

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: P135913

Luminaire Tested: **LD6A15D010TE ERM6A15830 6LM121H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135913
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23373)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15830 6LM121H
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED DOUBLE 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: 1512.0 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 1.06 / 1.01
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

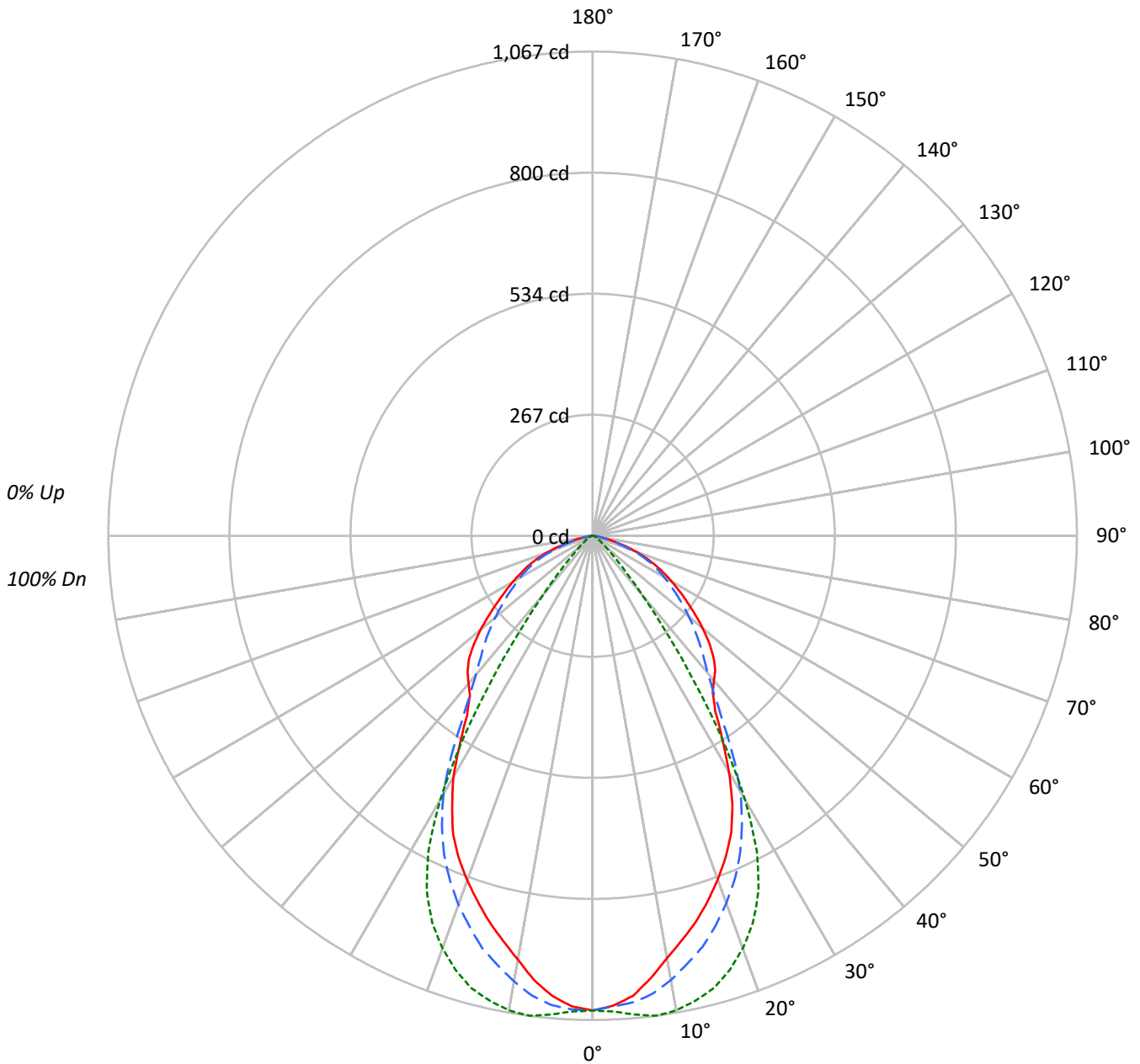
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P135913

