

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: P135643

Luminaire Tested: **LD6A10D010TE ERM6A10840 6LM111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135643
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: LD6A10D010TE ERM6A10840 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1151.0 lumens
Efficiency: N/A
Efficacy: 82.2 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

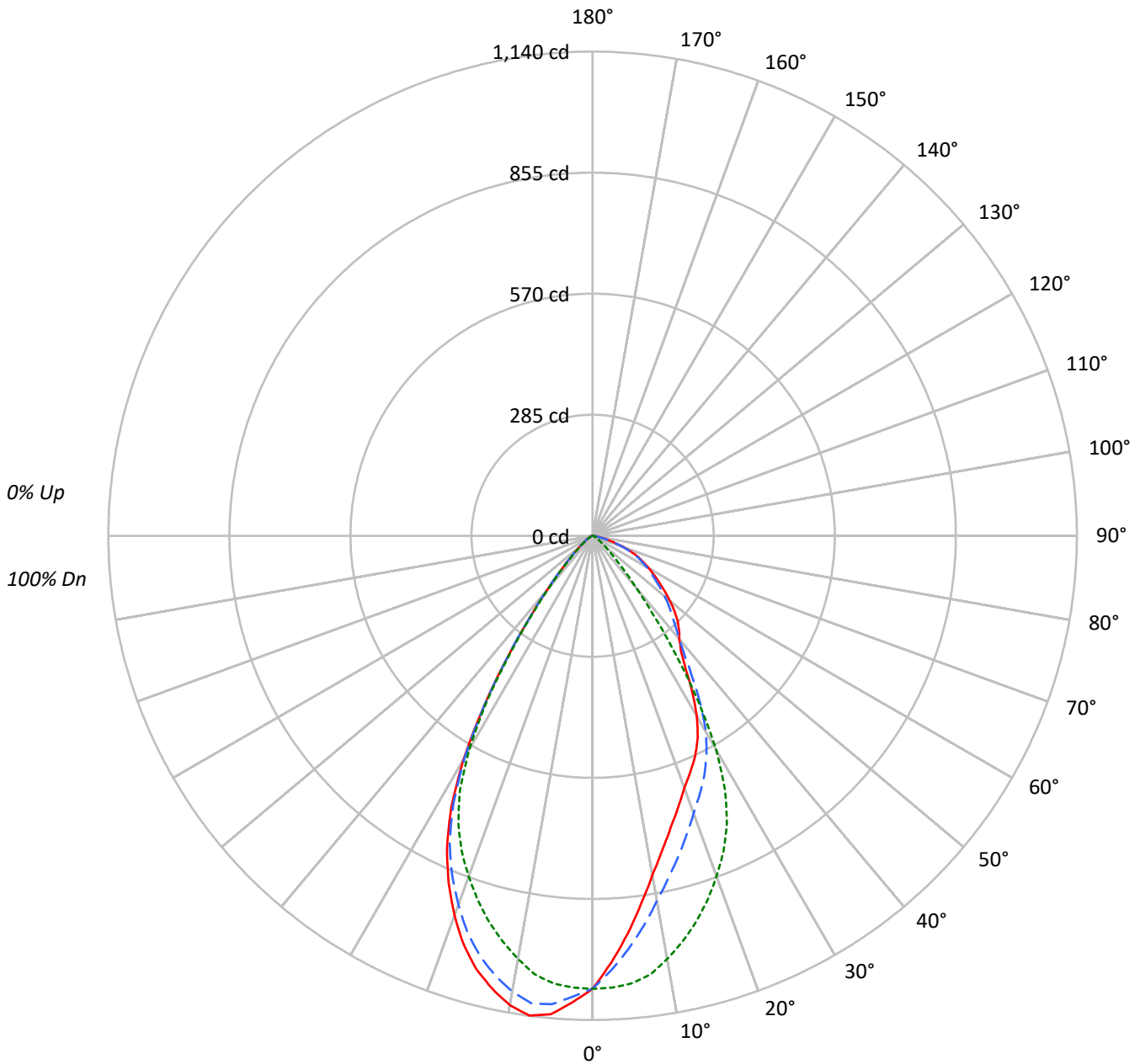
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	69573	69573	69573
5°	61632	69269	74062
10°	53720	67029	74342
15°	47989	63564	71358
20°	43823	59229	66033
25°	41147	53823	58373
30°	36898	43716	45682
35°	30321	27063	27748
40°	27032	13303	14044
45°	26083	6634	7095
50°	24034	3522	3776
55°	21725	2116	2252
60°	19898	1461	1461
65°	18185	1142	957
70°	14669	954	706
75°	9075	630	302
80°	5110	451	0
85°	2770	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.8	8.5
10°-20°	254.0	22.1
20°-30°	323.2	28.1
30°-40°	231.6	20.1
40°-50°	115.5	10.0
50°-60°	69.9	6.1
60°-70°	42.8	3.7
70°-80°	14.7	1.3
80°-90°	1.6	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°	674.9	58.6
0°-40°	906.5	78.8
0°-60°	1091.9	94.9
0°-90°	1151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1151.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1066	1066	1066	1066	1066	
5°	941	976	1058	1107	1131	86
15°	710	781	941	1024	1056	200
25°	572	622	748	796	811	261
35°	381	410	340	348	348	243
45°	283	264	72	79	77	216
55°	191	180	19	20	20	172
65°	118	114	7	6	6	115
75°	36	32	2	1	1	42
85°	4	2	0	0	0	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°	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4
2.5°	1005.6	1006.9	1009.3	1006.9	1008.1	1014.3	1011.8	1013.1	1016.8	1023.0	1019.3
5°	941.1	942.4	948.6	944.9	947.3	954.8	954.8	959.7	967.2	975.9	975.9
7.5°	874.2	876.7	882.9	880.4	884.1	894.0	895.3	902.7	912.6	925.0	931.2
10°	810.9	813.4	819.6	818.4	823.3	833.3	838.2	845.7	858.1	872.9	880.4
12.5°	757.6	760.1	765.1	765.1	771.3	781.2	786.1	796.1	808.5	824.6	834.5
15°	710.5	714.2	719.2	719.2	725.4	735.3	741.5	750.2	763.8	781.2	792.3
17.5°	669.6	670.8	675.8	675.8	682.0	691.9	698.1	706.8	720.4	736.5	748.9
20°	631.2	632.4	637.4	638.6	643.6	652.2	658.4	667.1	679.5	695.6	706.8
22.5°	601.4	603.9	607.6	608.8	611.3	620.0	627.4	633.6	644.8	658.4	669.6
25°	571.6	572.9	576.6	577.8	581.6	587.8	592.7	598.9	608.8	622.5	631.2
