

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: P182693

Luminaire Tested: **LDSQA4A13940D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182693
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26799)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA4A13940D010TE LAR15SP 4LSQA1H 30°
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 15° SPOT, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1369.9 lumens
Efficiency: N/A
Efficacy: 61.5 lumens/watt
Spacing Criteria (0/90/45): 2.24 / 0.6 / 1.1
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

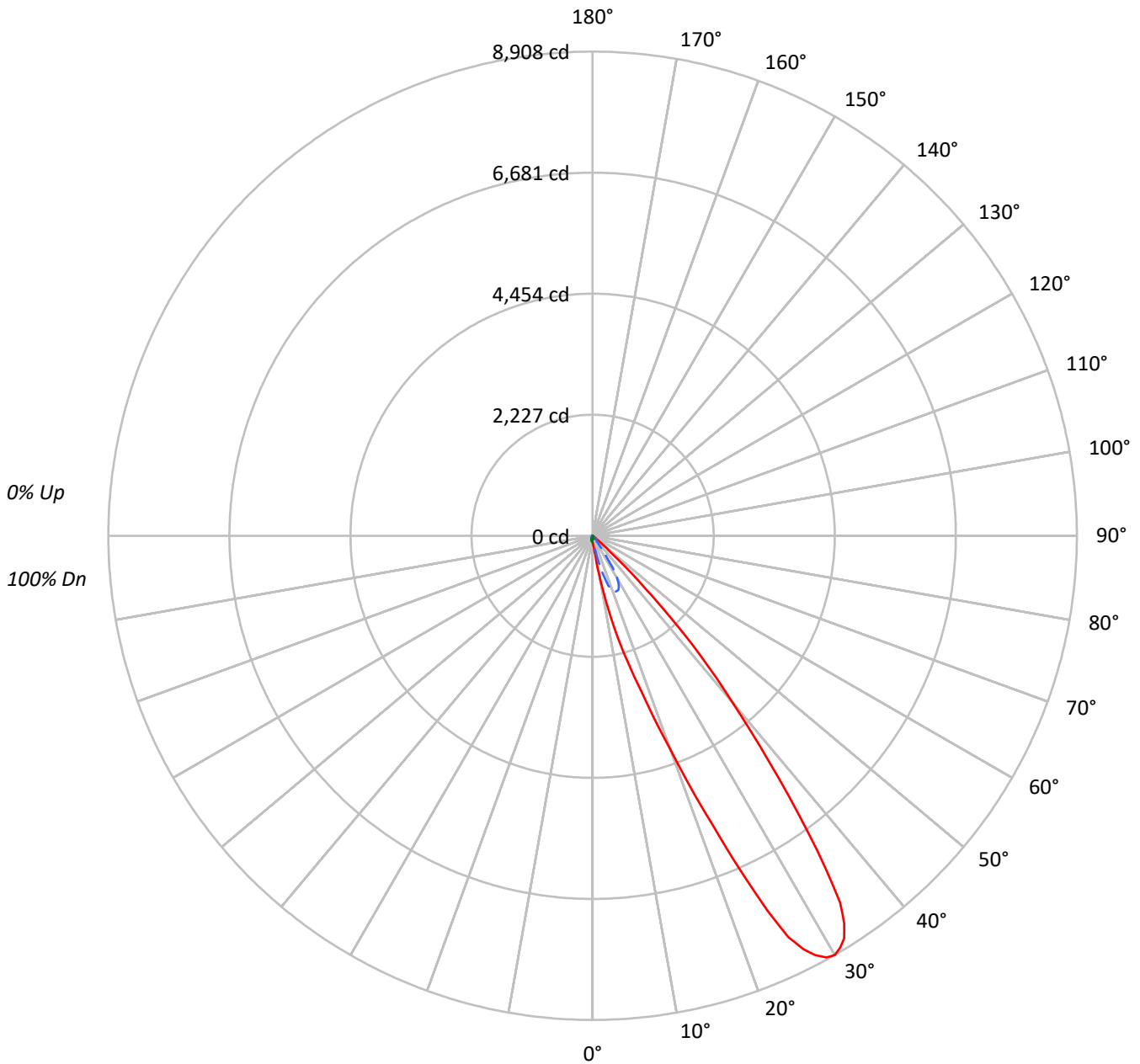
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	93	91																			
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	85	83																			
3	99	92	86	81	97	90	85	80	87	83	79	85	81	78	83	79	77	75																			
4	93	84	77	72	91	83	76	72	80	75	71	78	74	70	76	72	69	67																			
5	87	77	70	65	85	76	69	64	74	68	64	72	67	63	70	66	63	61																			
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55																			
7	76	65	57	52	74	64	57	52	62	56	52	61	56	52	60	55	51	50																			
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38	37																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11441	11441	11441
5°	19050	10794	9219
10°	81254	9463	7997
15°	224897	7522	7091
20°	431371	5320	6340
25°	813328	3549	5590
30°	996479	2371	4900
35°	884974	1585	4187
40°	504381	1075	3490
45°	183981	877	2904
50°	20256	633	2457
55°	2989	473	2027
60°	678	543	1647
65°	481	642	1146
70°	397	793	991
75°	524	1048	786
80°	0	1562	781
85°	0	2334	778



