

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: P179632

Luminaire Tested: **LDA6A45927D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179632
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26669)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A45927D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2942.0 lumens
Efficiency: N/A
Efficacy: 55.5 lumens/watt
Spacing Criteria (0/90/45): 2.14 / 1.07 / 1.49
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

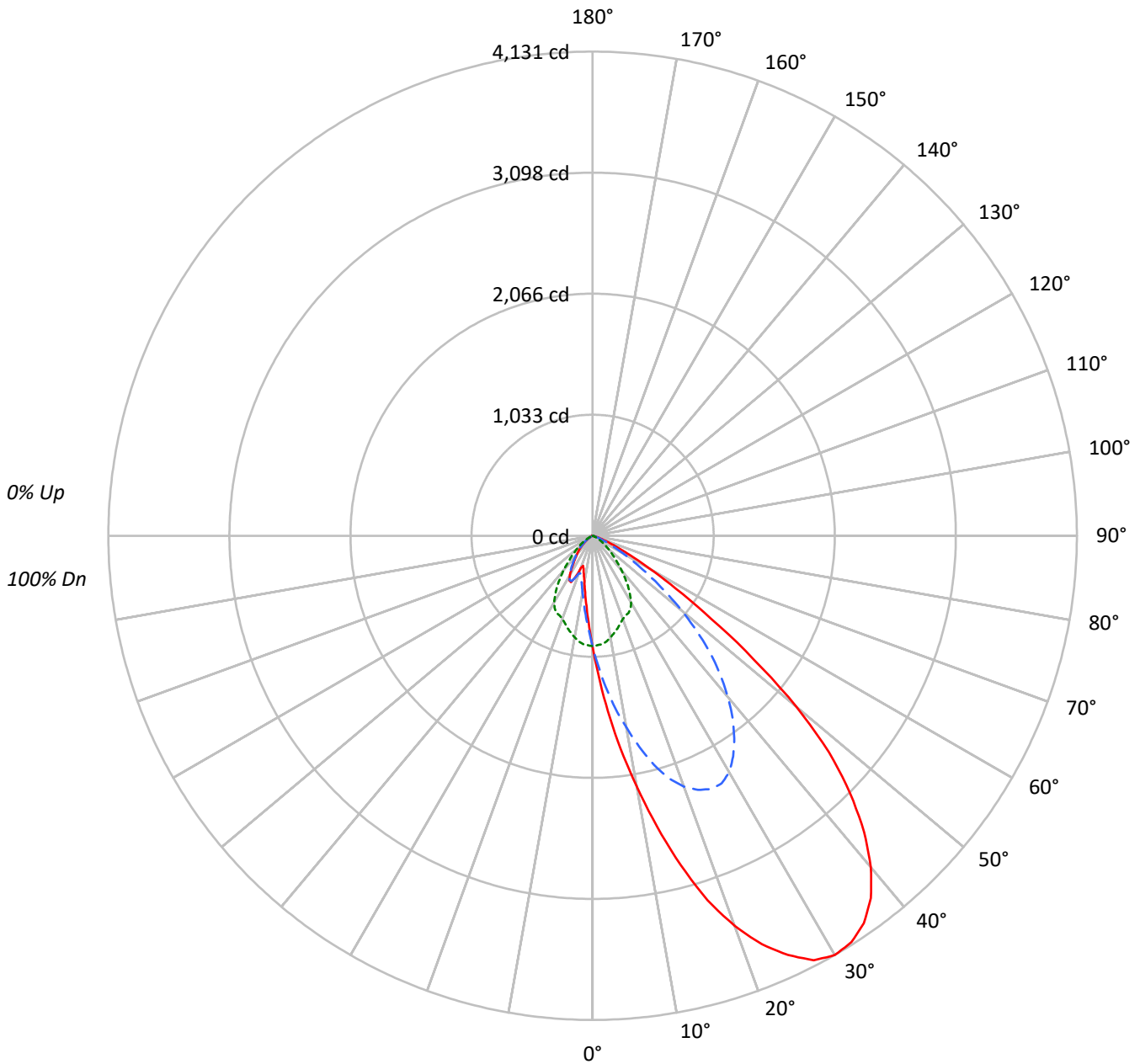
Input Watts (W): 53
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	105	102	109	106	103	100	102	100	97	98	96	94	95	93	92	90								
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70								
4	89	79	72	66	87	78	71	66	76	70	65	74	68	64	71	67	64	62								
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55								
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	49								
7	72	59	52	46	70	59	51	46	57	51	46	56	50	45	55	49	45	43								
8	67	54	47	41	65	54	46	41	53	46	41	51	45	41	50	45	41	39								
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35								
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	37	33	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	51657	51657	51657
5°	82687	51007	33073
10°	120817	48986	22289
15°	165188	46453	16839
20°	206652	43987	16994
25°	238719	43841	26360
30°	261502	41500	24523
35°	270035	35181	18926
40°	264281	27444	14906
45°	240901	20258	11443
50°	193631	14942	7667
55°	117903	10580	4330
60°	61179	6995	1688
65°	29809	3684	791
70°	13672	1603	737
75°	5698	1144	805
80°	2904	1200	979
85°	1950	2390	1447



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.7	3.3
10°-20°	342.4	11.6
20°-30°	648.3	22.0
30°-40°	785.2	26.7
40°-50°	657.2	22.3
50°-60°	318.5	10.8
60°-70°	78.1	2.7
70°-80°	12.7	0.4
80°-90°	3.1	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°	1087.4	37.0
0°-40°	1872.6	63.6
0°-60°	2848.2	96.8
0°-90°	2942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2942.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	942	942	942	942	942	
5°	1503	1294	927	678	601	164
15°	2911	2024	818	374	297	840
25°	3947	2384	725	427	436	1818
35°	4035	2107	526	304	283	2501
45°	3107	1421	261	159	148	2358
55°	1234	583	111	60	45	1156
65°	230	128	28	9	6	259
75°	27	14	5	5	4	36
85°	3	2	4	3	2	4
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°	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3
