

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: P135793

Luminaire Tested: **LD6A15D010TE ERM6A15830 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135793
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 ERM6A15830 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1528.0 lumens
Efficiency: N/A
Efficacy: 67.6 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

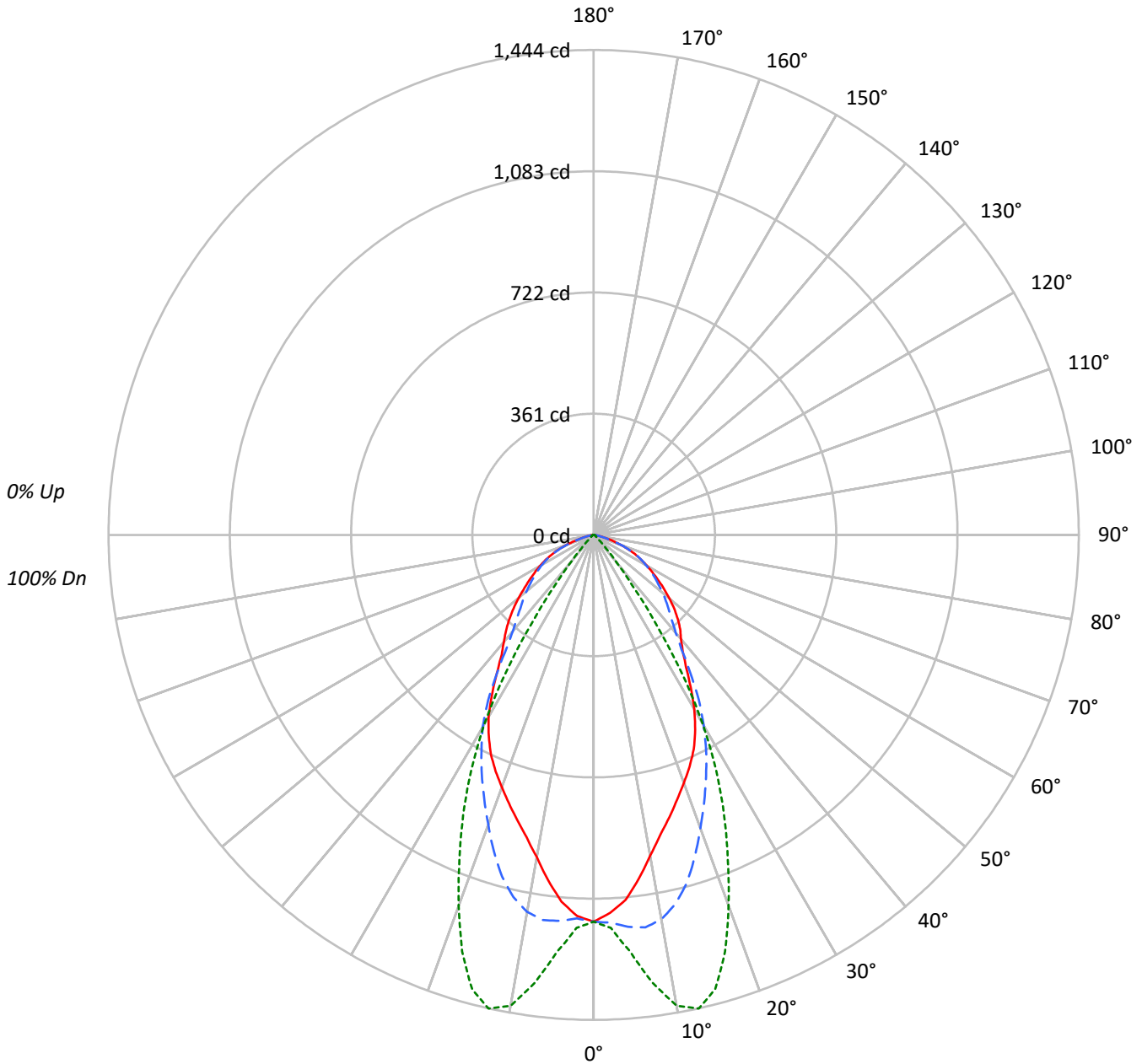
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	75118	75118	75118
5°	71430	81574	71777
10°	64213	94309	64558
15°	58755	94525	59315
20°	54508	81543	55452
25°	50713	66082	51995
30°	45102	48891	47076
35°	38102	25845	39934
40°	34415	8644	35395
45°	32643	2989	32745
50°	29850	1279	29535
55°	26673	955	26434
60°	23761	953	24035
65°	21010	973	21164
70°	16176	801	15966
75°	10032	529	9503
80°	5110	376	4734
85°	2321	0	2321



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	7.3
10°-20°	305.0	20.0
20°-30°	367.0	24.0
30°-40°	285.2	18.7
40°-50°	190.9	12.5
50°-60°	143.6	9.4
60°-70°	92.2	6.0
70°-80°	29.5	1.9
80°-90°	2.8	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°	783.7	51.3
0°-40°	1069.0	70.0
0°-60°	1403.5	91.9
0°-90°	1528.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1528.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1151	1151	1151	1151	1151	
5°	1091	1171	1246	1154	1096	100
15°	870	1072	1400	1053	878	245
25°	704	791	918	787	722	321
35°	478	500	324	500	501	304
45°	354	316	32	309	355	272
55°	234	222	8	217	232	211
65°	136	137	6	134	137	133
75°	40	38	2	36	38	46
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°	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4
2.5°	1126.3	1135.7	1132.6	1147.3	1136.8	1135.7	1143.1	1147.3	1148.3	1155.6	1155.6
5°	1090.7	1101.2	1098.1	1116.9	1112.7	1116.9	1132.6	1144.1	1154.6	1171.3	1181.8
7.5°	1032.1	1044.7	1046.8	1065.6	1067.7	1079.2	1104.3	1127.4	1149.3	1178.7	1203.8
10°	969.3	981.9	985.0	1005.9	1012.2	1027.9	1060.4	1089.7	1121.1	1161.9	1199.6