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	14.9	1.1
10°-20°	148.4	10.8
20°-30°	487.6	35.6
30°-40°	534.7	39.0
40°-50°	167.0	12.2
50°-60°	9.1	0.7
60°-70°	3.7	0.3
70°-80°	2.8	0.2
80°-90°	1.7	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°	650.8	47.5
0°-40°	1185.5	86.5
0°-60°	1361.7	99.4
0°-90°	1369.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1369.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	118	118	118	118	118	
5°	196	157	111	98	95	36
15°	2242	721	75	67	71	705
25°	7609	1107	33	41	52	3392
35°	7483	218	13	23	35	4375
45°	1343	23	6	13	21	1233
55°	18	4	3	8	12	28
65°	2	2	3	6	5	2
75°	1	2	3	4	2	1
85°	0	2	2	2	1	0
90°	0	0	0	0	0	



TEST NUMBER: P182693

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
2.5°	145.7	147.1	147.8	144.3	145.0	143.6	145.0	142.1	137.2	138.6	134.4
5°	195.9	193.1	192.3	186.7	185.3	182.4	182.4	176.1	166.9	165.5	157.0
7.5°	346.5	331.7	318.9	299.8	281.4	267.3	261.6	239.0	214.3	205.1	185.3
10°	826.0	823.1	791.3	731.2	661.9	611.7	582.7	495.0	384.0	316.1	245.4
12.5°	1503.4	1489.3	1444.0	1333.7	1214.2	1139.2	1080.5	903.7	739.0	606.7	434.9
15°	2242.4	2185.1	2118.6	1947.5	1779.9	1682.3	1598.9	1386.7	1131.5	941.2	720.6
17.5°	3031.6	3057.0	2895.8	2600.9	2303.2	2150.5	2009.0	1683.0	1403.7	1205.7	957.5
20°	4184.3	4130.5	3846.9	3358.3	2919.1	2663.9	2463.0	1992.8	1571.3	1324.5	1089.7
22.5°	5742.1	5571.0	5018.0	4191.3	3494.8	3140.5	2855.5	2221.9	1712.0	1385.3	1110.9
25°	7609.0	7450.6	6426.6	4992.5	3962.2	3503.3	3115.7	2367.6	1768.6	1395.2	1106.7
26°	8218.6	7983.1	6946.4	5277.5	4105.8	3595.2	3180.1	2395.9	1770.0	1387.4	1088.3
27°	8534.0	8349.4	7376.4	5508.8	4204.1	3653.2	3216.2	2402.9	1755.9	1369.8	1060.0
28°	8741.9	8569.3	7648.6	5660.1	4254.3	3675.8	3226.8	2387.4	1724.1	1338.6	1015.5
29°	8870.6	8688.8	7781.6	5728.7	4257.8	3665.9	3207.0	2346.3	1680.9	1301.2	963.9
30°	8908.1	8711.5	7785.1	5700.4	4205.5	3612.9	3151.1	2279.9	1628.6	1253.8	906.6
31°	8841.6	8638.6	7657.1	5571.7	4098.0	3509.6	3063.4	2192.2	1563.5	1203.6	818.2
32°	8731.3	8461.8	7389.1	5358.1	3950.9	3385.2	2953.8	2096.7	1494.2	1139.9	693.7
33°	8496.5	8171.2	6978.9	5090.1	3774.1	3242.3	2825.8	1990.6	1428.5	1030.3	515.5
34°	8143.6	7732.8	6476.1	4778.3	3574.0	3064.1	2678.7	1892.4	1359.9	885.4	352.9
