

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: P135919

Luminaire Tested: **LD6A15D010TE ERM6A15940 6LM121H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135919
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 ERM6A15940 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1457.0 lumens
Efficiency: N/A
Efficacy: 64.5 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

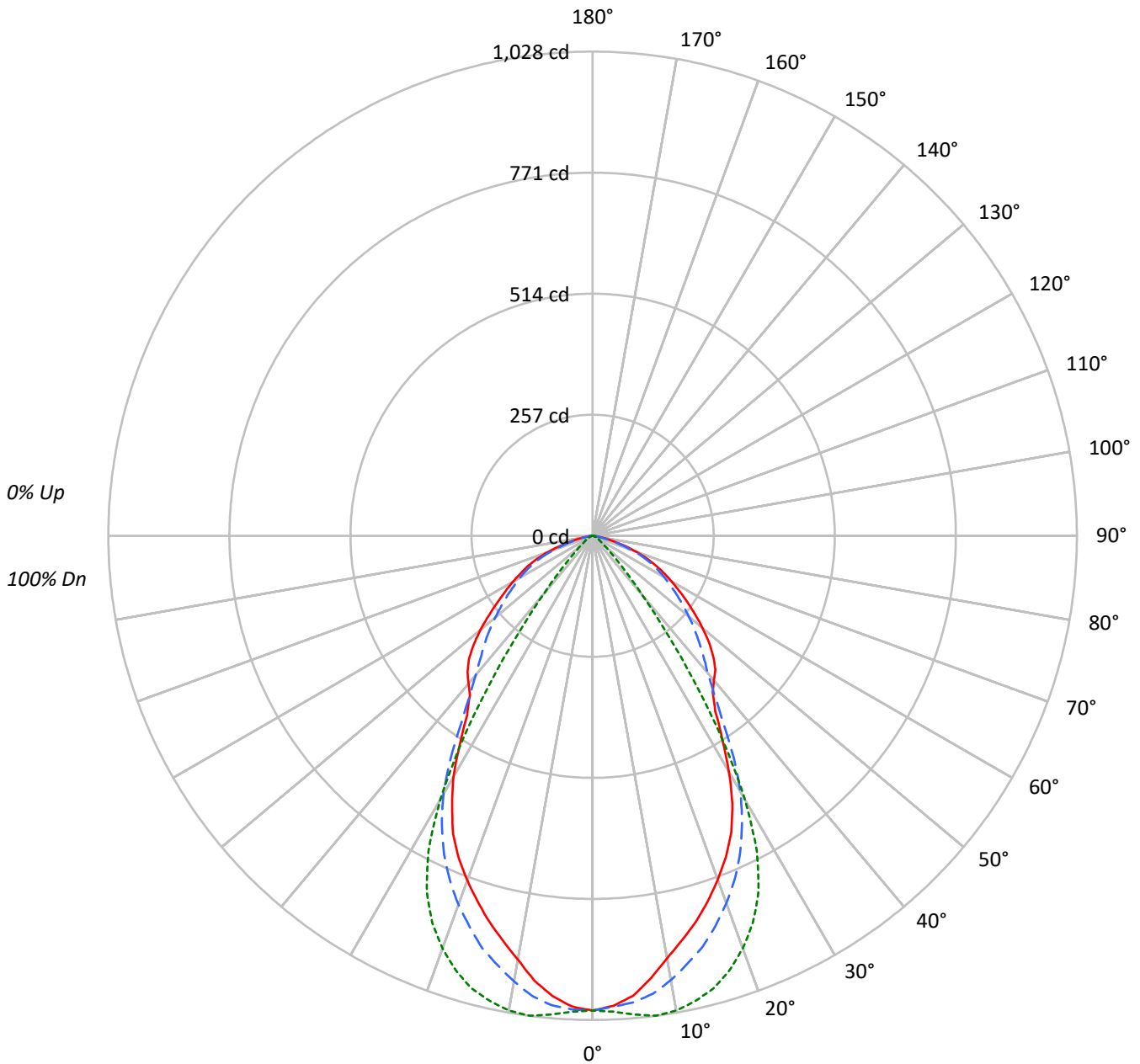
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	65763	65763	65763
5°	64226	66819	64226
10°	60325	67791	60523
15°	57282	67164	57282
20°	53917	64707	54029
25°	50094	59964	50426
30°	43595	48756	44507
35°	36142	29476	36995
40°	34109	13754	34892
45°	33437	6468	34276
50°	30916	3400	31535
55°	27890	2252	28049
60°	25235	1788	25431
65°	22569	1405	23279
70°	18579	1164	19170
75°	12276	756	12276
80°	6838	601	6838
85°	4566	0	3443



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.0	6.5
10°-20°	255.1	17.5
20°-30°	341.0	23.4
30°-40°	281.9	19.4
40°-50°	202.3	13.9
50°-60°	148.7	10.2
60°-70°	96.0	6.6
70°-80°	34.0	2.3
80°-90°	3.9	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°	690.1	47.4
0°-40°	972.1	66.7
0°-60°	1323.1	90.8
0°-90°	1457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1457.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1008	1008	1008	1008	1008	
5°	981	994	1020	1000	981	91
15°	848	903	994	906	848	238
25°	696	742	833	746	700	316
35°	454	481	370	486	464	292
45°	362	320	70	324	372	277
55°	245	218	20	221	247	220
65°	146	136	9	137	151	144
75°	49	40	3	40	49	55
85°	6	3	0	3	5	7
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°	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0
2.5°	998.9	991.4	997.4	991.4	992.8	998.9	1000.5	1003.5	1005.0	1000.5	1000.5
5°	980.7	973.0	980.7	974.6	977.6	985.2	986.8	992.8	995.9	994.4	997.4
7.5°	947.2	941.1	948.7	944.1	948.7	959.3	963.9	971.6	977.6	980.7	985.2
10°	910.6	904.5	912.2	907.6	915.2	927.4	932.0	941.1	950.2	957.8	965.4
