

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: P179928

Luminaire Tested: **LDA6A55927D010TE LARH30NF 6LAL1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179928
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26690)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55927D010TE LARH30NF 6LAL1LI 30°
Description: PORTFOLIO 6" Lensed Adjustable, Self-flanged, 30° Narrow Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3823.1 lumens
Efficiency: N/A
Efficacy: 62.7 lumens/watt
Spacing Criteria (0/90/45): 2.55 / 0.46 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

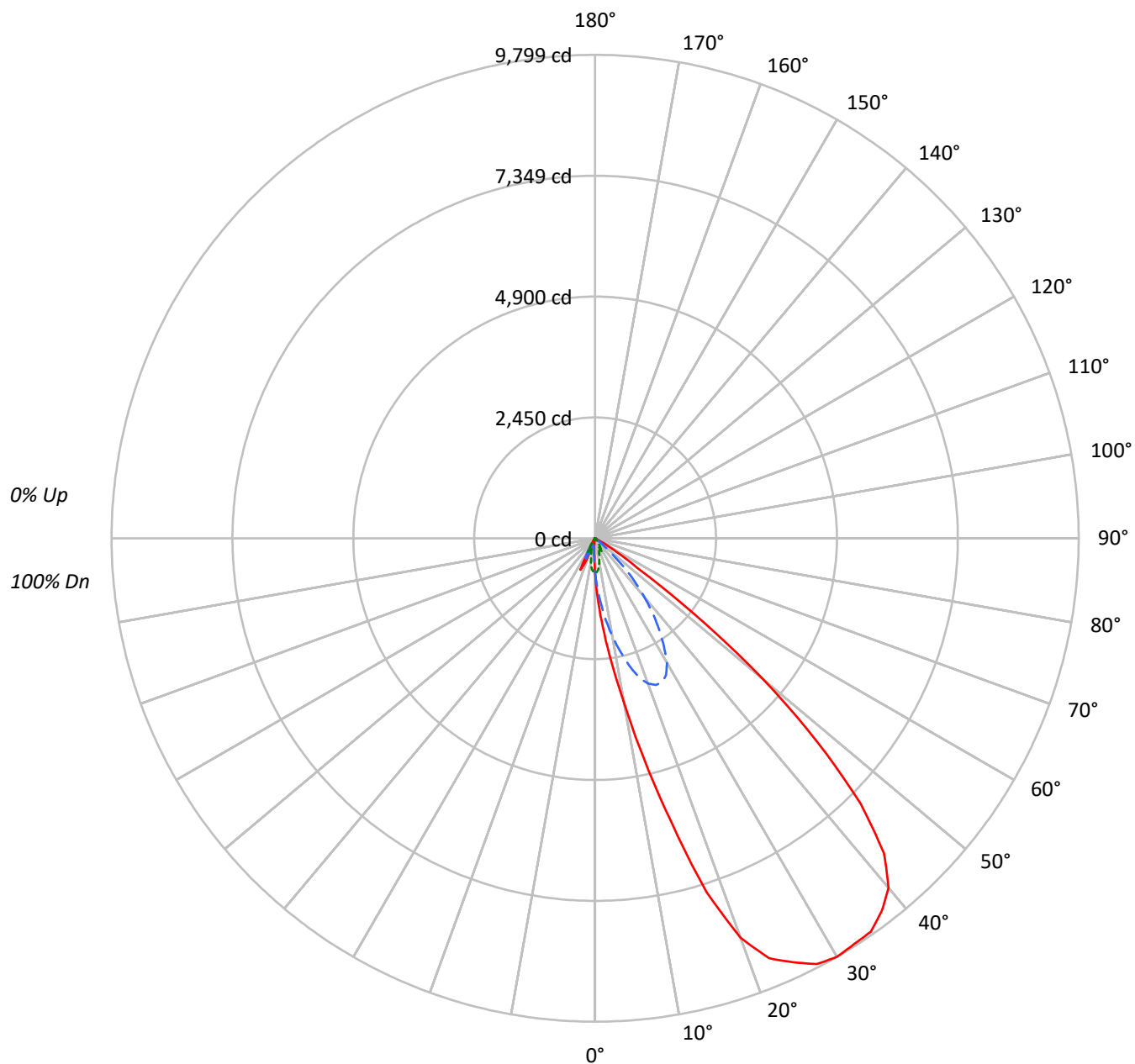
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20							
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						
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91						
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81						
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	77	75	73						
4	91	82	75	70	89	81	74	69	78	73	68	76	71	68	74	70	67	65						
5	85	74	67	62	83	73	67	62	72	66	61	70	64	60	68	63	60	58						
6	79	68	60	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52						
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47						
8	69	57	49	44	67	56	49	44	55	49	44	54	48	44	53	48	44	42						
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39	38						
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34						

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	38522	38522	38522
5°	99455	35703	11160
10°	188668	27243	3752
15°	337352	17713	3740
20°	502673	12047	6808
25°	573559	15031	42777
30°	620273	12553	12793
35°	651563	6110	4009
40°	661869	2197	2032
45°	589689	1450	1217
50°	378725	1023	827
55°	99705	717	430
60°	22235	735	329
65°	2140	869	389
70°	721	1074	481
75°	148	1419	784
80°	0	2368	1168
85°	0	4214	1887



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.3	2.2
10°-20°	445.4	11.6
20°-30°	1045.0	27.3
30°-40°	1202.0	31.4
40°-50°	853.8	22.3
50°-60°	173.6	4.5
60°-70°	8.7	0.2
70°-80°	5.2	0.1
80°-90°	4.3	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°	1575.7	41.2
0°-40°	2777.6	72.7
0°-60°	3805.0	99.5
0°-90°	3823.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3823.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	703	703	703	703	703	
5°	1807	1307	649	260	203	220
15°	5944	2672	312	70	66	1783