2.5°	1195.9	1168.2	1174.4	1179.0	1158.2	1171.3	1149.0	1141.3	1122.9	1127.5	1113.7
5°	1502.6	1464.1	1452.6	1452.6	1418.0	1429.5	1409.6	1374.2	1338.1	1327.3	1294.3
7.5°	1832.3	1790.0	1771.6	1763.9	1713.1	1706.2	1689.3	1634.7	1575.6	1544.1	1485.6
10°	2170.4	2132.0	2105.9	2088.2	2018.3	2006.0	1976.0	1899.1	1824.6	1757.0	1660.9
12.5°	2543.2	2491.7	2457.1	2427.9	2338.0	2318.8	2274.2	2171.2	2053.6	1972.2	1845.3
15°	2910.6	2858.3	2813.0	2770.7	2661.6	2633.9	2573.9	2443.3	2305.7	2184.3	2023.6
17.5°	3260.3	3194.2	3138.8	3082.0	2953.6	2919.0	2840.6	2695.4	2503.2	2365.7	2172.0
20°	3542.3	3477.8	3414.0	3341.7	3194.9	3153.4	3058.1	2886.0	2667.7	2502.5	2276.5
22.5°	3772.9	3699.9	3636.9	3542.3	3377.1	3328.7	3218.8	3023.6	2787.6	2594.7	2346.4
25°	3946.6	3869.0	3804.4	3698.4	3515.4	3459.3	3331.0	3119.6	2862.2	2650.0	2384.1
27.5°	4083.4	3994.3	3921.2	3803.7	3602.3	3539.3	3398.6	3170.4	2892.1	2660.8	2382.6
30°	4131.1	4044.2	3962.0	3835.2	3618.4	3548.5	3402.5	3155.0	2865.2	2616.2	2329.5
32.5°	4110.3	4020.4	3931.2	3796.7	3567.7	3492.4	3344.8	3080.4	2783.0	2520.9	2231.9
35°	4035.0	3943.5	3848.2	3709.1	3469.3	3387.9	3240.3	2966.7	2657.7	2395.6	2106.6
37.5°	3898.2	3806.7	3716.8	3566.9	3321.8	3237.2	3092.0	2808.4	2507.1	2242.7	1961.4
40°	3693.0	3602.3	3519.3	3367.9	3121.2	3035.9	2898.3	2617.0	2326.5	2065.1	1794.6
42.5°	3428.6	3341.7	3267.2	3118.9	2877.5	2796.1	2666.9	2394.9	2123.6	1870.7	1616.3
45°	3107.3	3028.2	2959.8	2819.9	2597.0	2518.6	2404.1	2146.6	1893.8	1657.0	1421.1
47.5°	2736.9	2664.6	2604.7	2475.6	2268.8	2197.3	2099.0	1859.9	1634.0	1418.0	1208.2
50°	2270.4	2207.3	2165.8	2054.4	1869.9	1810.0	1733.9	1532.5	1347.3	1161.3	987.6
52.5°	1732.4	1683.2	1664.0	1580.2	1437.2	1395.7	1346.5	1192.1	1056.8	910.0	774.7
55°	1233.6	1201.3	1189.0	1134.4	1040.6	1013.7	971.5	876.2	786.2	682.5	582.6
57.5°	840.0	823.1	813.9	780.1	722.5	704.0	680.2	618.7	561.1	493.4	421.9
60°	558.0	551.1	543.4	522.6	488.8	475.0	463.4	422.7	387.4	345.1	295.1
62.5°	362.0	358.9	353.5	340.5	327.4	318.2	305.9	279.0	258.2	236.7	199.1
65°	229.8	226.7	224.4	216.0	207.5	198.3	193.7	178.3	165.2	151.4	127.6
67.5°	142.2	139.9	139.1	133.7	127.6	122.2	119.1	109.1	101.5	93.0	77.6
70°	85.3	84.5	83.0	79.9	76.1	72.2	70.7	63.8	59.2	53.8	43.8
72.5°	49.2	48.4	47.7	45.3	43.0	41.5	40.0	37.7	32.3	29.2	24.6
75°	26.9	26.9	26.1	24.6	23.8	22.3	21.5	20.0	17.7	16.1	13.8
77.5°	15.4	14.6	14.6	13.8	13.1	13.1	12.3	11.5	10.0	10.0	8.5