35°	7483.1	7100.6	5921.0	4445.9	3358.3	2891.6	2516.8	1763.7	1266.5	710.0	217.8
36°	6744.2	6462.7	5382.9	4107.9	3137.7	2712.7	2349.9	1668.9	1128.6	522.6	147.8
37°	5988.9	5739.3	4875.1	3775.5	2916.3	2514.7	2180.2	1561.4	964.6	348.6	118.8
38°	5269.7	5071.7	4392.9	3448.8	2686.5	2307.5	2002.0	1446.8	787.8	224.2	97.6
39°	4609.3	4460.8	3920.5	3132.7	2456.0	2104.5	1830.8	1302.6	601.1	159.8	81.3
40°	3988.4	3883.7	3465.1	2820.9	2226.8	1905.1	1676.0	1127.9	417.2	126.6	65.8
42.5°	2712.7	2686.5	2438.3	2030.2	1654.0	1465.9	1325.2	634.3	160.5	76.4	36.8
45°	1342.9	1361.3	1262.3	1161.2	1082.7	1025.4	835.2	264.5	89.1	41.7	22.6
47.5°	475.2	475.9	409.4	364.9	348.6	347.2	252.5	93.3	47.4	25.5	16.3
50°	134.4	145.0	136.5	139.3	108.9	92.6	75.7	45.3	24.0	16.3	10.6
51°	82.7	89.1	83.4	86.3	75.0	67.2	56.6	33.9	19.1	13.4	9.9
52°	53.0	56.6	53.7	54.5	50.2	43.8	38.2	24.8	15.6	11.3	8.5
53°	36.1	38.2	36.1	36.1	33.2	31.1	26.9	18.4	12.7	9.2	6.4
54°	24.8	25.5	25.5	25.5	23.3	21.9	19.1	14.1	10.6	8.5	5.7
55°	17.7	18.4	17.7	17.7	17.0	15.6	14.1	10.6	8.5	7.1	4.2
57.5°	7.8	7.8	7.8	8.5	7.8	7.8	7.1	6.4	5.7	4.2	2.8
60°	3.5	3.5	3.5	3.5	4.2	4.2	4.2	4.2	3.5	2.8	2.8
61°	2.8	2.8	2.8	2.8	2.8	3.5	3.5	3.5	2.8	2.8	2.1
62°	2.1	2.1	2.1	2.1	2.8	2.8	2.8	2.8	2.8	2.1	2.1
63°	2.1	2.1	2.1	2.1	2.1	2.1	2.8	2.8	2.1	2.1	2.1
64°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
65°	2.1	1.4	1.4	1.4	1.4	2.1	2.1	2.1	2.1	2.1	2.1
66°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.1	2.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.1
75°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.1
77.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.4	1.4	2.1
80°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.4	1.4	2.1
82.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.4	1.4	2.1
85°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.4	1.4	2.1
87.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.4	1.4	2.1
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
2.5°	131.5	130.8	127.3	123.8	124.5	123.0	121.6	119.5	118.1	114.6	114.6
5°	149.9	146.4	138.6	131.5	130.8	128.0	123.8	119.5	116.0	111.0	109.6
7.5°	171.1	161.2	148.5	137.2	135.1	130.8	123.0	117.4	111.0	104.7	102.5
10°	201.5	178.2	156.3	139.3	135.1	128.7	118.8	111.0	104.0	96.2	93.3