12.5°	878.6	872.6	877.2	875.6	883.2	893.8	901.5	912.2	922.8	930.4	941.1
15°	848.1	842.1	848.1	845.1	851.2	863.4	871.0	881.7	893.8	903.0	915.2
17.5°	813.2	807.1	811.7	810.1	816.2	826.9	834.5	845.1	857.4	868.0	880.2
20°	776.6	770.5	775.1	772.1	778.2	790.3	796.4	808.5	819.2	829.9	840.6
22.5°	738.5	732.5	738.5	733.9	743.2	750.7	756.8	769.0	778.2	788.8	798.0
25°	695.9	689.8	694.3	691.3	697.5	706.6	711.1	723.4	730.9	741.6	750.7
27.5°	642.6	635.0	644.1	638.1	645.6	653.3	657.9	668.5	677.7	686.8	694.3
30°	578.7	572.6	581.7	577.1	586.3	592.4	598.5	609.1	616.7	627.4	628.9
32.5°	511.6	508.6	516.2	513.2	522.3	528.4	533.0	543.7	549.7	555.8	551.2
35°	453.8	450.7	458.4	456.8	464.5	469.0	473.6	479.7	479.7	481.2	469.0
37.5°	418.8	417.2	423.3	421.8	427.9	432.5	432.5	434.0	430.9	423.3	405.1
40°	400.5	399.0	403.5	402.0	406.6	408.1	406.6	403.5	394.4	379.2	354.8
42.5°	385.3	382.2	385.3	383.8	386.8	388.3	383.8	379.2	367.0	348.7	319.8
45°	362.4	359.4	364.0	360.9	364.0	364.0	359.4	353.3	339.6	319.8	289.3
47.5°	335.0	331.9	336.5	333.5	336.5	336.5	331.9	325.8	312.1	292.4	261.9
50°	304.6	301.5	304.6	303.0	306.0	307.6	301.5	296.9	284.8	266.4	236.1
52.5°	274.1	271.1	274.1	274.1	275.7	275.7	271.1	268.0	257.3	240.6	213.2
55°	245.2	242.1	246.6	245.2	246.6	246.6	242.1	239.1	231.4	217.7	191.8
57.5°	217.7	216.3	219.3	217.7	217.7	217.7	214.7	213.2	207.1	194.9	173.6
60°	193.4	190.4	191.8	191.8	191.8	193.4	190.4	188.8	184.3	175.1	155.3
62.5°	169.0	167.5	169.0	167.5	167.5	169.0	167.5	166.0	162.9	155.3	138.6
65°	146.2	143.1	146.2	144.7	144.7	144.7	143.1	143.1	140.1	135.6	120.3
67.5°	121.8	120.3	121.8	120.3	118.8	118.8	117.2	117.2	115.8	112.7	99.0
70°	97.4	94.4	96.0	92.9	94.4	91.4	91.4	89.8	88.3	86.8	76.2
72.5°	71.6	70.1	70.1	67.0	67.0	65.5	63.9	63.9	62.4	62.4	54.8
75°	48.7	48.7	47.2	44.1	45.7	42.6	42.6	42.6	41.1	39.6	35.0
77.5°	32.0	30.5	30.5	28.9	28.9	25.9	27.4	25.9	25.9	24.4	21.3
80°	18.2	18.2	18.2	16.8	16.8	15.2	15.2	15.2	13.7	13.7	12.2
82.5°	10.7	10.7	10.7	9.1	9.1	9.1	9.1	7.6	7.6	7.6	6.1