80°	9.2	9.2	9.2	8.5	8.5	8.5	7.7	7.7	6.9	6.1	6.1
82.5°	6.1	5.4	5.4	5.4	5.4	5.4	4.6	4.6	4.6	4.6	3.8
85°	3.1	3.1	3.1	3.1	2.3	3.1	2.3	2.3	2.3	2.3	2.3
87.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.5	1.5	1.5	2.3
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°	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3
2.5°	1077.5	1069.8	1054.5	1033.0	1025.3	1020.7	995.3	972.2	956.1	935.3	915.4
5°	1234.3	1205.9	1169.0	1124.4	1106.7	1091.4	1044.5	1001.4	966.1	926.9	890.0
7.5°	1396.5	1343.5	1281.2	1210.5	1181.3	1154.4	1083.7	1019.9	965.3	909.2	856.2
10°	1548.7	1468.0	1378.0	1283.5	1239.7	1200.5	1106.7	1024.5	952.3	880.0	814.7
12.5°	1697.8	1587.9	1468.7	1347.3	1290.4	1239.7	1123.6	1023.0	933.8	849.3	773.9
15°	1841.5	1699.3	1552.5	1403.4	1335.0	1272.8	1135.2	1017.6	914.6	818.5	734.8
17.5°	1957.5	1790.0	1612.5	1437.2	1360.4	1288.1	1133.6	1002.2	888.5	783.9	694.8
20°	2039.0	1846.1	1648.6	1452.6	1368.8	1288.9	1122.1	981.5	861.6	754.0	664.0
22.5°	2085.1	1872.2	1660.9	1452.6	1362.7	1278.9	1106.0	962.2	841.6	736.3	650.2
25°	2104.3	1876.8	1655.5	1440.3	1347.3	1261.2	1087.5	943.8	825.4	724.8	644.8
27.5°	2089.0	1849.9	1625.5	1406.5	1311.2	1225.1	1052.2	911.5	797.0	700.9	624.8
30°	2027.5	1782.3	1558.7	1341.2	1245.1	1161.3	993.8	857.7	747.8	655.6	583.3
32.5°	1927.6	1683.9	1464.1	1252.0	1156.7	1076.0	916.1	787.0	681.7	594.1	527.2
35°	1806.1	1567.1	1355.0	1148.2	1056.8	979.9	829.3	703.2	606.4	525.7	464.2
37.5°	1669.3	1438.0	1228.2	1038.3	950.7	877.7	737.1	618.7	529.5	455.0	400.4
40°	1515.6	1297.3	1099.8	920.0	837.0	769.3	636.4	531.9	450.4	383.5	337.4
42.5°	1353.5	1149.8	966.1	797.8	719.4	657.9	537.2	444.2	372.8	318.2	281.3
45°	1179.8	991.5	823.1	672.5	607.2	545.7	443.5	358.9	302.8	261.3	233.6
47.5°	994.5	827.7	679.4	548.0	491.1	437.3	351.2	286.7	245.9	214.4	193.7
50°	808.5	667.9	541.8	429.6	381.2	338.2	272.1	228.3	198.3	175.2	158.3
52.5°	631.8	518.0	415.0	323.6	287.4	256.7	211.4	180.6	158.3	140.6	128.4
55°	474.2	384.3	303.6	235.2	213.7	194.4	164.5	139.9	124.5	110.7	101.5
57.5°	343.6	274.4	216.0	172.9	159.1	146.0	124.5	107.6	96.1	85.3	78.4
60°	241.3	190.6	152.9	126.8	116.1	108.4	91.5	80.7	71.5	63.8	56.9
62.5°	162.2	129.1	106.8	89.9	83.0	77.6	66.9	57.6	50.7	44.6	38.4
65°	103.8	86.8	72.2	60.7	56.1	52.3	45.3	37.7	33.0	28.4	23.8
67.5°	63.8	54.6	45.3	37.7	34.6	32.3	27.7	23.1	20.0	16.9	14.6
70°	36.9	31.5	26.1	22.3	20.8	19.2	16.1	13.8	12.3	10.0	8.5