12.5°	309.7	219.9	166.2	139.3	131.5	123.8	111.7	102.5	94.1	85.6	82.7
15°	516.2	351.5	210.7	139.3	125.2	116.0	101.1	91.9	82.7	75.0	72.1
17.5°	712.8	500.0	293.5	157.0	125.9	106.8	88.4	78.5	70.7	62.9	60.8
20°	826.7	582.7	347.9	174.7	124.5	96.2	75.7	65.1	57.3	51.6	49.5
22.5°	841.5	586.2	335.9	156.3	104.7	79.9	62.9	53.0	46.7	41.7	40.3
25°	801.9	517.6	268.7	111.0	77.8	65.1	49.5	42.4	37.5	33.2	32.5
26°	771.5	476.6	234.1	91.9	68.6	58.0	44.6	38.2	33.9	30.4	29.7
27°	728.4	432.8	200.1	76.4	60.8	52.3	39.6	34.7	31.1	27.6	27.6
28°	679.6	385.4	161.2	64.4	54.5	46.7	36.1	31.1	27.6	25.5	25.5
29°	620.9	316.8	118.1	55.9	48.1	41.0	31.8	27.6	24.8	23.3	23.3
30°	533.9	229.8	81.3	48.8	41.7	36.1	28.3	24.8	22.6	21.2	21.2
31°	417.2	141.4	63.6	42.4	36.8	31.8	25.5	21.9	20.5	19.1	19.8
32°	284.3	88.4	54.5	36.8	32.5	27.6	22.6	19.8	18.4	17.7	17.7
33°	161.9	73.5	47.4	31.8	27.6	24.0	19.8	17.7	17.0	16.3	16.3
34°	107.5	62.9	41.0	26.9	22.6	20.5	17.0	15.6	14.9	14.9	14.9
35°	90.5	54.5	33.2	22.6	19.8	17.7	14.9	14.1	13.4	13.4	14.1
36°	76.4	45.3	26.9	19.1	17.0	15.6	13.4	12.7	12.0	12.0	12.7
37°	64.4	36.1	22.6	16.3	14.1	13.4	12.0	11.3	11.3	11.3	12.0
38°	52.3	29.0	19.1	14.1	12.7	11.3	10.6	9.9	9.9	10.6	11.3
39°	41.0	23.3	15.6	12.0	10.6	9.9	9.2	9.2	9.2	9.2	9.9
40°	32.5	19.8	13.4	10.6	9.2	9.2	8.5	7.8	8.5	8.5	9.9
42.5°	20.5	14.1	9.9	7.8	7.1	7.1	6.4	6.4	6.4	7.1	7.8
45°	14.9	11.3	7.8	6.4	5.7	5.0	5.0	5.0	5.7	6.4	7.1
47.5°	11.3	7.8	5.7	4.2	3.5	3.5	3.5	3.5	4.2	5.0	5.7
50°	7.8	5.0	3.5	2.8	2.8	2.8	2.8	2.8	3.5	4.2	5.0
51°	6.4	4.2	3.5	2.8	2.8	2.1	2.1	2.8	3.5	3.5	4.2
52°	5.0	3.5	2.8	2.1	2.1	2.1	2.1	2.8	2.8	3.5	4.2
53°	4.2	3.5	2.8	2.1	2.1	2.1	2.1	2.1	2.8	3.5	4.2
54°	3.5	2.8	2.1	2.1	2.1	2.1	2.1	2.1	2.8	3.5	4.2
55°	2.8	2.8	2.1	2.1	2.1	2.1	2.1	2.1	2.8	2.8	3.5
57.5°	2.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.8	3.5
60°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.8	3.5
61°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.8	3.5
62°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.8	3.5
63°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.8	2.8	3.5
64°	2.1	2.1	2.1	2.1	2.8	2.8	2.1	2.1	2.8	2.8	3.5
65°	2.1	2.1	2.8	2.8	2.8	2.8	2.1	2.1	2.8	2.8	3.5
66°	2.1	2.8	2.8	2.8	2.8	2.8	2.1	2.1	2.8	2.8	3.5