CATALOG NUMBER: LD6A15D010TE ERM6A15830 6LM121H

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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79				79
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70				70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62				62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56				56
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51				51
7	74	62	55	49	72	61	54	49	60	53	49	59	53	49	57	52	48	47				47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43				43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39				39
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36				36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	68248	68248	68248
5°	66649	69341	66649
10°	62603	70348	62809
15°	59451	69697	59451
20°	55952	67143	56063
25°	51988	62224	52326
30°	45238	50594	46187
35°	37504	30583	38388
40°	35395	14265	36204
45°	34701	6708	35577
50°	32073	3532	32722
55°	28936	2332	29118
60°	26188	1853	26396
65°	23418	1467	24144
70°	19285	1202	19895
75°	12755	807	12755
80°	7138	601	7138
85°	4716	0	3518



TEST NUMBER: P135913

CATALOG NUMBER: LD6A15D010TE ERM6A15830 6LM121H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.6	6.5
10°-20°	264.7	17.5
20°-30°	353.8	23.4
30°-40°	292.6	19.4
40°-50°	209.9	13.9
50°-60°	154.3	10.2
60°-70°	99.6	6.6
70°-80°	35.3	2.3
80°-90°	4.1	0.3
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°	716.2	47.4
0°-40°	1008.7	66.7
0°-60°	1373.0	90.8
0°-90°	1512.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1512.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1046	1046	1046	1046	1046	
5°	1018	1032	1059	1038	1018	95
15°	880	937	1032	940	880	247
25°	722	770	864	774	727	328
35°	471	499	384	504	482	303
45°	376	332	73	337	386	287
55°	254	226	20	229	256	228
65°	152	141	10	142	156	149
75°	51	41	3	41	51	57
85°	6	3	0	3	5	8
90°	0	0	0	0	0	



TEST NUMBER: P135913

CATALOG NUMBER: LD6A15D010TE ERM6A15830 6LM121H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1
2.5°	1036.6	1028.7	1035.1	1028.7	1030.3	1036.6	1038.2	1041.4	1043.0	1038.2	1038.2
5°	1017.7	1009.8	1017.7	1011.3	1014.5	1022.4	1024.0	1030.3	1033.5	1031.9	1035.1
7.5°	982.9	976.6	984.5	979.7	984.5	995.5	1000.3	1008.2	1014.5	1017.7	1022.4
10°	945.0	938.7	946.6	941.8	949.7	962.4	967.1	976.6	986.1	994.0	1001.9
12.5°	911.8	905.5	910.2	908.6	916.5	927.6	935.5	946.6	957.6	965.5	976.6
15°	880.2	873.9	880.2	877.0	883.3	896.0	903.9	915.0	927.6	937.1	949.7
17.5°	843.8	837.5	842.3	840.7	847.0	858.1	866.0	877.0	889.7	900.7	913.4
20°	805.9	799.6	804.3	801.2	807.5	820.1	826.5	839.1	850.2	861.2	872.3
22.5°	766.4	760.1	766.4	761.7	771.2	779.1	785.4	798.0	807.5	818.6	828.0
25°	722.2	715.8	720.6	717.4	723.7	733.2	738.0	750.6	758.5	769.6	779.1
27.5°	666.9	659.0	668.4	662.1	670.0	677.9	682.7	693.7	703.2	712.7	720.6
30°	600.5	594.2	603.6	598.9	608.4	614.7	621.0	632.1	640.0	651.1	652.6
32.5°	531.0	527.8	535.7	532.5	542.0	548.3	553.1	564.1	570.5	576.8	572.0
35°	470.9	467.7	475.6	474.1	482.0	486.7	491.5	497.8	497.8	499.4	486.7
37.5°	434.6	433.0	439.3	437.7	444.0	448.8	448.8	450.4	447.2	439.3	420.3
40°	415.6	414.0	418.8	417.2	421.9	423.5	421.9	418.8	409.3	393.5	368.2
42.5°	399.8	396.6	399.8	398.2	401.4	403.0	398.2	393.5	380.8	361.9	331.8
45°	376.1	372.9	377.7	374.5	377.7	377.7	372.9	366.6	352.4	331.8	300.2
47.5°	347.7	344.5	349.2	346.1	349.2	349.2	344.5	338.2	323.9	303.4	271.8
50°	316.0	312.9	316.0	314.5	317.6	319.2	312.9	308.1	295.5	276.5	244.9
52.5°	284.4	281.3	284.4	284.4	286.0	286.0	281.3	278.1	267.1	249.7	221.2
55°	254.4	251.3	256.0	254.4	256.0	256.0	251.3	248.1	240.2	226.0	199.1
57.5°	226.0	224.4	227.6	226.0	226.0	226.0	222.8	221.2	214.9	202.3	180.1
60°	200.7	197.5	199.1	199.1	199.1	200.7	197.5	195.9	191.2	181.7	161.2
62.5°	175.4	173.8	175.4	173.8	173.8	175.4	173.8	172.2	169.1	161.2	143.8
65°	151.7	148.5	151.7	150.1	150.1	150.1	148.5	148.5	145.4	140.6	124.8
67.5°	126.4	124.8	126.4	124.8	123.3	123.3	121.7	121.7	120.1	116.9	102.7
70°	101.1	98.0	99.6	96.4	98.0	94.8	94.8	93.2	91.7	90.1	79.0
72.5°	74.3	72.7	72.7	69.5	69.5	67.9	66.4	66.4	64.8	64.8	56.9
75°	50.6	50.6	49.0	45.8	47.4	44.2	44.2	44.2	42.7	41.1	36.3
77.5°	33.2	31.6	31.6	30.0	30.0	26.9	28.4	26.9	26.9	25.3	22.1
80°	19.0	19.0	19.0	17.4	17.4	15.8	15.8	15.8	14.2	14.2	12.6
82.5°	11.1	11.1	11.1	9.5	9.5	9.5	9.5	7.9	7.9	7.9	6.3
85°	6.3	4.7	4.7	4.7	4.7	4.7	4.7	3.2	3.2	3.2	3.2
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	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