12.5°	914.9	927.4	931.6	952.6	959.9	977.7	1012.2	1044.7	1080.3	1125.3	1170.3
15°	869.9	881.4	885.6	904.4	911.7	928.5	960.9	992.3	1026.9	1071.9	1115.8
17.5°	825.9	837.4	840.6	857.3	862.5	877.2	906.5	933.7	963.0	1002.8	1042.6
20°	785.1	795.5	797.6	812.3	815.4	826.9	851.0	873.0	897.1	928.5	960.9
22.5°	746.3	756.8	757.9	770.4	771.5	780.9	800.8	817.5	834.3	859.4	882.4
25°	704.5	714.9	716.0	726.5	727.5	733.8	749.5	762.0	773.6	791.4	807.1
27.5°	654.2	664.7	667.8	675.2	676.2	680.4	694.0	702.4	713.9	725.4	731.7
30°	598.7	608.2	612.4	618.6	619.7	626.0	638.5	644.8	652.1	654.2	656.3
32.5°	537.0	547.5	551.6	556.9	560.0	566.3	577.8	581.0	583.0	582.0	570.5
35°	478.4	487.8	492.0	498.3	500.4	504.5	514.0	512.9	509.8	500.4	479.4
37.5°	434.4	441.7	445.9	450.1	451.2	453.2	458.5	454.3	445.9	430.2	403.0
40°	404.1	411.4	412.4	416.6	415.6	415.6	416.6	409.3	398.8	380.0	348.6
42.5°	381.0	387.3	387.3	391.5	388.3	386.3	386.3	377.9	364.3	344.4	313.0
45°	353.8	359.0	360.1	362.2	359.0	356.9	356.9	348.6	336.0	316.1	284.7
47.5°	325.5	330.8	330.8	333.9	330.8	328.7	328.7	321.4	309.8	292.0	262.7
50°	294.1	299.4	300.4	302.5	300.4	299.4	300.4	293.1	283.7	268.0	241.8
52.5°	263.8	269.0	269.0	271.1	269.0	269.0	270.1	264.8	256.5	243.9	220.9
55°	234.5	238.7	240.8	242.8	239.7	239.7	240.8	237.6	231.3	221.9	202.0
57.5°	207.3	211.4	212.5	214.6	212.5	213.5	214.6	211.4	208.3	201.0	185.3
60°	182.1	186.3	187.4	188.4	187.4	187.4	188.4	187.4	185.3	180.0	166.4
62.5°	159.1	162.2	163.3	165.4	163.3	162.2	164.3	163.3	162.2	159.1	149.7
65°	136.1	138.2	139.2	140.3	138.2	136.1	138.2	138.2	139.2	137.1	129.8
67.5°	111.0	113.1	113.1	113.1	109.9	108.9	111.0	111.0	113.1	112.0	106.8
70°	84.8	85.8	85.8	85.8	81.6	81.6	82.7	82.7	84.8	84.8	81.6
72.5°	60.7	59.7	59.7	58.6	57.6	55.5	55.5	56.5	58.6	58.6	56.5
75°	39.8	38.7	37.7	37.7	36.6	34.5	34.5	35.6	36.6	37.7	36.6
77.5°	24.1	23.0	23.0	22.0	22.0	20.9	20.9	20.9	22.0	22.0	22.0
80°	13.6	12.6	12.6	12.6	11.5	11.5	11.5	11.5	11.5	12.6	11.5
82.5°	7.3	6.3	6.3	6.3	6.3	6.3	5.2	6.3	6.3	6.3	6.3
