

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: P135641

Luminaire Tested: **LD6A10D010TE ERM6A10830 6LM111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135641
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 ERM6A10830 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1100.0 lumens
Efficiency: N/A
Efficacy: 78.6 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

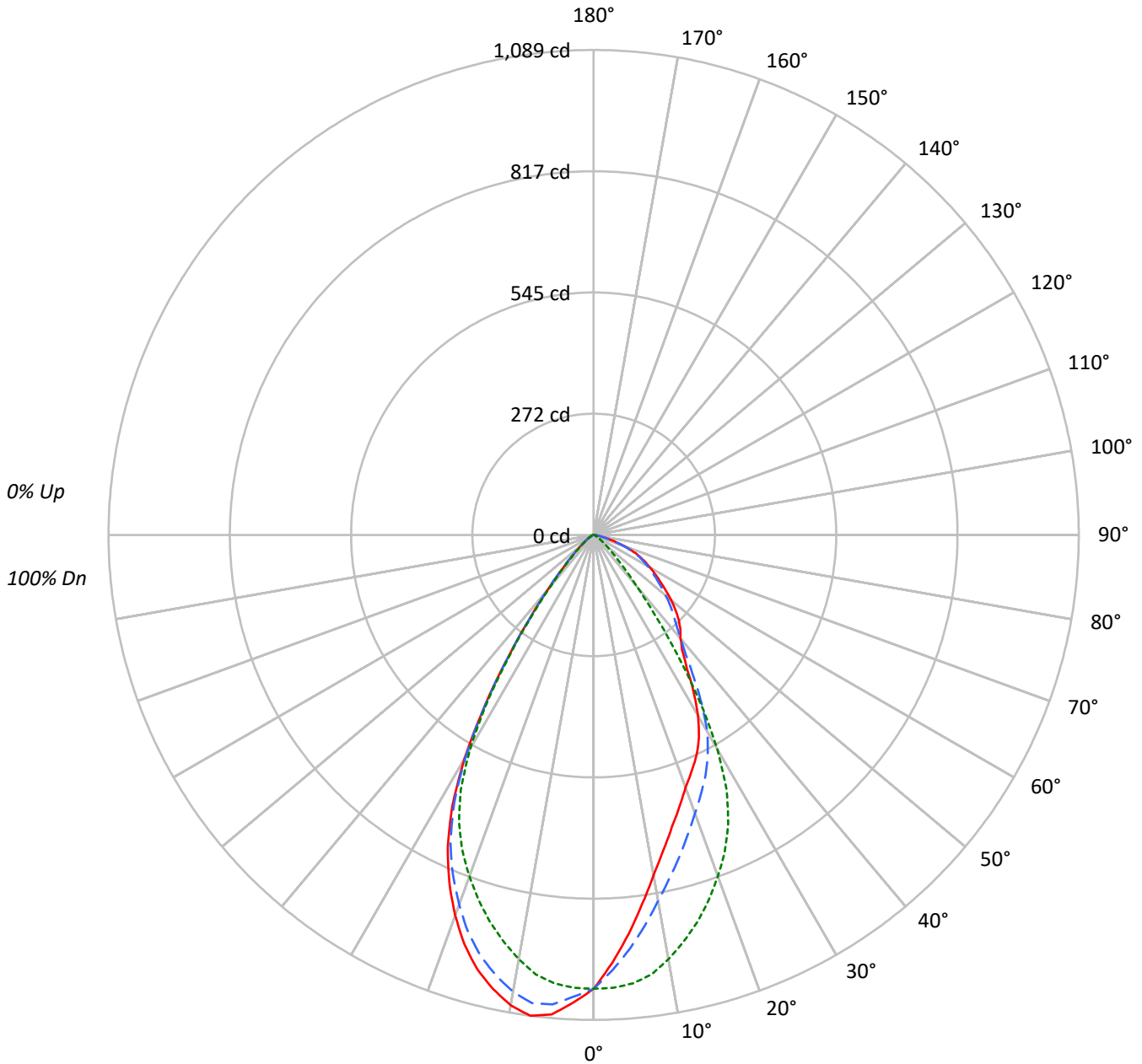
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	66487	66487	66487
5°	58902	66197	70781
10°	51341	64061	71050
15°	45861	60747	68197
20°	41879	56604	63103
25°	39325	51441	55788
30°	35264	41780	43656
35°	28975	25860	26521
40°	25839	12715	13422
45°	24930	6339	6781
50°	22969	3370	3613
55°	20758	2025	2161
60°	19024	1396	1396
65°	17382	1096	911
70°	14020	897	687
75°	8671	605	302
80°	4884	451	0
85°	2695	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	8.5
10°-20°	242.7	22.1
20°-30°	308.9	28.1
30°-40°	221.3	20.1
40°-50°	110.4	10.0
50°-60°	66.8	6.1
60°-70°	40.8	3.7
70°-80°	14.1	1.3
80°-90°	1.5	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°	645.0	58.6
0°-40°	866.3	78.8
0°-60°	1043.6	94.9
0°-90°	1100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1100.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1019	1019	1019	1019	1019	
5°	899	933	1011	1058	1081	82
15°	679	747	899	979	1010	191
25°	546	595	715	761	775	249
35°	364	392	325	333	333	232
45°	270	252	69	76	74	207
55°	182	172	18	19	19	164
65°	113	109	7	6	6	110
75°	34	31	2	1	1	40
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°	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	961.1	962.3	964.6	962.3	963.4	969.4	967.0	968.2	971.7	977.7	974.1
5°	899.4	900.6	906.6	903.0	905.4	912.5	912.5	917.2	924.3	932.6	932.6
7.5°	835.5	837.8	843.7	841.4	844.9	854.4	855.6	862.7	872.2	884.0	890.0
10°	775.0	777.4	783.3	782.1	786.9	796.3	801.1	808.2	820.0	834.3	841.4
12.5°	724.1	726.4	731.2	731.2	737.1	746.6	751.3	760.8	772.6	788.1	797.5
15°	679.0	682.6	687.3	687.3	693.2	702.7	708.7	716.9	730.0	746.6	757.2
17.5°	639.9	641.1	645.8	645.8	651.8	661.3	667.2	675.5	688.5	703.9	715.8
20°	603.2	604.4	609.1	610.3	615.0	623.3	629.3	637.6	649.4	664.8	675.5
22.5°	574.7	577.1	580.7	581.9	584.2	592.5	599.6	605.6	616.2	629.3	639.9
25°	546.3	547.5	551.0	552.2	555.8	561.7	566.4	572.4	581.9	594.9	603.2
