

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: P135678

Luminaire Tested: **LD6A15D010TE ERM6A15935 6LM111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135678
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23372)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15935 6LM111H
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SEMI-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: 1346.5 lumens
Efficiency: N/A
Efficacy: 59.6 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 0.96 / 0.92
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

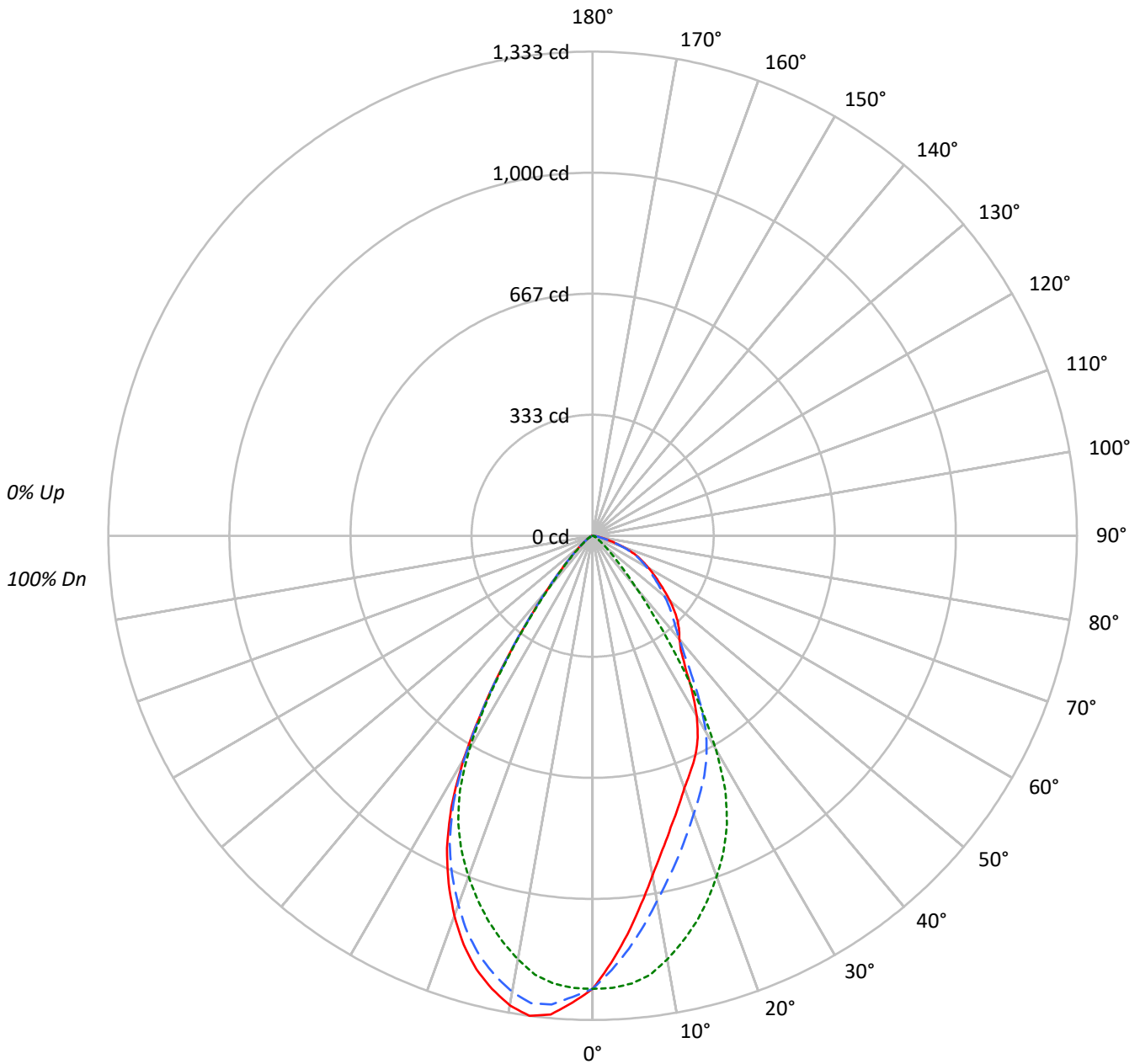
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83				83
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75				75
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68				68
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	64	63				63
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58				58
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53				53
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50				50
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46				46
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43				43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	81388	81388	81388
5°	72104	81037	86637
10°	62849	78417	86969
15°	56141	74364	83475
20°	51265	69289	77245
25°	48136	62965	68292
30°	43166	51144	53442
35°	35466	31659	32463
40°	31622	15568	16428
45°	30512	7769	8304
50°	28115	4121	4425
55°	25410	2468	2639
60°	23278	1709	1709
65°	21273	1343	1127
70°	17168	1106	820
75°	10612	731	378
80°	5974	564	0
85°	3219	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.4	8.5
10°-20°	297.1	22.1
20°-30°	378.1	28.1
30°-40°	270.9	20.1
40°-50°	135.1	10.0
50°-60°	81.8	6.1
60°-70°	50.0	3.7
70°-80°	17.3	1.3
80°-90°	1.8	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°	789.6	58.6
0°-40°	1060.5	78.8
0°-60°	1277.4	94.9
0°-90°	1346.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1346.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1248	1248	1248	1248	1248	
5°	1101	1142	1237	1295	1323	100
15°	831	914	1101	1198	1236	234
25°	669	728	875	931	949	305
35°	445	480	398	408	408	284
45°	331	309	84	93	90	253
55°	223	210	22	23	23	201
65°	138	134	9	7	7	135
75°	42	38	3	2	2	49
85°	4	3	0	0	0	6
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°	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5
2.5°	1176.4	1177.9	1180.8	1177.9	1179.3	1186.6	1183.7	1185.1	1189.5	1196.7	1192.4
5°	1101.0	1102.4	1109.7	1105.4	1108.2	1117.0	1117.0	1122.8	1131.4	1141.6	1141.6
7.5°	1022.7	1025.5	1032.8	1030.0	1034.3	1045.9	1047.4	1056.0	1067.6	1082.2	1089.4