27.5°	535.7	539.4	540.6	541.9	545.6	550.6	555.5	560.5	569.2	580.3	587.8
30°	489.8	491.0	494.8	497.2	501.0	505.9	512.1	517.1	524.5	533.2	538.2
32.5°	436.5	437.7	441.4	443.9	450.1	455.1	460.0	463.8	468.7	473.7	473.7
35°	380.7	384.4	385.6	389.4	395.6	400.5	404.2	405.5	408.0	410.4	401.8
37.5°	341.0	343.5	346.0	348.4	353.4	357.1	359.6	359.6	358.4	355.9	344.7
40°	317.4	318.7	321.2	322.4	327.4	329.8	329.8	327.4	322.4	316.2	298.8
42.5°	301.3	302.6	303.8	305.0	307.5	308.8	307.5	302.6	296.4	287.7	267.8
45°	282.7	284.0	285.2	285.2	287.7	287.7	286.4	281.5	274.0	264.1	243.0
47.5°	260.4	261.6	262.9	264.1	265.4	265.4	264.1	259.2	251.7	243.0	220.7
50°	236.8	238.1	239.3	239.3	241.8	241.8	240.6	235.6	229.4	220.7	200.9
52.5°	213.3	214.5	214.5	217.0	217.0	217.0	215.8	210.8	205.8	199.6	181.0
55°	191.0	192.2	192.2	194.7	195.9	194.7	193.4	189.7	184.8	179.8	164.9
57.5°	171.1	172.4	172.4	173.6	174.8	173.6	172.4	169.9	167.4	162.4	150.0
60°	152.5	153.8	153.8	155.0	155.0	153.8	153.8	151.3	148.8	146.3	135.2
62.5°	135.2	135.2	135.2	136.4	136.4	135.2	135.2	132.7	131.4	130.2	121.5
65°	117.8	117.8	117.8	117.8	117.8	115.3	115.3	114.1	112.8	114.1	106.6
67.5°	98.0	98.0	96.7	96.7	96.7	94.2	94.2	94.2	93.0	94.2	88.0
70°	76.9	76.9	75.6	75.6	74.4	71.9	71.9	71.9	70.7	71.9	68.2
72.5°	54.6	55.8	53.3	53.3	52.1	49.6	50.8	49.6	50.8	50.8	48.4
75°	36.0	37.2	34.7	34.7	33.5	32.2	32.2	32.2	33.5	32.2	31.0
77.5°	22.3	23.6	22.3	22.3	21.1	19.8	19.8	19.8	19.8	19.8	18.6
80°	13.6	13.6	13.6	12.4	12.4	11.2	11.2	11.2	11.2	11.2	9.9
82.5°	7.4	7.4	7.4	7.4	7.4	6.2	6.2	6.2	6.2	6.2	5.0
85°	3.7	3.7	3.7	3.7	3.7	2.5	2.5	2.5	2.5	2.5	2.5
87.5°	1.2	1.2	1.2	1.2	1.2	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°	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4
2.5°	1030.4	1035.4	1031.7	1046.5	1044.1	1055.2	1054.0	1065.1	1063.9	1065.1	1067.6
5°	990.7	1000.7	1001.9	1020.5	1021.7	1039.1	1042.8	1057.7	1060.2	1065.1	1071.3
7.5°	947.3	962.2	967.2	988.3	995.7	1014.3	1021.7	1041.6	1046.5	1055.2	1062.7
10°	900.2	917.6	925.0	949.8	959.7	980.8	990.7	1011.8	1019.3	1029.2	1037.9
12.5°	855.6	874.2	884.1	910.1	923.8	944.9	956.0	978.3	985.8	998.2	1006.9
15°	813.4	833.3	844.4	870.5	884.1	907.7	918.8	941.1	949.8	962.2	970.9
17.5°	770.0	789.9	802.3	827.1	844.4	864.3	876.7	899.0	907.7	918.8	927.5
20°	727.9	747.7	758.9	783.7	799.8	819.6	830.8	853.1	859.3	870.5	877.9