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.1	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.8	2.8	2.8
75°	2.1	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
77.5°	2.1	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.1	2.8	2.8
80°	2.1	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.1	2.8	2.8
82.5°	2.1	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.1	2.1	2.8
85°	2.1	2.1	2.8	2.8	2.8	2.8	2.8	2.1	2.1	2.1	2.1
87.5°	2.1	2.1	2.8	2.8	2.8	2.8	2.1	2.1	2.1	2.1	2.1
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: P182693

CATALOG NUMBER: LDSQA4A13940D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
2.5°	113.1	111.0	109.6	108.9	109.6	108.2	106.1	106.8	106.1	105.4	105.4
5°	107.5	104.0	102.5	101.8	101.8	101.1	98.3	99.0	98.3	97.6	97.6
7.5°	99.7	96.9	94.8	94.1	94.1	93.3	90.5	91.9	90.5	89.8	90.5
10°	90.5	87.7	87.0	85.6	85.6	84.9	82.7	83.4	82.7	82.7	82.7
12.5°	80.6	77.8	77.1	76.4	77.1	76.4	74.3	75.7	75.0	75.0	75.7
15°	70.0	67.9	67.9	67.2	67.9	67.2	66.5	67.2	67.2	67.2	68.6
17.5°	59.4	58.0	58.0	57.3	58.0	58.0	57.3	59.4	59.4	60.8	62.2
20°	48.8	47.4	48.1	48.1	49.5	49.5	49.5	51.6	52.3	53.7	55.9
22.5°	40.3	39.6	40.3	40.3	41.7	42.4	42.4	44.6	46.7	48.1	50.2
25°	32.5	32.5	33.9	33.9	34.7	36.1	36.8	39.6	41.0	42.4	44.6
26°	30.4	30.4	31.1	31.8	32.5	33.9	34.7	37.5	38.9	40.3	42.4
27°	27.6	27.6	29.0	29.7	30.4	31.8	33.2	35.4	36.8	38.9	40.3
28°	25.5	25.5	26.9	27.6	28.3	30.4	31.1	33.2	34.7	36.8	38.9
29°	23.3	24.0	25.5	25.5	26.9	28.3	29.0	31.8	33.2	34.7	36.8