85°	6.1	4.6	4.6	4.6	4.6	4.6	4.6	3.0	3.0	3.0	3.0
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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0
2.5°	1006.6	1005.0	1003.5	1009.6	1011.2	1006.6	1006.6	1011.2	1014.2	1006.6	1005.0
5°	1005.0	1006.6	1006.6	1014.2	1018.7	1015.7	1015.7	1020.3	1023.3	1014.2	1011.2
7.5°	997.4	1002.0	1005.0	1015.7	1023.3	1021.8	1023.3	1027.8	1029.4	1020.3	1015.7
10°	980.7	986.8	992.8	1006.6	1015.7	1017.2	1018.7	1023.3	1026.4	1014.2	1008.0
12.5°	957.8	967.0	976.1	991.4	1002.0	1003.5	1008.0	1011.2	1012.6	1002.0	994.4
15°	932.0	944.1	953.2	970.0	982.2	985.2	989.8	994.4	994.4	982.2	974.6
17.5°	900.0	910.6	922.8	939.5	953.2	956.3	962.4	967.0	967.0	954.8	944.1
20°	860.4	872.6	883.2	901.5	916.7	921.3	927.4	932.0	932.0	921.3	907.6
22.5°	819.2	831.5	842.1	858.8	874.0	878.6	883.2	889.3	887.8	878.6	866.5
25°	770.5	781.2	788.8	805.5	817.8	822.3	828.3	833.0	831.5	822.3	811.7
27.5°	711.1	718.7	720.3	730.9	741.6	746.2	750.7	755.3	753.7	746.2	737.0
30°	642.6	641.1	633.5	633.5	638.1	641.1	644.1	647.2	645.6	641.1	635.0
32.5°	555.8	545.1	525.3	514.7	510.1	510.1	510.1	513.2	511.6	510.1	510.1
35°	462.9	440.1	409.7	386.8	374.6	370.1	367.0	370.1	368.5	370.1	376.1
37.5°	386.8	353.3	312.1	281.7	261.9	252.8	246.6	248.2	248.2	252.8	263.4
40°	330.5	287.8	242.1	204.1	181.3	169.0	161.5	161.5	162.9	169.0	182.7
42.5°	287.8	240.6	190.4	153.8	126.4	114.2	106.6	105.1	106.6	114.2	127.9
45°	254.3	204.1	153.8	114.2	91.4	77.6	71.6	70.1	71.6	79.2	91.4
47.5°	225.4	175.1	127.9	88.3	65.5	54.8	48.7	47.2	50.3	56.4	67.0
50°	201.0	152.2	105.1	70.1	50.3	39.6	35.0	33.5	35.0	41.1	50.3
52.5°	178.1	132.4	88.3	54.8	38.0	30.5	25.9	24.4	25.9	30.5	39.6
55°	159.9	117.2	76.2	45.7	30.5	24.4	21.3	19.8	21.3	24.4	32.0
57.5°	143.1	103.5	65.5	38.0	25.9	19.8	16.8	16.8	16.8	19.8	25.9
60°	127.9	91.4	56.4	32.0	21.3	16.8	13.7	13.7	13.7	16.8	21.3
62.5°	114.2	80.7	48.7	27.4	18.2	13.7	12.2	12.2	12.2	13.7	18.2
65°	97.4	68.5	41.1	22.8	15.2	12.2	10.7	9.1	10.7	12.2	15.2