22.5°	688.2	706.8	716.7	742.7	756.4	773.7	784.9	804.7	812.2	820.9	825.8
25°	648.5	664.6	672.1	694.4	705.5	721.7	730.3	747.7	755.1	762.6	768.8
27.5°	603.9	612.6	615.0	632.4	641.1	655.9	659.7	675.8	682.0	686.9	691.9
30°	548.1	549.3	541.9	550.6	554.3	565.4	565.4	580.3	585.3	589.0	594.0
32.5°	477.4	470.0	452.6	450.1	447.6	453.8	451.4	463.8	468.7	471.2	474.9
35°	399.3	383.2	354.6	343.5	336.0	334.8	331.1	339.8	343.5	346.0	348.4
37.5°	331.1	307.5	271.6	251.7	239.3	234.4	229.4	234.4	236.8	239.3	241.8
40°	281.5	251.7	209.6	184.8	167.4	160.0	153.8	156.2	158.7	161.2	162.4
42.5°	245.5	212.0	166.2	136.4	119.0	110.4	104.2	105.4	106.6	107.9	110.4
45°	218.2	182.3	135.2	102.9	85.6	76.9	71.9	71.9	73.2	74.4	75.6
47.5°	195.9	157.5	110.4	79.4	63.2	54.6	49.6	49.6	50.8	50.8	52.1
50°	174.8	136.4	90.5	62.0	47.1	39.7	36.0	34.7	36.0	36.0	37.2
52.5°	157.5	120.3	75.6	49.6	36.0	29.8	26.0	26.0	26.0	26.0	26.0
55°	141.4	105.4	63.2	39.7	28.5	23.6	19.8	18.6	18.6	18.6	18.6
57.5°	129.0	94.2	54.6	33.5	23.6	18.6	16.1	14.9	14.9	14.9	14.9
60°	116.6	83.1	47.1	27.3	18.6	16.1	13.6	11.2	11.2	11.2	11.2
62.5°	104.2	71.9	39.7	23.6	16.1	12.4	11.2	8.7	8.7	8.7	8.7
65°	90.5	62.0	33.5	18.6	12.4	9.9	8.7	7.4	7.4	6.2	6.2
67.5°	74.4	49.6	27.3	16.1	11.2	8.7	7.4	6.2	5.0	5.0	5.0
70°	57.0	37.2	21.1	12.4	8.7	7.4	5.0	5.0	3.7	3.7	3.7
72.5°	40.9	26.0	14.9	9.9	6.2	5.0	5.0	3.7	3.7	3.7	2.5
75°	26.0	17.4	9.9	6.2	5.0	3.7	3.7	2.5	2.5	2.5	2.5
77.5°	16.1	11.2	7.4	5.0	3.7	2.5	2.5	2.5	1.2	1.2	1.2
80°	8.7	6.2	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	5.0	3.7	2.5	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0
85°	2.5	1.2	1.2	1.2	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°	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4
2.5°	1075.1	1081.3	1077.5	1080.0	1091.2	1086.2	1094.9	1094.9	1104.8	1104.8	1097.4
5°	1082.5	1089.9	1091.2	1094.9	1109.8	1107.3	1117.2	1119.7	1130.9	1133.3	1127.1
7.5°	1077.5	1086.2	1089.9	1096.1	1111.0	1109.8	1120.9	1125.9	1135.8	1139.5	1134.6
10°	1054.0	1063.9	1068.9	1075.1	1091.2	1089.9	1102.3	1108.5	1117.2	1120.9	1117.2
12.5°	1023.0	1034.1	1039.1	1045.3	1061.4	1060.2	1072.6	1078.8	1086.2	1091.2	1087.5
15°	988.3	995.7	1004.4	1010.6	1025.5	1024.2	1036.6	1042.8	1049.0	1055.2	1051.5
17.5°	943.6	951.1	959.7	964.7	979.6	979.6	989.5	994.5	1003.1	1008.1	1003.1
20°	892.8	901.5	907.7	911.4	925.0	923.8	933.7	938.7	946.1	949.8	946.1
22.5°	839.5	846.9	851.9	854.3	865.5	864.3	871.7	876.7	882.9	886.6	882.9