25°	9482	3219	248	543	707	4370
35°	9736	2260	91	67	60	6048
45°	7606	804	19	20	16	5605
55°	1043	21	8	8	4	1407
65°	16	6	7	6	3	40
75°	1	4	7	6	4	2
85°	0	4	7	5	3	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7
2.5°	1210.8	1174.2	1156.2	1155.4	1103.1	1120.3	1103.1	1089.6	1040.9	1020.7	987.1
5°	1807.3	1762.4	1726.4	1710.7	1620.9	1601.5	1592.5	1546.8	1445.1	1385.9	1307.4
7.5°	2510.7	2463.6	2404.4	2357.3	2227.1	2190.4	2166.5	2087.9	1937.5	1818.5	1671.8
10°	3389.3	3361.6	3265.8	3179.0	2981.4	2905.1	2833.2	2649.9	2453.1	2214.4	2025.0
12.5°	4572.4	4507.3	4336.7	4163.0	3853.2	3739.5	3620.5	3327.1	3026.3	2652.1	2339.3
15°	5944.1	5888.7	5626.1	5343.2	4902.4	4715.3	4529.0	4067.3	3604.8	3122.8	2672.3
17.5°	7523.1	7418.4	7157.2	6679.0	6062.4	5768.3	5421.0	4832.8	4165.3	3510.5	2950.7
20°	8616.5	8554.3	8333.6	7874.8	7172.9	6784.5	6353.5	5546.0	4633.0	3821.1	3133.3
22.5°	9214.4	9152.3	8986.9	8582.0	8006.6	7616.7	7116.0	6123.0	4986.2	4029.8	3219.4
25°	9482.3	9441.9	9351.3	9021.3	8488.5	8137.5	7663.8	6521.8	5207.0	4124.9	3218.6
27.5°	9730.0	9740.5	9516.7	9245.1	8754.2	8401.7	7952.7	6701.4	5250.4	4077.0	3115.4
30°	9798.8	9772.6	9674.6	9292.2	8835.0	8451.1	7969.9	6606.4	5081.3	3865.2	2910.3
32.5°	9756.2	9756.9	9664.9	9258.5	8721.2	8291.7	7750.6	6265.9	4752.0	3532.9	2591.5
35°	9736.0	9729.2	9490.5	9133.6	8451.1	7945.9	7264.2	5719.6	4295.5	3108.6	2260.0
37.5°	9535.4	9495.0	9322.9	8838.7	7945.9	7300.1	6566.0	5051.3	3733.5	2667.1	1920.3
40°	9248.8	9197.9	8918.0	8223.6	7082.3	6361.7	5632.1	4294.8	3145.3	2227.8	1541.6
42.5°	8661.4	8577.5	8153.2	7232.0	5970.3	5299.8	4695.1	3537.4	2571.3	1808.8	1183.9
45°	7606.2	7469.2	6881.8	5919.4	4819.3	4293.3	3782.1	2835.5	2058.7	1347.0	803.7
47.5°	6107.3	5957.6	5424.8	4651.7	3773.2	3346.6	2912.6	2087.9	1392.7	785.0	403.4
50°	4440.7	4337.4	3866.7	3214.9	2495.0	2137.3	1804.3	1164.4	668.3	379.4	165.4
52.5°	2558.6	2484.5	2156.7	1692.0	1227.3	1027.5	826.2	508.1	340.5	150.4	53.1
55°	1043.2	1000.5	856.9	725.9	544.8	470.7	392.9	253.7	114.5	35.9	21.0
57.5°	510.4	505.1	421.3	337.5	248.5	200.6	151.2	50.9	27.7	18.0	13.5
60°	202.8	195.3	134.0	77.8	43.4	35.2	29.9	21.0	15.7	12.0	9.7
62.5°	35.2	34.4	29.2	24.7	20.2	18.0	16.5	12.7	10.5	8.2	7.5
65°	16.5	16.5	15.0	13.5	11.2	10.5	9.7	8.2	6.7	6.0	6.0
67.5°	8.2	8.2	7.5	6.7	6.0	6.0	5.2	5.2	4.5	4.5	4.5
70°	4.5	4.5	4.5	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7