30°	21.9	22.6	23.3	24.0	24.8	26.2	27.6	29.7	31.1	32.5	34.7
31°	20.5	21.2	21.9	22.6	23.3	24.8	26.2	28.3	29.7	31.1	33.2
32°	19.1	19.1	20.5	21.2	21.9	23.3	24.8	26.9	28.3	29.7	31.8
33°	17.7	18.4	19.1	19.8	20.5	21.9	23.3	24.8	26.2	28.3	30.4
34°	16.3	17.0	18.4	19.1	19.8	21.2	21.9	23.3	24.8	26.9	28.3
35°	14.9	16.3	17.0	17.7	18.4	19.8	20.5	22.6	23.3	25.5	26.9
36°	14.1	14.9	16.3	17.0	17.7	18.4	19.1	21.2	22.6	24.0	25.5
37°	12.7	14.1	14.9	15.6	16.3	17.7	18.4	19.8	21.2	22.6	24.0
38°	12.0	12.7	14.1	14.9	15.6	16.3	17.0	19.1	19.8	21.2	22.6
39°	11.3	12.0	13.4	14.1	14.1	15.6	16.3	17.7	18.4	19.8	21.9
40°	10.6	11.3	12.7	12.7	13.4	14.9	15.6	17.0	17.7	19.1	20.5
42.5°	9.2	9.9	10.6	11.3	12.0	12.7	13.4	14.9	15.6	16.3	17.7
45°	7.8	8.5	9.9	9.9	10.6	11.3	12.0	12.7	13.4	14.9	15.6
47.5°	6.4	7.8	8.5	9.2	9.2	9.9	10.6	11.3	12.0	12.7	13.4
50°	5.7	6.4	7.1	7.8	7.8	8.5	9.2	9.9	9.9	10.6	12.0
51°	5.7	6.4	7.1	7.1	7.8	8.5	8.5	9.2	9.9	9.9	10.6
52°	5.0	5.7	6.4	7.1	7.1	7.8	8.5	8.5	9.2	9.9	10.6
53°	5.0	5.7	6.4	6.4	7.1	7.8	7.8	8.5	8.5	9.2	9.9
54°	5.0	5.7	6.4	6.4	7.1	7.1	7.8	7.8	8.5	8.5	9.2
55°	4.2	5.0	5.7	6.4	6.4	7.1	7.1	7.8	7.8	8.5	8.5
57.5°	4.2	5.0	5.7	5.7	5.7	6.4	6.4	7.1	7.1	7.1	7.8
60°	4.2	5.0	5.0	5.7	5.7	6.4	6.4	6.4	6.4	7.1	7.1
61°	4.2	4.2	5.0	5.7	5.7	5.7	6.4	6.4	6.4	6.4	7.1
62°	4.2	4.2	5.0	5.0	5.7	5.7	5.7	6.4	6.4	6.4	6.4
63°	3.5	4.2	5.0	5.0	5.7	5.7	5.7	5.7	5.7	6.4	6.4
64°	3.5	4.2	5.0	5.0	5.0	5.7	5.7	5.7	5.7	5.7	5.7
65°	3.5	4.2	5.0	5.0	5.0	5.7	5.7	5.7	5.7	5.7	5.7
66°	3.5	4.2	5.0	5.0	5.0	5.7	5.7	5.7	5.7	5.7	5.7