25°	778.7	783.7	787.4	788.6	798.5	796.1	806.0	806.0	810.9	814.7	810.9
27.5°	700.6	704.3	706.8	705.5	713.0	709.3	717.9	711.7	721.7	724.1	720.4
30°	600.2	602.6	605.1	600.2	605.1	600.2	607.6	598.9	607.6	611.3	607.6
32.5°	481.1	481.1	483.6	477.4	479.9	474.9	478.6	476.2	478.6	482.4	478.6
35°	353.4	353.4	355.9	352.2	353.4	348.4	350.9	348.4	349.7	352.2	350.9
37.5°	245.5	244.3	248.0	245.5	246.8	244.3	245.5	243.0	244.3	245.5	244.3
40°	166.2	166.2	168.6	167.4	168.6	167.4	168.6	167.4	167.4	167.4	166.2
42.5°	111.6	112.8	114.1	114.1	115.3	114.1	115.3	114.1	114.1	114.1	112.8
45°	76.9	76.9	78.1	78.1	79.4	79.4	79.4	78.1	78.1	78.1	78.1
47.5°	53.3	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	53.3
50°	37.2	38.4	38.4	38.4	38.4	38.4	38.4	37.2	37.2	37.2	37.2
52.5°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	26.0	26.0
55°	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8
57.5°	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
60°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
62.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
65°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
67.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
75°	2.5	2.5	2.5	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	0.0	1.2	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: LD6A10D010TE ERM6A10840 6LM111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1066.4	1066.4	1066.4	1066.4
2.5°	1093.7	1103.6	1099.9	1099.9
5°	1123.4	1134.6	1132.1	1130.9
7.5°	1132.1	1142.0	1139.5	1139.5
10°	1114.7	1124.7	1122.2	1122.2
12.5°	1086.2	1094.9	1093.7	1092.4
15°	1050.3	1058.9	1057.7	1056.5
17.5°	1001.9	1011.8	1010.6	1009.3
20°	943.6	952.3	952.3	951.1
22.5°	880.4	886.6	887.8	885.3
25°	808.5	813.4	813.4	810.9
27.5°	717.9	721.7	721.7	720.4
30°	606.4	607.6	608.8	606.4
32.5°	476.2	476.2	478.6	476.2
35°	347.2	347.2	349.7	348.4
37.5°	241.8	241.8	243.0	241.8
40°	164.9	164.9	166.2	164.9
42.5°	112.8	111.6	112.8	112.8
45°	76.9	76.9	78.1	76.9
47.5°	53.3	53.3	53.3	53.3
50°	37.2	37.2	37.2	37.2
52.5°	26.0	26.0	26.0	26.0
55°	18.6	19.8	19.8	19.8
57.5°	13.6	14.9	14.9	14.9
60°	11.2	11.2	11.2	11.2
62.5°	8.7	8.7	8.7	8.7
65°	6.2	6.2	6.2	6.2
67.5°	5.0	5.0	5.0	5.0
70°	3.7	3.7	3.7	3.7
72.5°	2.5	2.5	2.5	2.5
75°	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2
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)