85°	3.1	3.1	3.1	3.1	2.1	2.1	2.1	2.1	2.1	3.1	3.1
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4
2.5°	1152.5	1163.0	1155.6	1178.7	1163.0	1171.3	1182.8	1171.3	1174.5	1181.8	1167.1
5°	1188.1	1206.9	1209.0	1240.4	1227.9	1242.5	1258.2	1245.6	1247.7	1253.0	1234.1
7.5°	1224.7	1258.2	1273.9	1317.9	1314.7	1338.8	1357.7	1345.1	1345.1	1346.1	1317.9
10°	1235.2	1284.4	1313.7	1368.1	1376.5	1411.0	1432.0	1423.6	1421.5	1418.4	1379.6
12.5°	1212.2	1272.9	1310.5	1371.3	1388.0	1428.8	1447.7	1444.5	1441.4	1435.1	1390.1
15°	1158.8	1221.6	1261.3	1321.0	1342.0	1383.8	1399.5	1399.5	1396.4	1390.1	1342.0
17.5°	1080.3	1138.9	1175.5	1227.9	1248.8	1287.5	1298.0	1301.1	1298.0	1291.7	1247.7
20°	991.3	1040.5	1069.8	1112.7	1129.5	1163.0	1169.2	1174.5	1172.4	1167.1	1128.4
22.5°	904.4	943.1	965.1	1002.8	1009.1	1037.3	1039.4	1043.6	1042.6	1040.5	1009.1
25°	824.8	851.0	863.6	891.8	893.9	914.9	913.8	918.0	917.0	917.0	892.9
27.5°	741.1	756.8	760.0	777.7	773.6	789.3	791.4	789.3	790.3	791.4	773.6
30°	657.4	660.5	651.1	653.2	641.7	651.1	641.7	649.0	649.0	652.1	641.7
32.5°	562.1	552.7	527.6	515.0	495.1	495.1	489.9	489.9	489.9	495.1	493.0
35°	460.6	437.5	398.8	371.6	343.3	336.0	335.0	324.5	326.6	333.9	339.2
37.5°	373.7	339.2	287.9	249.1	215.6	201.0	195.7	187.4	190.5	198.9	211.4
40°	311.9	270.1	210.4	165.4	131.9	115.1	106.8	101.5	104.7	115.1	130.8
42.5°	273.2	227.1	163.3	116.2	84.8	69.1	60.7	56.5	59.7	69.1	87.9
45°	244.9	196.8	131.9	85.8	57.6	42.9	35.6	32.4	34.5	42.9	58.6
47.5°	223.0	173.8	109.9	65.9	40.8	28.3	22.0	18.8	20.9	28.3	40.8
50°	203.1	154.9	93.2	52.3	31.4	20.9	14.7	12.6	14.7	19.9	30.4
52.5°	185.3	138.2	79.6	42.9	24.1	16.7	11.5	9.4	10.5	15.7	24.1
55°	169.6	125.6	70.1	36.6	20.9	14.7	10.5	8.4	10.5	13.6	20.9
57.5°	154.9	113.1	61.8	31.4	17.8	12.6	9.4	8.4	9.4	12.6	17.8
60°	140.3	100.5	54.4	27.2	15.7	11.5	8.4	7.3	8.4	10.5	15.7
62.5°	125.6	89.0	47.1	23.0	13.6	9.4	7.3	6.3	7.3	9.4	13.6
65°	108.9	75.4	39.8	19.9	11.5	8.4	6.3	6.3	6.3	8.4	11.5