TEST NUMBER: P135913

CATALOG NUMBER: LD6A15D010TE ERM6A15830 6LM121H

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1
2.5°	1044.5	1043.0	1041.4	1047.7	1049.3	1044.5	1044.5	1049.3	1052.4	1044.5	1043.0
5°	1043.0	1044.5	1044.5	1052.4	1057.2	1054.0	1054.0	1058.8	1061.9	1052.4	1049.3
7.5°	1035.1	1039.8	1043.0	1054.0	1061.9	1060.3	1061.9	1066.7	1068.2	1058.8	1054.0
10°	1017.7	1024.0	1030.3	1044.5	1054.0	1055.6	1057.2	1061.9	1065.1	1052.4	1046.1
12.5°	994.0	1003.4	1012.9	1028.7	1039.8	1041.4	1046.1	1049.3	1050.9	1039.8	1031.9
15°	967.1	979.7	989.2	1006.6	1019.2	1022.4	1027.1	1031.9	1031.9	1019.2	1011.3
17.5°	933.9	945.0	957.6	975.0	989.2	992.4	998.7	1003.4	1003.4	990.8	979.7
20°	892.8	905.5	916.5	935.5	951.3	956.0	962.4	967.1	967.1	956.0	941.8
22.5°	850.2	862.8	873.9	891.2	907.1	911.8	916.5	922.9	921.3	911.8	899.2
25°	799.6	810.7	818.6	835.9	848.6	853.3	859.6	864.4	862.8	853.3	842.3
27.5°	738.0	745.9	747.4	758.5	769.6	774.3	779.1	783.8	782.2	774.3	764.8
30°	666.9	665.3	657.4	657.4	662.1	665.3	668.4	671.6	670.0	665.3	659.0
32.5°	576.8	565.7	545.2	534.1	529.4	529.4	529.4	532.5	531.0	529.4	529.4
35°	480.4	456.7	425.1	401.4	388.7	384.0	380.8	384.0	382.4	384.0	390.3
37.5°	401.4	366.6	323.9	292.3	271.8	262.3	256.0	257.6	257.6	262.3	273.4
40°	342.9	298.7	251.3	211.8	188.0	175.4	167.5	167.5	169.1	175.4	189.6
42.5°	298.7	249.7	197.5	159.6	131.2	118.5	110.6	109.0	110.6	118.5	132.7
45°	263.9	211.8	159.6	118.5	94.8	80.6	74.3	72.7	74.3	82.2	94.8
47.5°	233.9	181.7	132.7	91.7	67.9	56.9	50.6	49.0	52.1	58.5	69.5
50°	208.6	158.0	109.0	72.7	52.1	41.1	36.3	34.8	36.3	42.7	52.1
52.5°	184.9	137.5	91.7	56.9	39.5	31.6	26.9	25.3	26.9	31.6	41.1
55°	165.9	121.7	79.0	47.4	31.6	25.3	22.1	20.5	22.1	25.3	33.2
57.5°	148.5	107.5	67.9	39.5	26.9	20.5	17.4	17.4	17.4	20.5	26.9
60°	132.7	94.8	58.5	33.2	22.1	17.4	14.2	14.2	14.2	17.4	22.1
62.5°	118.5	83.8	50.6	28.4	19.0	14.2	12.6	12.6	12.6	14.2	19.0
65°	101.1	71.1	42.7	23.7	15.8	12.6	11.1	9.5	11.1	12.6	15.8
67.5°	83.8	58.5	34.8	19.0	12.6	9.5	7.9	7.9	7.9	9.5	12.6
70°	64.8	45.8	26.9	14.2	9.5	7.9	6.3	6.3	6.3	7.9	9.5
72.5°	44.2	31.6	19.0	11.1	7.9	6.3	4.7	4.7	4.7	6.3	7.9
75°	28.4	20.5	12.6	7.9	4.7	4.7	3.2	3.2	3.2	4.7	4.7
77.5°	17.4	12.6	7.9	4.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2
80°	9.5	7.9	4.7	3.2	3.2	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	4.7	4.7	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	1.6	1.6	1.6	1.6	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