72.5°	3.0	3.0	3.0	2.2	1.5	2.2	2.2	2.2	3.0	3.7	3.7
75°	0.7	0.7	0.7	1.5	1.5	1.5	2.2	2.2	3.0	3.7	3.7
77.5°	0.7	0.7	0.7	0.7	1.5	1.5	1.5	2.2	3.0	3.7	3.7
80°	0.0	0.7	0.7	0.7	1.5	1.5	1.5	2.2	3.0	3.7	3.7
82.5°	0.0	0.0	0.7	0.7	1.5	1.5	1.5	2.2	3.0	3.7	3.7
85°	0.0	0.0	0.7	0.7	1.5	1.5	1.5	2.2	3.0	3.7	3.7
87.5°	0.0	0.0	0.7	0.7	1.5	1.5	1.5	2.2	3.0	3.7	3.7
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7
2.5°	972.1	933.2	907.7	862.8	844.1	835.9	794.7	755.1	716.9	689.2	646.6
5°	1247.5	1185.4	1090.3	1001.3	962.4	937.7	856.9	782.0	710.9	648.8	574.7
7.5°	1543.8	1415.9	1266.9	1124.0	1056.7	1011.8	886.8	777.5	675.8	581.5	480.4
10°	1828.2	1626.9	1409.9	1205.6	1114.3	1046.9	883.8	743.9	611.4	489.4	380.9
12.5°	2070.7	1810.2	1522.1	1257.2	1138.2	1052.2	856.1	685.5	524.6	393.6	299.3
15°	2275.0	1950.9	1596.2	1274.4	1131.5	1029.7	802.2	605.4	429.6	312.1	241.7
17.5°	2418.7	2019.0	1613.4	1245.2	1084.4	966.9	720.7	502.9	337.5	252.2	190.8
20°	2502.5	2028.0	1571.5	1174.2	1002.0	877.8	618.1	395.1	273.9	206.5	148.2
22.5°	2515.2	1983.9	1489.2	1078.4	907.0	787.3	514.9	330.8	249.2	193.1	145.2
25°	2453.8	1896.3	1382.2	984.8	820.9	698.2	445.3	334.5	279.9	248.5	258.2
27.5°	2334.8	1751.9	1259.5	889.0	731.1	606.9	420.6	350.2	305.3	310.6	328.5
30°	2152.2	1548.3	1082.9	726.6	559.8	462.5	334.5	252.2	209.5	198.3	199.1
32.5°	1883.6	1293.1	850.1	504.4	376.4	312.1	211.8	140.7	141.4	131.0	130.2
35°	1576.8	1040.9	636.1	338.3	260.4	217.0	125.0	98.8	95.0	91.3	86.1
37.5°	1272.9	804.5	423.6	231.2	166.1	120.5	62.9	51.6	47.9	44.9	44.9
40°	969.1	562.8	261.9	121.2	67.4	49.4	37.4	31.4	30.7	30.7	29.9
42.5°	703.4	332.3	142.2	47.9	37.4	32.9	26.2	23.2	23.2	23.2	23.2
45°	374.2	169.1	54.6	29.9	24.7	23.2	19.5	18.0	18.0	18.7	18.7
47.5°	172.9	63.6	27.7	20.2	17.2	17.2	15.0	14.2	14.2	15.0	15.0
50°	62.1	26.2	18.0	14.2	12.7	13.5	12.0	11.2	12.0	12.0	12.0
52.5°	23.9	16.5	12.7	11.2	9.7	10.5	9.0	9.0	9.7	9.7	9.7
55°	15.0	12.0	9.7	8.2	7.5	8.2	7.5	7.5	7.5	7.5	7.5
57.5°	10.5	9.0	7.5	6.7	6.0	6.7	6.7	6.7	6.7	6.7	6.7
60°	8.2	6.7	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.7	6.7
62.5°	6.7	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.7	6.7	6.7
65°	6.0	5.2	6.0	6.0	5.2	6.0	6.0	6.0	6.7	6.7	7.5
67.5°	4.5	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	6.7
70°	4.5	4.5	5.2	5.2	5.2	5.2	6.0	6.0	6.7	6.7	6.7