72.5°	20.8	18.4	15.4	13.1	12.3	11.5	10.0	8.5	7.7	6.9	6.1
75°	12.3	10.8	9.2	8.5	7.7	7.7	6.9	6.1	5.4	5.4	4.6
77.5°	7.7	6.9	6.1	6.1	5.4	5.4	5.4	4.6	4.6	4.6	4.6
80°	5.4	5.4	4.6	4.6	4.6	4.6	3.8	3.8	3.8	3.8	3.8
82.5°	3.8	3.8	3.8	3.1	3.1	3.1	3.1	3.1	3.8	3.8	3.8
85°	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1	3.8	3.8	3.8
87.5°	2.3	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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°	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3
2.5°	893.8	884.6	867.7	852.3	850.0	828.5	806.2	801.6	793.9	781.6	767.0
5°	853.1	828.5	799.3	777.8	768.6	737.8	707.1	693.2	677.9	654.1	640.2
7.5°	805.5	769.3	728.6	704.0	690.9	652.5	617.2	597.2	576.4	551.1	534.2
10°	753.2	707.9	660.2	632.5	617.2	575.7	538.0	514.9	492.7	467.3	449.6
12.5°	704.0	652.5	600.3	571.0	554.1	511.1	472.7	448.1	425.8	405.0	384.3
15°	660.2	602.6	548.0	518.8	501.1	457.3	420.4	395.8	374.3	354.3	335.9
17.5°	617.9	558.0	504.2	475.7	458.1	417.3	382.0	359.7	338.9	320.5	304.4
20°	588.7	531.9	481.1	454.2	438.9	402.7	372.8	355.1	340.5	324.3	310.5
22.5°	581.0	530.3	486.5	464.2	452.7	424.3	402.7	392.0	387.4	377.4	369.7
25°	581.0	536.5	499.6	481.1	471.9	450.4	433.5	429.6	426.6	420.4	416.6
27.5°	566.4	524.9	491.9	475.7	468.1	448.8	434.2	429.6	425.8	421.2	416.6
30°	528.0	489.6	458.8	444.2	436.5	418.1	402.7	397.4	393.5	386.6	382.7
32.5°	476.5	439.6	414.3	397.4	390.4	372.8	358.2	352.0	348.9	342.8	335.9
35°	418.9	386.6	362.0	348.2	341.2	325.9	312.8	306.7	303.6	296.7	288.2
37.5°	360.5	331.3	311.3	298.2	292.8	280.5	269.0	264.4	261.3	255.9	249.0
40°	302.8	282.1	264.4	254.4	249.8	239.8	229.8	225.2	222.9	218.3	212.9
42.5°	255.2	238.3	224.4	216.0	212.1	204.4	196.0	191.4	189.1	184.5	180.6
45°	213.7	200.6	189.8	182.2	179.1	172.2	165.2	161.4	159.1	155.3	151.4
47.5°	179.1	167.5	158.3	152.9	149.9	144.5	138.3	134.5	133.0	129.9	126.0
50°	146.8	138.3	130.7	126.0	123.7	118.4	113.0	109.9	108.4	105.3	101.5
52.5°	118.4	112.2	105.3	100.7	98.4	94.5	89.2	86.1	83.8	80.7	76.1
55°	93.0	87.6	82.2	77.6	76.1	71.5	66.9	62.3	59.9	56.9	53.0
57.5°	72.2	66.1	60.7	56.9	55.3	50.7	46.1	41.5	39.2	35.4	33.0
60°	51.5	46.1	40.7	38.4	36.9	32.3	28.4	24.6	23.1	20.8	19.2
62.5°	33.8	30.0	25.4	23.1	22.3	19.2	16.1	15.4	13.8	13.1	12.3
65°	20.8	18.4	15.4	13.8	13.1	12.3	10.8	10.0	9.2	8.5	8.5
67.5°	12.3	11.5	10.0	9.2	8.5	7.7	7.7	6.9	6.9	6.1	6.1
70°	8.5	7.7	6.9	6.1	6.1	6.1	6.1	6.1	6.1	5.4	5.4
72.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