67.5°	80.7	56.4	33.5	18.2	12.2	9.1	7.6	7.6	7.6	9.1	12.2
70°	62.4	44.1	25.9	13.7	9.1	7.6	6.1	6.1	6.1	7.6	9.1
72.5°	42.6	30.5	18.2	10.7	7.6	6.1	4.6	4.6	4.6	6.1	7.6
75°	27.4	19.8	12.2	7.6	4.6	4.6	3.0	3.0	3.0	4.6	4.6
77.5°	16.8	12.2	7.6	4.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0
80°	9.1	7.6	4.6	3.0	3.0	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	4.6	4.6	3.0	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0	1008.0
2.5°	1005.0	1008.0	1009.6	1003.5	1005.0	1006.6	997.4	998.9	994.4	1003.5	998.9
5°	1009.6	1011.2	1012.6	1003.5	1002.0	1000.5	989.8	988.2	982.2	989.8	985.2
7.5°	1011.2	1008.0	1008.0	994.4	989.8	985.2	971.6	967.0	959.3	962.4	956.3
10°	1003.5	997.4	992.8	976.1	968.5	960.9	944.1	938.0	927.4	928.9	921.3
12.5°	986.8	979.1	971.6	953.2	944.1	933.4	916.7	907.6	896.9	896.9	887.8
15°	965.4	956.3	947.2	928.9	916.7	906.1	886.3	877.2	866.5	864.9	857.4
17.5°	935.0	924.3	915.2	893.8	881.7	869.5	851.2	840.6	829.9	829.9	820.8
20°	898.4	886.3	875.6	855.8	843.6	833.0	811.7	802.5	793.3	791.9	784.2
22.5°	855.8	843.6	834.5	816.2	802.5	791.9	773.5	766.0	756.8	755.3	746.2
25°	802.5	791.9	782.7	767.5	755.3	746.2	729.4	720.3	714.1	714.1	706.6
27.5°	730.9	721.8	720.3	708.1	698.9	692.9	679.1	673.1	665.4	665.4	656.3
30°	635.0	636.5	642.6	639.5	636.5	633.5	621.3	619.7	610.6	609.1	598.5
32.5°	517.8	528.4	545.1	554.3	558.9	561.9	558.9	555.8	548.2	546.7	534.5
35°	392.9	414.2	441.6	459.9	475.1	485.7	490.3	490.3	487.3	485.7	475.1
37.5°	284.8	316.7	353.3	383.8	408.1	427.9	437.0	443.1	443.1	443.1	438.6
40°	208.6	246.6	289.3	328.9	359.4	385.3	399.0	409.7	412.7	417.2	414.2
42.5°	155.3	196.4	242.1	287.8	322.8	351.7	370.1	382.2	389.9	394.4	394.4
45°	118.8	159.9	207.1	255.9	292.4	324.4	342.6	356.3	364.0	370.1	370.1
47.5°	91.4	131.0	178.1	226.9	265.0	296.9	315.3	327.4	335.0	341.1	341.1
50°	71.6	108.1	153.8	201.0	239.1	269.5	286.2	298.5	304.6	309.1	310.7
52.5°	57.8	91.4	135.6	181.3	216.3	243.6	257.3	268.0	274.1	277.1	278.7
