1	11.1
67.5°	86.9	59.6	30.3	15.1	9.1	7.1	5.1	5.1	5.1	7.1	9.1
70°	66.6	44.4	23.2	12.2	7.1	5.1	4.1	4.1	4.1	5.1	7.1
72.5°	46.4	31.3	16.1	9.1	5.1	4.1	3.0	3.0	3.0	4.1	5.1
75°	29.3	20.2	11.1	6.1	4.1	3.0	2.0	2.0	2.0	3.0	4.1
77.5°	17.1	12.2	7.1	4.1	2.0	2.0	1.0	1.0	1.0	2.0	2.0
80°	9.1	7.1	4.1	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	5.1	3.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	2.0	1.0	1.0	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4	1110.4
2.5°	1121.6	1125.6	1124.5	1103.4	1101.3	1102.3	1088.3	1093.3	1098.3	1093.3	1094.3
5°	1176.0	1175.0	1162.9	1132.6	1120.6	1112.5	1089.3	1085.2	1082.2	1071.0	1067.1
7.5°	1247.8	1233.6	1208.4	1162.9	1137.7	1115.5	1081.2	1064.0	1051.9	1032.7	1021.6
10°	1297.2	1269.0	1231.6	1172.1	1133.7	1099.3	1054.9	1028.7	1008.5	983.3	967.1
12.5°	1304.2	1264.9	1221.5	1151.8	1107.4	1065.0	1016.6	987.3	964.1	936.8	921.6
15°	1258.8	1218.5	1173.1	1103.4	1059.0	1015.6	969.1	939.9	916.6	890.3	877.3
17.5°	1173.1	1135.7	1095.3	1030.7	992.4	953.0	911.6	886.4	866.1	845.9	832.9
20°	1064.0	1034.7	1001.4	946.9	916.6	884.3	852.0	831.8	816.7	799.5	789.4
22.5°	956.0	933.8	909.6	866.1	843.9	820.7	795.5	781.4	770.2	757.2	750.1
25°	852.0	836.9	821.7	788.4	775.3	759.2	740.9	730.9	723.8	714.7	709.6
27.5°	744.0	738.9	735.0	713.7	708.7	697.6	685.4	679.4	674.4	668.3	664.2
30°	626.9	630.0	646.1	634.9	640.0	637.0	632.0	627.9	625.9	620.8	615.8
32.5°	494.7	515.9	539.1	542.1	557.2	564.3	563.3	564.3	565.3	561.3	557.2
35°	354.3	388.7	425.0	441.2	466.4	482.5	488.6	494.7	498.7	497.7	494.7
37.5°	236.2	282.7	326.0	354.3	387.6	409.8	423.0	433.1	439.1	441.2	441.2
40°	157.5	201.9	259.4	295.8	333.1	360.4	375.5	388.7	397.8	401.7	403.8
42.5°	111.1	158.5	217.1	258.4	296.7	326.0	343.3	357.3	366.5	371.5	373.6
45°	81.8	127.2	187.8	230.2	269.6	297.8	315.0	328.1	337.2	342.2	345.3
47.5°	62.6	107.0	165.6	209.0	248.3	274.6	290.8	302.8	310.9	315.0	317.0
50°	49.5	89.9	147.4	190.8	227.1	251.3	265.5	275.6	282.7	285.7	287.7
52.5°	40.3	77.7	132.3	173.6	208.0	229.1	240.3	248.3	254.4	256.4	258.4
55°	34.4	67.6	119.1	159.5	190.8	209.0	217.1	224.1	227.1	229.1	230.2
57.5°	30.3	59.6	108.0	146.3	174.6	189.8	195.8	200.9	201.9	203.9	204.9
60°	26.2	51.5	95.9	132.3	157.5	170.6	173.6	177.7	177.7	178.7	179.7
62.5°	22.2	44.4	83.8	118.1	140.4	151.4	153.4	154.5	154.5	154.5	155.5
65°	18.1	37.4	70.6	102.0	122.1	129.2	130.2	131.2	129.2	129.2	130.2
67.5°	15.1	29.3	56.5	83.8	99.9	106.0	105.0	105.0	102.0	102.0	103.0
70°	11.1	22.2	42.4	63.6	75.7	79.8	77.7	77.7	74.7	74.7	75.7
72.5°	8.1	16.1	29.3	43.4	52.5	54.5	52.5	52.5	50.5	50.5	51.5
75°	6.1	10.1	19.2	28.3	33.3	34.4	33.3	32.3	31.3	31.3	32.3
77.5°	4.1	7.1	11.1	16.1	19.2	20.2	19.2	19.2	18.1	19.2	19.2
80°	2.0	4.1	6.1	9.1	10.1	11.1	11.1	11.1	10.1	10.1	11.1
82.5°	1.0	2.0	3.0	4.1	5.1	6.1	5.1	5.1	5.1	5.1	5.1
85°	0.0	1.0	1.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0
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°	1110.4	1110.4	1110.4	1110.4
2.5°	1092.3	1087.2	1080.1	1095.3
5°	1061.0	1050.9	1042.8	1056.9
7.5°	1011.5	997.4	986.3	1000.4
10°	955.0	938.9	926.7	939.9
12.5°	905.5	889.4	879.3	889.4
15°	862.1	847.0	837.9	847.0
17.5°	819.7	806.6	798.5	808.6
20°	779.4	768.2	761.1	770.2
22.5°	742.0	731.9	725.8	735.0
25°	702.6	695.5	688.4	696.6
27.5°	659.2	651.1	647.1	652.2
30°	609.7	601.7	598.6	602.7
32.5°	551.2	543.1	540.1	543.1
35°	490.6	483.5	479.5	483.5
37.5°	439.1	433.1	430.0	433.1
40°	402.8	399.8	396.8	400.7
42.5°	374.5	371.5	369.5	372.5
45°	345.3	341.2	339.2	342.2
47.5°	316.0	311.9	309.9	311.9
50°	285.7	280.6	279.6	280.6
52.5°	255.4	251.3	249.3	250.3
55°	228.1	225.1	223.1	224.1
57.5°	203.9	199.9	198.8	199.9
60°	179.7	177.7	176.6	177.7
62.5°	155.5	154.5	155.5	155.5
65°	131.2	131.2	132.3	132.3
67.5°	105.0	107.0	108.0	108.0
70°	77.7	79.8	80.8	80.8
72.5°	52.5	54.5	55.5	56.5
75°	33.3	35.4	36.4	36.4
77.5°	20.2	21.2	21.2	22.2
80°	11.1	12.2	12.2	12.2
82.5°	6.1	6.1	6.1	7.1
85°	3.0	3.0	3.0	3.0
87.5°	0.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)