

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: P182691

Luminaire Tested: **LDSQA4A13930D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182691  
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: LDSQA4A13930D010TE 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 / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1256.6 lumens  
Efficiency: N/A  
Efficacy: 56.4 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

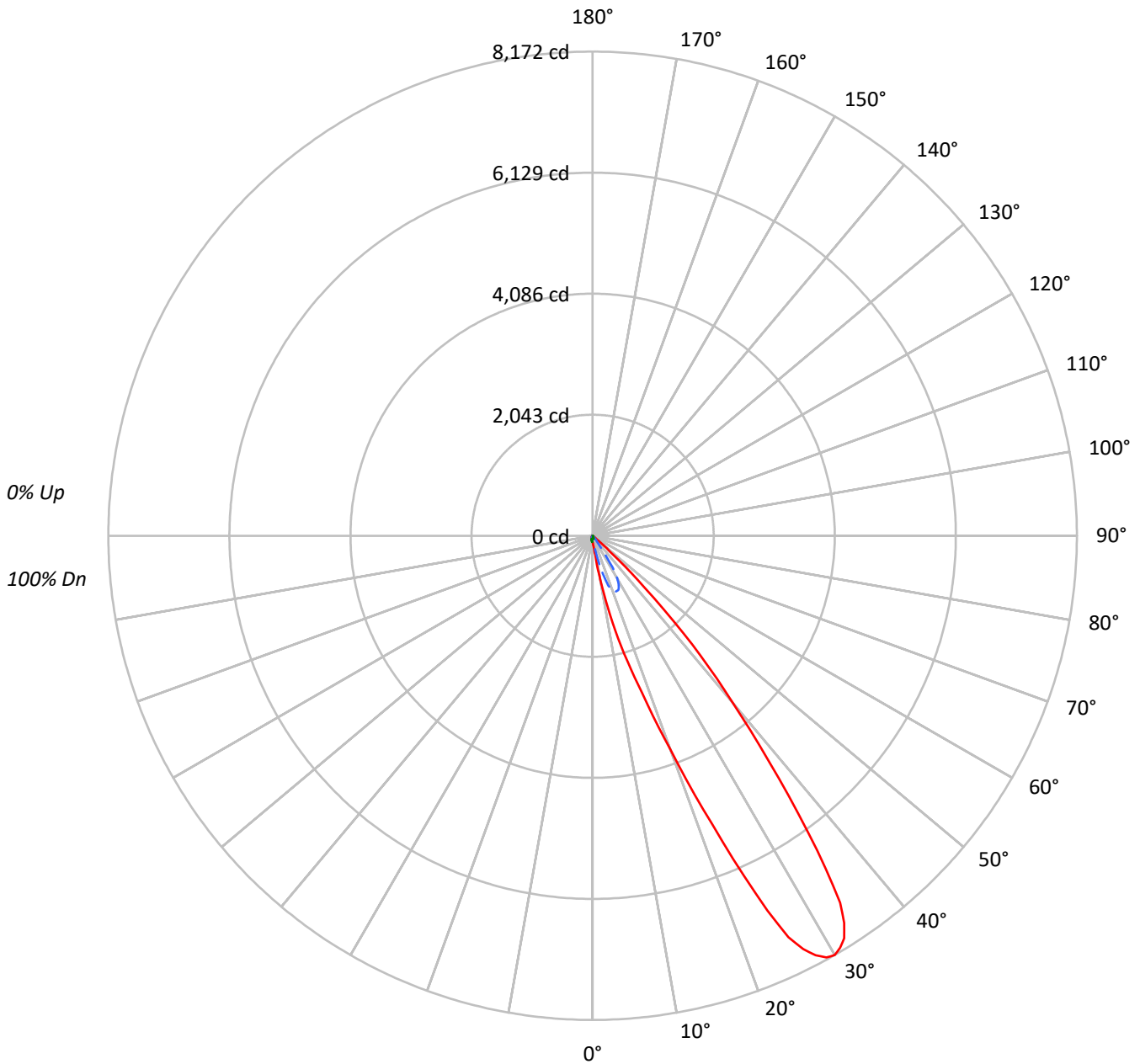
Input Watts (W): 22.27  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				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	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	93	91				91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	85	83				83
3	99	92	86	81	97	90	85	80	87	83	79	85	81	78	83	79	77	75				75
4	93	84	77	72	91	83	76	72	80	75	71	78	74	70	76	72	69	67				67
5	87	77	70	65	85	76	69	64	74	68	64	72	67	63	70	66	63	61				61
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				55
7	76	65	57	52	74	64	57	52	62	56	52	61	56	52	60	55	51	50				50
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45				45
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41				41
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38	37				37