72.5°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.0	6.7	6.7	6.7
75°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.0	6.7	6.7	6.7
77.5°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	6.7	6.7
80°	4.5	5.2	5.2	6.0	6.0	6.0	6.0	6.7	6.7	7.5	7.5
82.5°	4.5	5.2	5.2	6.0	6.0	6.0	6.0	6.7	6.7	7.5	7.5
85°	4.5	5.2	5.2	6.0	6.0	6.0	6.0	6.7	6.7	6.7	6.7
87.5°	4.5	5.2	5.2	6.0	6.0	6.0	6.0	6.0	6.7	6.7	6.7
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7
2.5°	618.1	581.5	544.8	526.8	511.1	488.7	460.2	437.0	412.3	399.6	370.4
5°	516.4	453.5	400.4	374.9	355.5	328.5	299.3	278.4	259.7	249.2	230.5
7.5°	399.6	339.7	293.4	273.9	259.7	232.7	211.0	189.3	169.9	155.7	136.9
10°	309.1	262.7	224.5	205.8	190.1	161.6	135.5	115.2	94.3	80.1	74.1
12.5°	245.5	202.1	163.1	144.4	128.0	98.8	79.3	75.6	71.8	70.3	68.1
15°	188.6	148.9	107.8	89.1	82.3	78.6	74.1	73.3	70.3	70.3	68.1
17.5°	141.4	97.3	82.3	80.8	80.1	78.6	76.3	75.6	74.8	74.8	74.1
20°	101.8	94.3	92.0	93.5	94.3	95.8	95.0	95.0	98.0	104.8	103.3
22.5°	142.9	154.9	167.6	172.1	188.6	205.0	220.0	238.7	282.9	333.8	345.7
25°	282.9	318.8	351.7	369.7	396.6	433.3	468.5	511.9	542.6	568.0	597.2
27.5°	351.7	365.2	360.0	362.2	359.2	354.0	355.5	364.4	360.0	346.5	351.7
30°	208.0	218.5	212.5	215.5	207.3	207.3	205.0	209.5	206.5	201.3	199.8
32.5°	135.5	141.4	140.7	140.7	137.7	136.2	131.0	129.5	124.2	114.5	112.3
35°	81.6	77.8	74.1	71.8	70.3	70.3	69.6	69.6	67.4	65.1	64.4
37.5°	44.2	44.9	44.9	44.9	44.9	46.4	45.6	45.6	45.6	44.2	44.2
40°	30.7	32.2	32.2	32.2	32.9	32.9	32.9	33.7	32.9	32.9	32.9
42.5°	23.9	24.7	23.9	23.9	24.7	24.7	24.7	25.4	25.4	25.4	24.7
45°	19.5	19.5	18.7	19.5	19.5	20.2	20.2	20.2	20.2	19.5	19.5
47.5°	15.7	15.7	15.7	15.7	16.5	16.5	16.5	16.5	16.5	16.5	16.5
50°	12.7	12.7	12.7	13.5	13.5	13.5	12.7	13.5	13.5	13.5	12.7
52.5°	9.7	9.7	9.7	9.7	9.7	9.0	9.0	9.0	9.0	9.0	8.2
55°	7.5	7.5	7.5	7.5	7.5	8.2	7.5	8.2	7.5	7.5	6.7
57.5°	6.7	6.7	6.7	6.7	7.5	7.5	6.7	6.7	6.7	6.0	6.0
60°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.0	5.2	5.2
62.5°	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	6.0	5.2	5.2
65°	7.5	7.5	6.7	7.5	7.5	6.7	6.7	6.0	6.0	5.2	5.2
67.5°	7.5	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.0	6.0	5.2
70°	7.5	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.0	6.0	5.2
72.5°	7.5	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.7	6.0	5.2