55°	47.2	79.2	120.3	161.5	194.9	220.8	233.0	240.6	245.2	248.2	248.2
57.5°	39.6	68.5	106.6	146.2	178.1	197.9	208.6	214.7	217.7	220.8	220.8
60°	33.5	59.4	94.4	131.0	159.9	178.1	185.8	190.4	193.4	194.9	194.9
62.5°	28.9	50.3	82.2	115.8	141.6	158.4	164.5	167.5	169.0	169.0	170.6
65°	24.4	42.6	70.1	100.5	121.8	137.0	141.6	143.1	143.1	144.7	146.2
67.5°	18.2	33.5	56.4	82.2	100.5	112.7	117.2	117.2	117.2	117.2	118.8
70°	15.2	25.9	42.6	62.4	77.6	86.8	89.8	89.8	89.8	89.8	91.4
72.5°	10.7	18.2	30.5	44.1	56.4	62.4	62.4	63.9	62.4	62.4	65.5
75°	7.6	12.2	19.8	28.9	35.0	39.6	41.1	41.1	41.1	41.1	42.6
77.5°	4.6	7.6	12.2	16.8	22.8	24.4	25.9	25.9	25.9	25.9	27.4
80°	3.0	4.6	7.6	10.7	12.2	13.7	15.2	15.2	15.2	15.2	15.2
82.5°	1.6	3.0	4.6	4.6	6.1	7.6	7.6	7.6	7.6	7.6	9.1
85°	0.0	1.6	1.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.6
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 ERM6A15940 6LM121H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1008.0	1008.0	1008.0	1008.0
2.5°	989.8	1000.5	992.8	1000.5
5°	974.6	983.7	974.6	980.7
7.5°	944.1	951.8	942.6	951.8
10°	907.6	915.2	906.1	913.6
12.5°	874.0	880.2	871.0	880.2
15°	843.6	849.7	840.6	848.1
17.5°	808.5	813.2	805.5	813.2
20°	772.1	776.6	770.5	778.2
22.5°	735.5	741.6	733.9	741.6
25°	694.3	698.9	691.3	700.5
27.5°	645.6	648.7	641.1	645.6
30°	586.3	587.8	581.7	590.8
32.5°	523.9	523.9	514.7	523.9
35°	465.9	464.5	458.4	464.5
37.5°	429.5	429.5	424.9	427.9
40°	408.1	409.7	403.5	409.7
42.5°	389.9	392.9	388.3	392.9
45°	367.0	370.1	365.5	371.5
47.5°	338.1	341.1	338.1	342.6
50°	306.0	309.1	306.0	310.7
52.5°	274.1	277.1	274.1	277.1
55°	245.2	246.6	243.6	246.6
57.5°	217.7	219.3	216.3	219.3
60°	191.8	194.9	191.8	194.9
62.5°	169.0	170.6	170.6	172.0
65°	144.7	150.8	149.2	150.8
67.5°	120.3	124.9	124.9	126.4
70°	92.9	96.0	99.0	100.5
72.5°	65.5	70.1	71.6	73.1
75°	42.6	47.2	47.2	48.7
77.5°	27.4	30.5	30.5	30.5
80°	16.8	18.2	16.8	18.2
82.5°	9.1	9.1	9.1	10.7
85°	4.6	4.6	4.6	4.6
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)