67.5°	90.0	61.8	31.4	15.7	9.4	7.3	5.2	5.2	5.2	7.3	9.4
70°	69.1	46.1	24.1	12.6	7.3	5.2	4.2	4.2	4.2	5.2	7.3
72.5°	48.2	32.4	16.7	9.4	5.2	4.2	3.1	3.1	3.1	4.2	5.2
75°	30.4	20.9	11.5	6.3	4.2	3.1	2.1	2.1	2.1	3.1	4.2
77.5°	17.8	12.6	7.3	4.2	2.1	2.1	1.0	1.0	1.0	2.1	2.1
80°	9.4	7.3	4.2	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	5.2	3.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	2.1	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°	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4
2.5°	1163.0	1167.1	1166.1	1144.1	1142.0	1143.1	1128.4	1133.6	1138.9	1133.6	1134.7
5°	1219.5	1218.4	1205.9	1174.5	1161.9	1153.5	1129.5	1125.3	1122.1	1110.6	1106.4
7.5°	1293.8	1279.1	1253.0	1205.9	1179.7	1156.7	1121.1	1103.3	1090.7	1070.8	1059.3
10°	1345.1	1315.8	1277.1	1215.3	1175.5	1139.9	1093.9	1066.7	1045.7	1019.5	1002.8
12.5°	1352.4	1311.6	1266.6	1194.4	1148.3	1104.3	1054.1	1023.7	999.7	971.4	955.7
15°	1305.3	1263.4	1216.3	1144.1	1098.1	1053.0	1004.9	974.5	950.5	923.2	909.6
17.5°	1216.3	1177.6	1135.7	1068.7	1029.0	988.1	945.2	919.1	898.1	877.2	863.6
20°	1103.3	1072.9	1038.4	981.9	950.5	917.0	883.5	862.5	846.8	829.0	818.6
22.5°	991.3	968.3	943.1	898.1	875.1	851.0	824.8	810.2	798.7	785.1	777.7
25°	883.5	867.8	852.1	817.5	803.9	787.2	768.3	757.9	750.5	741.1	735.9
27.5°	771.5	766.2	762.0	740.1	734.8	723.3	710.8	704.5	699.2	693.0	688.8
30°	650.0	653.2	669.9	658.4	663.6	660.5	655.3	651.1	649.0	643.8	638.5
32.5°	512.9	534.9	559.0	562.1	577.8	585.1	584.1	585.1	586.2	582.0	577.8
35°	367.4	403.0	440.7	457.4	483.6	500.4	506.6	512.9	517.1	516.1	512.9
37.5°	244.9	293.1	338.1	367.4	402.0	425.0	438.6	449.1	455.3	457.4	457.4
40°	163.3	209.4	269.0	306.7	345.4	373.7	389.4	403.0	412.4	416.6	418.7
42.5°	115.1	164.3	225.1	268.0	307.7	338.1	355.9	370.6	380.0	385.2	387.3
45°	84.8	131.9	194.7	238.7	279.5	308.8	326.6	340.2	349.6	354.9	358.0
47.5°	64.9	111.0	171.7	216.7	257.5	284.7	301.5	314.0	322.4	326.6	328.7
50°	51.3	93.2	152.8	197.8	235.5	260.6	275.3	285.8	293.1	296.2	298.3