75°	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.7	6.0	6.0	5.2
77.5°	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.7	6.0	6.0	5.2
80°	7.5	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.0	6.0	5.2
82.5°	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.7	6.0	6.0	5.2
85°	7.5	6.7	6.7	6.7	6.7	6.7	6.0	6.0	5.2	5.2	4.5
87.5°	6.7	6.7	6.7	6.7	6.7	6.0	6.0	5.2	4.5	3.7	3.7
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: LDA6A55927D010TE LARH30NF 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	702.7	702.7	702.7	702.7	702.7	702.7	702.7	702.7
2.5°	370.4	363.7	360.7	355.5	351.0	348.7	340.5	350.2
5°	226.7	218.5	216.3	211.8	206.5	203.6	197.6	202.8
7.5°	129.5	119.7	115.2	111.5	106.3	101.8	96.5	99.5
10°	72.6	69.6	70.3	68.1	67.4	66.6	65.9	67.4
12.5°	67.4	65.1	65.9	64.4	63.6	63.6	62.9	63.6
15°	68.1	65.9	67.4	65.9	65.1	65.1	64.4	65.9
17.5°	74.1	72.6	74.1	72.6	73.3	72.6	73.3	74.1
20°	104.0	106.3	110.8	107.8	110.0	113.0	116.7	116.7
22.5°	365.9	413.8	419.8	443.8	505.1	502.9	544.0	545.5
25°	639.1	642.1	669.0	660.0	660.8	692.2	689.2	707.2
27.5°	367.4	366.7	371.9	362.2	365.2	367.4	359.2	368.9
30°	205.0	201.3	203.6	198.3	198.3	199.8	197.6	202.1
32.5°	113.7	110.8	110.8	107.0	106.3	105.5	103.3	105.5
35°	65.1	62.9	63.6	62.1	60.6	59.9	59.1	59.9
37.5°	44.9	43.4	44.2	42.7	41.2	40.4	39.7	40.4
40°	32.9	32.2	32.2	30.7	29.9	29.2	28.4	28.4
42.5°	24.7	23.9	23.9	22.5	21.7	21.0	20.2	21.0
45°	18.7	18.0	18.0	17.2	16.5	15.7	15.7	15.7
47.5°	16.5	15.7	16.5	15.7	15.0	15.0	15.0	15.0
50°	12.7	12.7	12.7	12.0	11.2	11.2	10.5	9.7
52.5°	8.2	7.5	7.5	6.7	6.7	6.0	6.0	6.0
55°	6.7	6.0	6.0	5.2	5.2	4.5	4.5	4.5
57.5°	5.2	5.2	4.5	4.5	3.7	3.7	3.7	3.7
60°	4.5	4.5	4.5	3.7	3.7	3.0	3.0	3.0
62.5°	4.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0
65°	4.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0
67.5°	4.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0
70°	5.2	4.5	4.5	3.7	3.7	3.7	3.0	3.0
72.5°	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
75°	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
77.5°	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
80°	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
82.5°	4.5	4.5	4.5	3.7	3.7	3.7	3.7	3.7
85°	4.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0
87.5°	3.0	3.0	2.2	2.2	2.2	1.5	1.5	1.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)