10°	948.7	951.6	958.9	957.4	963.2	974.8	980.6	989.3	1003.8	1021.2	1030.0
12.5°	886.3	889.2	895.0	895.0	902.3	913.9	919.7	931.3	945.8	964.7	976.3
15°	831.2	835.5	841.3	841.3	848.6	860.2	867.5	877.6	893.6	913.9	926.9
17.5°	783.3	784.8	790.6	790.6	797.9	809.5	816.7	826.9	842.8	861.7	876.1
20°	738.4	739.8	745.6	747.0	752.8	763.0	770.2	780.5	794.9	813.8	826.9
22.5°	703.6	706.4	710.8	712.2	715.2	725.3	734.0	741.2	754.3	770.2	783.3
25°	668.7	670.2	674.5	676.0	680.3	687.6	693.4	700.6	712.2	728.2	738.4
27.5°	626.6	631.0	632.5	633.9	638.3	644.1	649.9	655.7	665.8	678.9	687.6
30°	573.0	574.4	578.8	581.7	586.0	591.8	599.1	604.9	613.6	623.8	629.6
32.5°	510.6	512.1	516.4	519.4	526.5	532.3	538.1	542.6	548.4	554.2	554.2
35°	445.3	449.7	451.1	455.5	462.7	468.5	472.9	474.3	477.3	480.1	470.0
37.5°	398.9	401.8	404.7	407.6	413.4	417.8	420.7	420.7	419.2	416.3	403.3
40°	371.3	372.8	375.7	377.1	383.0	385.9	385.9	383.0	377.1	369.9	349.6
42.5°	352.5	353.9	355.4	356.9	359.7	361.2	359.7	353.9	346.7	336.5	313.3
45°	330.7	332.2	333.7	333.7	336.5	336.5	335.1	329.3	320.6	309.0	284.3
47.5°	304.7	306.0	307.5	309.0	310.5	310.5	309.0	303.2	294.4	284.3	258.2
50°	277.0	278.5	280.0	280.0	282.8	282.8	281.5	275.7	268.4	258.2	235.0
52.5°	249.5	251.0	251.0	253.8	253.8	253.8	252.4	246.6	240.8	233.6	211.8
55°	223.4	224.8	224.8	227.8	229.2	227.8	226.3	222.0	216.2	210.4	192.9
57.5°	200.2	201.6	201.6	203.1	204.6	203.1	201.6	198.8	195.8	190.0	175.5
60°	178.4	179.9	179.9	181.3	181.3	179.9	179.9	177.0	174.1	171.2	158.1
62.5°	158.1	158.1	158.1	159.6	159.6	158.1	158.1	155.2	153.8	152.3	142.2
65°	137.8	137.8	137.8	137.8	137.8	134.9	134.9	133.5	132.0	133.5	124.8
67.5°	114.6	114.6	113.2	113.2	113.2	110.2	110.2	110.2	108.8	110.2	103.0
70°	90.0	90.0	88.5	88.5	87.0	84.2	84.2	84.2	82.7	84.2	79.8
72.5°	63.8	65.3	62.4	62.4	61.0	58.0	59.5	58.0	59.5	59.5	56.5
75°	42.1	43.6	40.6	40.6	39.1	37.8	37.8	37.8	39.1	37.8	36.3
77.5°	26.2	27.5	26.2	26.2	24.7	23.2	23.2	23.2	23.2	23.2	21.7
80°	15.9	15.9	15.9	14.6	14.6	13.1	13.1	13.1	13.1	13.1	11.6
82.5°	8.7	8.7	8.7	8.7	8.7	7.3	7.3	7.3	7.3	7.3	5.8
85°	4.3	4.3	4.3	4.3	4.3	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	1.5	1.5	1.5	1.5	1.5	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°	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5
2.5°	1205.4	1211.2	1206.9	1224.3	1221.4	1234.4	1233.0	1246.0	1244.6	1246.0	1249.0
5°	1159.0	1170.6	1172.1	1193.8	1195.3	1215.6	1220.0	1237.4	1240.2	1246.0	1253.3
7.5°	1108.2	1125.6	1131.4	1156.1	1164.8	1186.6	1195.3	1218.5	1224.3	1234.4	1243.2
10°	1053.2	1073.4	1082.2	1111.2	1122.8	1147.4	1159.0	1183.7	1192.4	1204.0	1214.2