52.5°	41.9	80.6	137.1	180.0	215.6	237.6	249.1	257.5	263.8	265.9	268.0
55°	35.6	70.1	123.5	165.4	197.8	216.7	225.1	232.4	235.5	237.6	238.7
57.5°	31.4	61.8	112.0	151.8	181.1	196.8	203.1	208.3	209.4	211.4	212.5
60°	27.2	53.4	99.4	137.1	163.3	176.9	180.0	184.2	184.2	185.3	186.3
62.5°	23.0	46.1	86.9	122.5	145.5	157.0	159.1	160.2	160.2	160.2	161.2
65°	18.8	38.7	73.3	105.7	126.7	134.0	135.0	136.1	134.0	134.0	135.0
67.5°	15.7	30.4	58.6	86.9	103.6	109.9	108.9	108.9	105.7	105.7	106.8
70°	11.5	23.0	44.0	65.9	78.5	82.7	80.6	80.6	77.5	77.5	78.5
72.5°	8.4	16.7	30.4	45.0	54.4	56.5	54.4	54.4	52.3	52.3	53.4
75°	6.3	10.5	19.9	29.3	34.5	35.6	34.5	33.5	32.4	32.4	33.5
77.5°	4.2	7.3	11.5	16.7	19.9	20.9	19.9	19.9	18.8	19.9	19.9
80°	2.1	4.2	6.3	9.4	10.5	11.5	11.5	11.5	10.5	10.5	11.5
82.5°	1.0	2.1	3.1	4.2	5.2	6.3	5.2	5.2	5.2	5.2	5.2
85°	0.0	1.0	1.0	2.1	2.1	3.1	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°	1151.4	1151.4	1151.4	1151.4
2.5°	1132.6	1127.4	1120.0	1135.7
5°	1100.1	1089.7	1081.3	1096.0
7.5°	1048.9	1034.2	1022.7	1037.3
10°	990.2	973.5	960.9	974.5
12.5°	938.9	922.2	911.7	922.2
15°	893.9	878.2	868.8	878.2
17.5°	850.0	836.4	828.0	838.5
20°	808.1	796.6	789.3	798.7
22.5°	769.4	758.9	752.6	762.0
25°	728.5	721.2	713.9	722.3
27.5°	683.5	675.2	671.0	676.2
30°	632.2	623.9	620.7	624.9
32.5°	571.5	563.2	560.0	563.2
35°	508.7	501.4	497.2	501.4
37.5°	455.3	449.1	445.9	449.1
40°	417.7	414.5	411.4	415.6
42.5°	388.3	385.2	383.1	386.3
45°	358.0	353.8	351.7	354.9
47.5°	327.6	323.4	321.4	323.4
50°	296.2	291.0	290.0	291.0
52.5°	264.8	260.6	258.6	259.6
55°	236.6	233.4	231.3	232.4
57.5°	211.4	207.3	206.2	207.3
60°	186.3	184.2	183.2	184.2
62.5°	161.2	160.2	161.2	161.2
65°	136.1	136.1	137.1	137.1
67.5°	108.9	111.0	112.0	112.0
70°	80.6	82.7	83.7	83.7
72.5°	54.4	56.5	57.6	58.6
75°	34.5	36.6	37.7	37.7
77.5°	20.9	22.0	22.0	23.0
80°	11.5	12.6	12.6	12.6
82.5°	6.3	6.3	6.3	7.3
85°	3.1	3.1	3.1	3.1
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)