27.5°	511.9	515.5	516.7	517.9	521.4	526.2	530.9	535.6	543.9	554.6	561.7
30°	468.1	469.3	472.8	475.2	478.8	483.5	489.4	494.2	501.3	509.6	514.3
32.5°	417.1	418.3	421.9	424.2	430.2	434.9	439.6	443.2	447.9	452.7	452.7
35°	363.8	367.4	368.5	372.1	378.0	382.8	386.3	387.5	389.9	392.2	384.0
37.5°	325.9	328.3	330.6	333.0	337.7	341.3	343.7	343.7	342.5	340.1	329.4
40°	303.4	304.6	306.9	308.1	312.9	315.2	315.2	312.9	308.1	302.2	285.6
42.5°	288.0	289.1	290.3	291.5	293.9	295.1	293.9	289.1	283.2	274.9	256.0
45°	270.2	271.4	272.6	272.6	274.9	274.9	273.7	269.0	261.9	252.4	232.3
47.5°	248.9	250.0	251.2	252.4	253.6	253.6	252.4	247.7	240.6	232.3	210.9
50°	226.3	227.5	228.7	228.7	231.1	231.1	229.9	225.2	219.2	210.9	192.0
52.5°	203.8	205.0	205.0	207.4	207.4	207.4	206.2	201.5	196.7	190.8	173.0
55°	182.5	183.7	183.7	186.1	187.2	186.1	184.9	181.3	176.6	171.8	157.6
57.5°	163.5	164.7	164.7	165.9	167.1	165.9	164.7	162.4	160.0	155.2	143.4
60°	145.8	146.9	146.9	148.1	148.1	146.9	146.9	144.6	142.2	139.8	129.2
62.5°	129.2	129.2	129.2	130.4	130.4	129.2	129.2	126.8	125.6	124.4	116.1
65°	112.6	112.6	112.6	112.6	112.6	110.2	110.2	109.0	107.8	109.0	101.9
67.5°	93.6	93.6	92.4	92.4	92.4	90.1	90.1	90.1	88.9	90.1	84.1
70°	73.5	73.5	72.3	72.3	71.1	68.7	68.7	68.7	67.5	68.7	65.2
72.5°	52.1	53.3	51.0	51.0	49.8	47.4	48.6	47.4	48.6	48.6	46.2
75°	34.4	35.6	33.2	33.2	32.0	30.8	30.8	30.8	32.0	30.8	29.6
77.5°	21.3	22.5	21.3	21.3	20.1	19.0	19.0	19.0	19.0	19.0	17.8
80°	13.0	13.0	13.0	11.9	11.9	10.7	10.7	10.7	10.7	10.7	9.5
82.5°	7.1	7.1	7.1	7.1	7.1	5.9	5.9	5.9	5.9	5.9	4.7
85°	3.6	3.6	3.6	3.6	3.6	2.4	2.4	2.4	2.4	2.4	2.4
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°	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	984.8	989.5	986.0	1000.2	997.8	1008.5	1007.3	1017.9	1016.8	1017.9	1020.3
5°	946.8	956.3	957.5	975.3	976.5	993.1	996.6	1010.8	1013.2	1017.9	1023.9
7.5°	905.4	919.6	924.3	944.5	951.6	969.4	976.5	995.4	1000.2	1008.5	1015.6
10°	860.3	876.9	884.0	907.7	917.2	937.4	946.8	967.0	974.1	983.6	991.9
12.5°	817.7	835.5	844.9	869.8	882.9	903.0	913.7	935.0	942.1	954.0	962.3
15°	777.4	796.3	807.0	831.9	844.9	867.4	878.1	899.4	907.7	919.6	927.9
17.5°	735.9	754.9	766.7	790.4	807.0	826.0	837.8	859.2	867.4	878.1	886.4
20°	695.6	714.6	725.2	748.9	764.3	783.3	794.0	815.3	821.2	831.9	839.0