12.5°	1000.9	1022.7	1034.3	1064.8	1080.7	1105.4	1118.4	1144.5	1153.2	1167.7	1177.9
15°	951.6	974.8	987.9	1018.3	1034.3	1061.8	1074.9	1101.0	1111.2	1125.6	1135.8
17.5°	900.8	924.0	938.5	967.5	987.9	1011.1	1025.5	1051.7	1061.8	1074.9	1085.0
20°	851.5	874.7	887.8	916.8	935.6	958.9	971.9	998.0	1005.3	1018.3	1027.0
22.5°	805.0	826.9	838.5	868.9	884.9	905.2	918.2	941.4	950.1	960.3	966.1
25°	758.6	777.5	786.3	812.3	825.4	844.3	854.4	874.7	883.4	892.1	899.4
27.5°	706.4	716.6	719.5	739.8	750.0	767.4	771.7	790.6	797.9	803.7	809.5
30°	641.2	642.6	633.9	644.1	648.4	661.5	661.5	678.9	684.7	689.0	694.8
32.5°	558.5	549.7	529.5	526.5	523.7	531.0	528.0	542.6	548.4	551.2	555.5
35°	467.1	448.3	414.9	401.8	393.1	391.7	387.3	397.5	401.8	404.7	407.6
37.5°	387.3	359.7	317.7	294.4	280.0	274.2	268.4	274.2	277.0	280.0	282.8
40°	329.3	294.4	245.2	216.2	195.8	187.1	179.9	182.8	185.7	188.6	190.0
42.5°	287.3	248.0	194.4	159.6	139.3	129.1	121.8	123.3	124.8	126.2	129.1
45°	255.3	213.2	158.1	120.4	100.1	90.0	84.2	84.2	85.6	87.0	88.5
47.5°	229.2	184.2	129.1	92.8	74.0	63.8	58.0	58.0	59.5	59.5	61.0
50°	204.6	159.6	105.9	72.6	55.2	46.4	42.1	40.6	42.1	42.1	43.6
52.5°	184.2	140.7	88.5	58.0	42.1	34.8	30.5	30.5	30.5	30.5	30.5
55°	165.4	123.3	74.0	46.4	33.3	27.5	23.2	21.7	21.7	21.7	21.7
57.5°	150.9	110.2	63.8	39.1	27.5	21.7	18.9	17.4	17.4	17.4	17.4
60°	136.4	97.2	55.2	32.0	21.7	18.9	15.9	13.1	13.1	13.1	13.1
62.5°	121.8	84.2	46.4	27.5	18.9	14.6	13.1	10.1	10.1	10.1	10.1
65°	105.9	72.6	39.1	21.7	14.6	11.6	10.1	8.7	8.7	7.3	7.3
67.5°	87.0	58.0	32.0	18.9	13.1	10.1	8.7	7.3	5.8	5.8	5.8
70°	66.8	43.6	24.7	14.6	10.1	8.7	5.8	5.8	4.3	4.3	4.3
72.5°	47.9	30.5	17.4	11.6	7.3	5.8	5.8	4.3	4.3	4.3	2.9
75°	30.5	20.4	11.6	7.3	5.8	4.3	4.3	2.9	2.9	2.9	2.9
77.5°	18.9	13.1	8.7	5.8	4.3	2.9	2.9	2.9	1.5	1.5	1.5
80°	10.1	7.3	4.3	2.9	2.9	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	5.8	4.3	2.9	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0
85°	2.9	1.5	1.5	1.5	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°	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5	1247.5
2.5°	1257.6	1264.9	1260.6	1263.4	1276.5	1270.7	1280.8	1280.8	1292.4	1292.4	1283.8
5°	1266.4	1275.0	1276.5	1280.8	1298.2	1295.4	1307.0	1309.8	1322.9	1325.9	1318.6
7.5°	1260.6	1270.7	1275.0	1282.3	1299.7	1298.2	1311.3	1317.1	1328.7	1333.1	1327.3
10°	1233.0	1244.6	1250.4	1257.6	1276.5	1275.0	1289.6	1296.9	1307.0	1311.3	1307.0
12.5°	1196.7	1209.8	1215.6	1222.8	1241.7	1240.2	1254.8	1262.0	1270.7	1276.5	1272.2
15°	1156.1	1164.8	1175.0	1182.2	1199.6	1198.2	1212.7	1220.0	1227.2	1234.4	1230.1
17.5°	1103.9	1112.6	1122.8	1128.6	1146.0	1146.0	1157.6	1163.4	1173.5	1179.3	1173.5