TEST NUMBER: P135913

CATALOG NUMBER: LD6A15D010TE ERM6A15830 6LM121H

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1	1046.1
2.5°	1043.0	1046.1	1047.7	1041.4	1043.0	1044.5	1035.1	1036.6	1031.9	1041.4	1036.6
5°	1047.7	1049.3	1050.9	1041.4	1039.8	1038.2	1027.1	1025.6	1019.2	1027.1	1022.4
7.5°	1049.3	1046.1	1046.1	1031.9	1027.1	1022.4	1008.2	1003.4	995.5	998.7	992.4
10°	1041.4	1035.1	1030.3	1012.9	1005.0	997.1	979.7	973.4	962.4	963.9	956.0
12.5°	1024.0	1016.1	1008.2	989.2	979.7	968.7	951.3	941.8	930.8	930.8	921.3
15°	1001.9	992.4	982.9	963.9	951.3	940.2	919.7	910.2	899.2	897.6	889.7
17.5°	970.3	959.2	949.7	927.6	915.0	902.3	883.3	872.3	861.2	861.2	851.7
20°	932.3	919.7	908.6	888.1	875.4	864.4	842.3	832.8	823.3	821.7	813.8
22.5°	888.1	875.4	866.0	847.0	832.8	821.7	802.8	794.9	785.4	783.8	774.3
25°	832.8	821.7	812.2	796.4	783.8	774.3	756.9	747.4	741.1	741.1	733.2
27.5°	758.5	749.0	747.4	734.8	725.3	719.0	704.8	698.5	690.6	690.6	681.1
30°	659.0	660.5	666.9	663.7	660.5	657.4	644.7	643.2	633.7	632.1	621.0
32.5°	537.3	548.3	565.7	575.2	579.9	583.1	579.9	576.8	568.9	567.3	554.7
35°	407.7	429.8	458.3	477.2	493.0	504.1	508.8	508.8	505.7	504.1	493.0
37.5°	295.5	328.7	366.6	398.2	423.5	444.0	453.5	459.8	459.8	459.8	455.1
40°	216.5	256.0	300.2	341.3	372.9	399.8	414.0	425.1	428.2	433.0	429.8
42.5°	161.2	203.8	251.3	298.7	335.0	365.0	384.0	396.6	404.5	409.3	409.3
45°	123.3	165.9	214.9	265.5	303.4	336.6	355.6	369.8	377.7	384.0	384.0
47.5°	94.8	135.9	184.9	235.5	275.0	308.1	327.1	339.7	347.7	354.0	354.0
50°	74.3	112.2	159.6	208.6	248.1	279.7	297.1	309.7	316.0	320.8	322.4
52.5°	60.0	94.8	140.6	188.0	224.4	252.8	267.1	278.1	284.4	287.6	289.2
55°	49.0	82.2	124.8	167.5	202.3	229.1	241.8	249.7	254.4	257.6	257.6
57.5°	41.1	71.1	110.6	151.7	184.9	205.4	216.5	222.8	226.0	229.1	229.1
60°	34.8	61.6	98.0	135.9	165.9	184.9	192.8	197.5	200.7	202.3	202.3