22.5°	657.7	675.5	685.0	709.8	722.9	739.5	750.1	769.1	776.2	784.5	789.2
25°	619.8	635.2	642.3	663.6	674.3	689.7	698.0	714.6	721.7	728.8	734.7
27.5°	577.1	585.4	587.8	604.4	612.7	626.9	630.4	645.8	651.8	656.5	661.3
30°	523.8	525.0	517.9	526.2	529.7	540.4	540.4	554.6	559.3	562.9	567.6
32.5°	456.2	449.1	432.5	430.2	427.8	433.7	431.4	443.2	447.9	450.3	453.9
35°	381.6	366.2	338.9	328.3	321.1	320.0	316.4	324.7	328.3	330.6	333.0
37.5°	316.4	293.9	259.5	240.6	228.7	224.0	219.2	224.0	226.3	228.7	231.1
40°	269.0	240.6	200.3	176.6	160.0	152.9	146.9	149.3	151.7	154.1	155.2
42.5°	234.6	202.6	158.8	130.4	113.8	105.5	99.5	100.7	101.9	103.1	105.5
45°	208.6	174.2	129.2	98.4	81.8	73.5	68.7	68.7	69.9	71.1	72.3
47.5°	187.2	150.5	105.5	75.8	60.4	52.1	47.4	47.4	48.6	48.6	49.8
50°	167.1	130.4	86.5	59.3	45.0	37.9	34.4	33.2	34.4	34.4	35.6
52.5°	150.5	114.9	72.3	47.4	34.4	28.4	24.9	24.9	24.9	24.9	24.9
55°	135.1	100.7	60.4	37.9	27.3	22.5	19.0	17.8	17.8	17.8	17.8
57.5°	123.2	90.1	52.1	32.0	22.5	17.8	15.4	14.2	14.2	14.2	14.2
60°	111.4	79.4	45.0	26.1	17.8	15.4	13.0	10.7	10.7	10.7	10.7
62.5°	99.5	68.7	37.9	22.5	15.4	11.9	10.7	8.3	8.3	8.3	8.3
65°	86.5	59.3	32.0	17.8	11.9	9.5	8.3	7.1	7.1	5.9	5.9
67.5°	71.1	47.4	26.1	15.4	10.7	8.3	7.1	5.9	4.7	4.7	4.7
70°	54.5	35.6	20.1	11.9	8.3	7.1	4.7	4.7	3.6	3.6	3.6
72.5°	39.1	24.9	14.2	9.5	5.9	4.7	4.7	3.6	3.6	3.6	2.4
75°	24.9	16.6	9.5	5.9	4.7	3.6	3.6	2.4	2.4	2.4	2.4
77.5°	15.4	10.7	7.1	4.7	3.6	2.4	2.4	2.4	1.2	1.2	1.2
80°	8.3	5.9	3.6	2.4	2.4	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	4.7	3.6	2.4	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0
85°	2.4	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°	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	1027.4	1033.4	1029.8	1032.2	1042.8	1038.1	1046.4	1046.4	1055.9	1055.9	1048.8
5°	1034.5	1041.6	1042.8	1046.4	1060.6	1058.2	1067.7	1070.1	1080.8	1083.1	1077.2
7.5°	1029.8	1038.1	1041.6	1047.6	1061.8	1060.6	1071.3	1076.0	1085.5	1089.1	1084.3
10°	1007.3	1016.8	1021.5	1027.4	1042.8	1041.6	1053.5	1059.4	1067.7	1071.3	1067.7
12.5°	977.7	988.3	993.1	999.0	1014.4	1013.2	1025.1	1031.0	1038.1	1042.8	1039.3
15°	944.5	951.6	959.9	965.8	980.0	978.8	990.7	996.6	1002.5	1008.5	1004.9
17.5°	901.8	908.9	917.2	922.0	936.2	936.2	945.7	950.4	958.7	963.4	958.7
20°	853.2	861.5	867.4	871.0	884.0	882.9	892.3	897.1	904.2	907.7	904.2