75°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
77.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.8	3.8
80°	3.8	4.6	4.6	4.6	4.6	3.8	3.8	3.8	3.8	3.8	3.8
82.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
85°	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.1	3.1	2.3
87.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.3	2.3	2.3	1.5
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: P179632

CATALOG NUMBER: LDA6A45927D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	942.3	942.3	942.3	942.3	942.3	942.3	942.3	942.3
2.5°	765.5	758.6	751.7	762.4	761.7	750.9	758.6	746.3
5°	632.5	622.5	614.9	621.8	617.9	607.2	611.8	601.0
7.5°	524.2	512.6	503.4	508.8	502.6	492.7	491.1	486.5
10°	438.1	425.8	417.3	421.2	415.0	405.8	403.5	400.4
12.5°	372.8	361.2	353.5	356.6	350.5	342.0	340.5	342.8
15°	322.0	313.6	307.4	309.7	301.3	296.7	295.1	296.7
17.5°	292.8	283.6	279.0	281.3	275.1	270.5	269.8	269.0
20°	305.1	298.2	296.7	300.5	295.9	292.1	294.4	291.3
22.5°	372.0	371.2	372.0	381.2	378.9	377.4	378.9	378.9
25°	418.9	421.9	422.7	432.7	433.5	431.9	435.8	435.8
27.5°	417.3	418.1	417.3	427.3	428.9	425.8	429.6	430.4
30°	380.4	380.4	378.1	386.6	386.6	385.1	386.6	387.4
32.5°	332.0	331.3	330.5	334.3	334.3	332.0	333.6	333.6
35°	286.7	283.6	283.6	285.9	285.1	282.8	283.6	282.8
37.5°	247.5	243.6	243.6	245.2	242.9	240.6	241.3	241.3
40°	211.4	208.3	208.3	210.6	209.1	206.7	208.3	208.3
42.5°	177.5	176.8	176.8	178.3	178.3	176.8	179.1	179.8
45°	149.9	147.6	147.6	149.1	149.1	147.6	148.3	147.6
47.5°	124.5	122.2	122.2	122.2	120.7	118.4	118.4	117.6
50°	99.1	95.3	94.5	94.5	93.0	90.7	90.7	89.9
52.5°	73.8	69.9	69.9	69.2	67.6	66.9	66.1	66.1
55°	50.7	47.7	48.4	46.9	46.9	45.3	46.1	45.3
57.5°	31.5	30.0	30.0	29.2	27.7	26.9	26.9	26.1
60°	18.4	16.9	16.9	16.9	16.1	15.4	15.4	15.4
62.5°	12.3	11.5	11.5	11.5	10.0	10.0	9.2	9.2
65°	7.7	6.9	6.9	6.9	6.1	6.1	6.1	6.1
67.5°	6.1	6.1	5.4	5.4	5.4	5.4	5.4	5.4
70°	5.4	5.4	5.4	5.4	5.4	4.6	4.6	4.6
72.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
75°	4.6	4.6	3.8	4.6	3.8	3.8	3.8	3.8
77.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
80°	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1
82.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
87.5°	2.3	1.5	1.5	1.5	0.8	0.8	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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













(END OF REPORT)