62.5°	30.0	52.1	85.3	120.1	147.0	164.3	170.7	173.8	175.4	175.4	177.0
65°	25.3	44.2	72.7	104.3	126.4	142.2	147.0	148.5	148.5	150.1	151.7
67.5°	19.0	34.8	58.5	85.3	104.3	116.9	121.7	121.7	121.7	121.7	123.3
70°	15.8	26.9	44.2	64.8	80.6	90.1	93.2	93.2	93.2	93.2	94.8
72.5°	11.1	19.0	31.6	45.8	58.5	64.8	64.8	66.4	64.8	64.8	67.9
75°	7.9	12.6	20.5	30.0	36.3	41.1	42.7	42.7	42.7	42.7	44.2
77.5°	4.7	7.9	12.6	17.4	23.7	25.3	26.9	26.9	26.9	26.9	28.4
80°	3.2	4.7	7.9	11.1	12.6	14.2	15.8	15.8	15.8	15.8	15.8
82.5°	1.6	3.2	4.7	4.7	6.3	7.9	7.9	7.9	7.9	7.9	9.5
85°	0.0	1.6	1.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	4.7
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



TEST NUMBER: P135913

CATALOG NUMBER: LD6A15D010TE ERM6A15830 6LM121H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1046.1	1046.1	1046.1	1046.1
2.5°	1027.1	1038.2	1030.3	1038.2
5°	1011.3	1020.8	1011.3	1017.7
7.5°	979.7	987.6	978.2	987.6
10°	941.8	949.7	940.2	948.1
12.5°	907.1	913.4	903.9	913.4
15°	875.4	881.8	872.3	880.2
17.5°	839.1	843.8	835.9	843.8
20°	801.2	805.9	799.6	807.5
22.5°	763.3	769.6	761.7	769.6
25°	720.6	725.3	717.4	726.9
27.5°	670.0	673.2	665.3	670.0
30°	608.4	610.0	603.6	613.1
32.5°	543.6	543.6	534.1	543.6
35°	483.6	482.0	475.6	482.0
37.5°	445.6	445.6	440.9	444.0
40°	423.5	425.1	418.8	425.1
42.5°	404.5	407.7	403.0	407.7
45°	380.8	384.0	379.3	385.6
47.5°	350.8	354.0	350.8	355.6
50°	317.6	320.8	317.6	322.4
52.5°	284.4	287.6	284.4	287.6
55°	254.4	256.0	252.8	256.0
57.5°	226.0	227.6	224.4	227.6
60°	199.1	202.3	199.1	202.3
62.5°	175.4	177.0	177.0	178.6
65°	150.1	156.4	154.9	156.4
67.5°	124.8	129.6	129.6	131.2
70°	96.4	99.6	102.7	104.3
72.5°	67.9	72.7	74.3	75.9
75°	44.2	49.0	49.0	50.6
77.5°	28.4	31.6	31.6	31.6
80°	17.4	19.0	17.4	19.0
82.5°	9.5	9.5	9.5	11.1
85°	4.7	4.7	4.7	4.7
87.5°	1.6	1.6	1.6	1.6
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)