22.5°	802.3	809.4	814.1	816.5	827.2	826.0	833.1	837.8	843.7	847.3	843.7
25°	744.2	748.9	752.5	753.7	763.2	760.8	770.3	770.3	775.0	778.6	775.0
27.5°	669.5	673.1	675.5	674.3	681.4	677.8	686.1	680.2	689.7	692.1	688.5
30°	573.6	575.9	578.3	573.6	578.3	573.6	580.7	572.4	580.7	584.2	580.7
32.5°	459.8	459.8	462.2	456.2	458.6	453.9	457.4	455.1	457.4	461.0	457.4
35°	337.7	337.7	340.1	336.6	337.7	333.0	335.4	333.0	334.2	336.6	335.4
37.5°	234.6	233.5	237.0	234.6	235.8	233.5	234.6	232.3	233.5	234.6	233.5
40°	158.8	158.8	161.2	160.0	161.2	160.0	161.2	160.0	160.0	160.0	158.8
42.5°	106.7	107.8	109.0	109.0	110.2	109.0	110.2	109.0	109.0	109.0	107.8
45°	73.5	73.5	74.7	74.7	75.8	75.8	75.8	74.7	74.7	74.7	74.7
47.5°	51.0	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.1	52.1	51.0
50°	35.6	36.7	36.7	36.7	36.7	36.7	36.7	35.6	35.6	35.6	35.6
52.5°	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	24.9	24.9
55°	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
57.5°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
60°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
62.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
65°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
67.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	2.4	2.4	2.4	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 ERM6A10830 6LM111H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1019.1	1019.1	1019.1	1019.1
2.5°	1045.2	1054.7	1051.1	1051.1
5°	1073.6	1084.3	1081.9	1080.8
7.5°	1081.9	1091.4	1089.1	1089.1
10°	1065.3	1074.8	1072.5	1072.5
12.5°	1038.1	1046.4	1045.2	1044.0
15°	1003.7	1012.0	1010.8	1009.7
17.5°	957.5	967.0	965.8	964.6
20°	901.8	910.1	910.1	908.9
22.5°	841.4	847.3	848.5	846.1
25°	772.6	777.4	777.4	775.0
27.5°	686.1	689.7	689.7	688.5
30°	579.5	580.7	581.9	579.5
32.5°	455.1	455.1	457.4	455.1
35°	331.8	331.8	334.2	333.0
37.5°	231.1	231.1	232.3	231.1
40°	157.6	157.6	158.8	157.6
42.5°	107.8	106.7	107.8	107.8
45°	73.5	73.5	74.7	73.5
47.5°	51.0	51.0	51.0	51.0
50°	35.6	35.6	35.6	35.6
52.5°	24.9	24.9	24.9	24.9
55°	17.8	19.0	19.0	19.0
57.5°	13.0	14.2	14.2	14.2
60°	10.7	10.7	10.7	10.7
62.5°	8.3	8.3	8.3	8.3
65°	5.9	5.9	5.9	5.9
67.5°	4.7	4.7	4.7	4.7
70°	3.6	3.6	3.6	3.6
72.5°	2.4	2.4	2.4	2.4
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)