20°	1044.4	1054.5	1061.8	1066.1	1082.2	1080.7	1092.3	1098.1	1106.8	1111.2	1106.8
22.5°	982.1	990.7	996.5	999.5	1012.5	1011.1	1019.7	1025.5	1032.8	1037.1	1032.8
25°	911.0	916.8	921.1	922.6	934.2	931.3	942.9	942.9	948.7	953.1	948.7
27.5°	819.6	823.9	826.9	825.4	834.1	829.7	839.9	832.7	844.3	847.1	842.8
30°	702.1	705.0	707.9	702.1	707.9	702.1	710.8	700.6	710.8	715.2	710.8
32.5°	562.8	562.8	565.8	558.5	561.3	555.5	560.0	557.0	560.0	564.3	560.0
35°	413.4	413.4	416.3	412.0	413.4	407.6	410.5	407.6	409.1	412.0	410.5
37.5°	287.3	285.8	290.1	287.3	288.6	285.8	287.3	284.3	285.8	287.3	285.8
40°	194.4	194.4	197.3	195.8	197.3	195.8	197.3	195.8	195.8	195.8	194.4
42.5°	130.6	132.0	133.5	133.5	134.9	133.5	134.9	133.5	133.5	133.5	132.0
45°	90.0	90.0	91.4	91.4	92.8	92.8	92.8	91.4	91.4	91.4	91.4
47.5°	62.4	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8	62.4
50°	43.6	44.9	44.9	44.9	44.9	44.9	44.9	43.6	43.6	43.6	43.6
52.5°	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	30.5	30.5
55°	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2
57.5°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
60°	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
62.5°	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
65°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
67.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
70°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.9	2.9	2.9	2.9	2.9	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	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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CATALOG NUMBER: LD6A15D010TE ERM6A15935 6LM111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1247.5	1247.5	1247.5	1247.5
2.5°	1279.5	1291.1	1286.6	1286.6
5°	1314.3	1327.3	1324.4	1322.9
7.5°	1324.4	1336.0	1333.1	1333.1
10°	1304.0	1315.6	1312.8	1312.8
12.5°	1270.7	1280.8	1279.5	1278.0
15°	1228.6	1238.8	1237.4	1235.9
17.5°	1172.1	1183.7	1182.2	1180.8
20°	1103.9	1114.0	1114.0	1112.6
22.5°	1030.0	1037.1	1038.6	1035.8
25°	945.8	951.6	951.6	948.7
27.5°	839.9	844.3	844.3	842.8
30°	709.4	710.8	712.2	709.4
32.5°	557.0	557.0	560.0	557.0
35°	406.2	406.2	409.1	407.6
37.5°	282.8	282.8	284.3	282.8
40°	192.9	192.9	194.4	192.9
42.5°	132.0	130.6	132.0	132.0
45°	90.0	90.0	91.4	90.0
47.5°	62.4	62.4	62.4	62.4
50°	43.6	43.6	43.6	43.6
52.5°	30.5	30.5	30.5	30.5
55°	21.7	23.2	23.2	23.2
57.5°	15.9	17.4	17.4	17.4
60°	13.1	13.1	13.1	13.1
62.5°	10.1	10.1	10.1	10.1
65°	7.3	7.3	7.3	7.3
67.5°	5.8	5.8	5.8	5.8
70°	4.3	4.3	4.3	4.3
72.5°	2.9	2.9	2.9	2.9
75°	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5
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)