TEST NUMBER: P182693

CATALOG NUMBER: LDSQA4A13940D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.5	3.5	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
75°	3.5	3.5	3.5	4.2	4.2	4.2	4.2	4.2	4.2	3.5	3.5
77.5°	2.8	2.8	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.8
80°	2.8	2.8	3.5	3.5	3.5	3.5	3.5	3.5	2.8	2.8	2.8
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.1
85°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.1	1.4
87.5°	2.1	2.8	2.8	2.8	2.8	2.8	2.1	2.1	2.1	1.4	1.4
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: P182693

CATALOG NUMBER: LDSQA4A13940D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	118.1	118.1	118.1	118.1	118.1	118.1	118.1	118.1
2.5°	106.1	104.0	103.2	103.2	104.0	103.2	104.0	103.2
5°	97.6	95.5	95.5	94.8	95.5	94.8	95.5	94.8
7.5°	90.5	88.4	88.4	88.4	88.4	88.4	89.1	88.4
10°	83.4	81.3	81.3	80.6	81.3	81.3	82.0	81.3
12.5°	76.4	75.0	75.0	74.3	75.7	75.0	76.4	75.7
15°	70.0	68.6	68.6	69.3	70.0	70.0	70.7	70.7
17.5°	63.6	63.6	63.6	64.4	65.1	65.8	66.5	65.8
20°	58.0	58.0	58.7	59.4	60.1	60.8	61.5	61.5
22.5°	52.3	52.3	53.0	54.5	55.9	56.6	57.3	57.3
25°	46.7	47.4	48.1	48.8	50.9	51.6	52.3	52.3
26°	44.6	45.3	46.7	47.4	48.8	49.5	50.9	50.9
27°	43.1	43.8	44.6	45.3	47.4	48.1	49.5	48.8
28°	41.0	41.7	42.4	43.8	45.3	46.7	47.4	47.4
29°	38.9	40.3	41.0	41.7	43.8	44.6	45.3	45.3
30°	37.5	38.2	38.9	40.3	41.7	43.1	43.8	43.8
31°	35.4	36.8	37.5	38.2	40.3	41.0	42.4	42.4
32°	33.9	34.7	35.4	36.8	38.2	39.6	40.3	40.3
33°	31.8	33.2	33.9	34.7	36.8	38.2	38.9	38.2
34°	30.4	31.8	31.8	33.2	34.7	36.1	36.8	36.8
35°	29.0	29.7	30.4	31.8	33.2	34.7	35.4	35.4
36°	27.6	28.3	29.0	30.4	31.8	33.2	33.9	33.9
37°	26.2	26.9	27.6	28.3	30.4	31.8	32.5	32.5
38°	24.8	25.5	26.2	27.6	29.0	29.7	31.1	31.1
39°	23.3	24.0	24.8	26.2	27.6	28.3	29.7	29.0
40°	21.9	23.3	23.3	24.8	26.2	26.9	28.3	27.6
42.5°	19.1	19.8	20.5	21.2	22.6	24.0	24.8	24.8
45°	17.0	17.7	18.4	19.1	19.8	20.5	21.9	21.2
47.5°	14.1	14.9	15.6	16.3	17.0	17.7	18.4	18.4
50°	12.7	12.7	13.4	13.4	14.9	15.6	16.3	16.3
51°	11.3	12.0	12.7	12.7	14.1	14.1	14.9	14.9
52°	11.3	11.3	12.0	12.0	12.7	13.4	14.1	14.1
53°	10.6	10.6	11.3	11.3	12.0	12.7	13.4	13.4
54°	9.9	9.9	10.6	10.6	11.3	12.0	12.7	12.7
55°	9.2	9.2	9.9	9.9	10.6	11.3	12.0	12.0
57.5°	7.8	8.5	8.5	9.2	9.2	9.9	9.9	10.6
60°	7.1	7.8	7.8	7.8	8.5	8.5	8.5	8.5
61°	7.1	7.1	7.1	7.8	7.8	7.1	7.8	7.1
62°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
63°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
64°	6.4	5.7	5.7	5.7	5.7	5.7	5.7	5.7
65°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.0
66°	5.7	5.7	5.0	5.7	5.0	5.0	5.0	5.0



TEST NUMBER: P182693

CATALOG NUMBER: LDSQA4A13940D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	3.5	3.5	3.5	3.5	3.5	2.8	2.8	2.8
75°	3.5	3.5	3.5	2.8	2.8	2.8	2.8	2.1
77.5°	2.8	2.8	2.8	2.8	2.1	2.1	2.1	2.1
80°	2.1	2.1	2.1	2.1	2.1	2.1	1.4	1.4
82.5°	2.1	1.4	1.4	1.4	1.4	1.4	1.4	1.4
85°	1.4	1.4	1.4	1.4	1.4	0.7	0.7	0.7
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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°







67.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.1	2.1
70°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.1	2.1





67.5°	2.1	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.8	2.8	3.5
70°	2.1	2.8	2.8	2.8	2.8	2.8	2.8	2.1	2.8	2.8	2.8





67.5°	3.5	4.2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
70°	3.5	4.2	4.2	4.2	5.0	5.0	5.0	5.0	5.0	5.0	5.0





67.5°	5.0	5.0	5.0	5.0	5.0	4.2	4.2	4.2
70°	4.2	4.2	4.2	4.2	4.2	3.5	3.5	3.5



(END OF REPORT)