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	10492	10492	10492
5°	17475	9900	8451
10°	74535	8676	7338
15°	206312	6900	6509
20°	395721	4887	5814
25°	746115	3260	5131
30°	914126	2181	4497
35°	811840	1455	3832
40°	462699	986	3199
45°	168773	795	2672
50°	18583	588	2246
55°	2736	439	1858
60°	620	504	1511
65°	436	596	1032
70°	368	736	906
75°	487	973	711
80°	0	1450	725
85°	0	2112	667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	13.6	1.1
10°-20°	136.2	10.8
20°-30°	447.3	35.6
30°-40°	490.5	39.0
40°-50°	153.2	12.2
50°-60°	8.4	0.7
60°-70°	3.4	0.3
70°-80°	2.6	0.2
80°-90°	1.6	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°	597.1	47.5
0°-40°	1087.5	86.5
0°-60°	1249.1	99.4
0°-90°	1256.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1256.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	108	108	108	108	108	
5°	180	144	102	90	87	33
15°	2057	661	69	62	65	646
25°	6980	1015	30	38	48	3112
35°	6865	200	12	21	32	4013
45°	1232	21	6	12	20	1131
55°	16	4	3	7	11	25
65°	2	2	3	5	4	2
75°	1	2	3	4	2	1
85°	0	2	2	2	1	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°	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3
2.5°	133.6	134.9	135.6	132.3	133.0	131.7	133.0	130.4	125.9	127.1	123.3
5°	179.7	177.1	176.5	171.3	170.0	167.4	167.4	161.5	153.1	151.8	144.0
7.5°	317.9	304.2	292.6	275.1	258.2	245.2	240.0	219.3	196.6	188.1	170.0
10°	757.7	755.1	725.9	670.8	607.2	561.1	534.5	454.1	352.3	290.0	225.1
12.5°	1379.2	1366.2	1324.7	1223.5	1113.8	1045.1	991.2	829.1	677.9	556.6	399.0
15°	2057.1	2004.5	1943.6	1786.6	1632.8	1543.3	1466.8	1272.1	1037.9	863.4	661.0
17.5°	2781.1	2804.4	2656.5	2386.0	2112.9	1972.8	1843.0	1543.9	1287.7	1106.1	878.4
20°	3838.5	3789.2	3529.0	3080.8	2677.9	2443.7	2259.5	1828.1	1441.5	1215.0	999.7
22.5°	5267.6	5110.6	4603.3	3844.9	3206.0	2881.0	2619.5	2038.3	1570.5	1270.8	1019.1
25°	6980.2	6834.9	5895.5	4579.9	3634.8	3213.7	2858.3	2171.9	1622.4	1279.9	1015.2
26°	7539.4	7323.4	6372.4	4841.4	3766.5	3298.1	2917.3	2197.9	1623.7	1272.8	998.4
27°	7828.7	7659.4	6766.8	5053.5	3856.6	3351.3	2950.4	2204.3	1610.8	1256.6	972.4
28°	8019.4	7861.2	7016.5	5192.3	3902.7	3372.0	2960.1	2190.1	1581.6	1228.0	931.6
29°	8137.5	7970.8	7138.5	5255.3	3905.9	3363.0	2941.9	2152.4	1542.0	1193.6	884.2
30°	8171.9	7991.6	7141.7	5229.3	3857.9	3314.3	2890.7	2091.5	1494.0	1150.2	831.7
31°	8110.9	7924.7	7024.3	5111.2	3759.3	3219.6	2810.2	2011.0	1434.3	1104.1	750.6
32°	8009.7	7762.6	6778.5	4915.3	3624.4	3105.4	2709.7	1923.4	1370.7	1045.7	636.4
33°	7794.3	7495.9	6402.2	4669.5	3462.2	2974.4	2592.3	1826.1	1310.4	945.2	472.9
34°	7470.6	7093.7	5941.0	4383.4	3278.6	2810.9	2457.3	1736.0	1247.5	812.2	323.7
35°	6864.7	6513.8	5431.7	4078.5	3080.8	2652.6	2308.8	1617.9	1161.9	651.3	199.8
36°	6186.8	5928.6	4938.0	3768.4	2878.4	2488.5	2155.7	1531.0	1035.4	479.4	135.6
37°	5494.0	5265.0	4472.3	3463.5	2675.3	2306.8	2000.0	1432.4	884.9	319.8	109.0
38°	4834.2	4652.6	4029.8	3163.8	2464.5	2116.8	1836.5	1327.3	722.7	205.6	89.5
39°	4228.3	4092.1	3596.5	2873.8	2253.0	1930.6	1679.5	1194.9	551.4	146.6	74.6
40°	3658.8	3562.8	3178.7	2587.7	2042.8	1747.6	1537.5	1034.7	382.7	116.1	60.3
42.5°	2488.5	2464.5	2236.8	1862.5	1517.4	1344.8	1215.7	581.9	147.3	70.1	33.7
45°	1231.9	1248.8	1158.0	1065.2	993.2	940.6	766.1	242.6	81.7	38.3	20.8
47.5°	435.9	436.6	375.6	334.7	319.8	318.5	231.6	85.6	43.5	23.4	14.9
50°	123.3	133.0	125.2	127.8	99.9	85.0	69.4	41.5	22.1	14.9	9.7
51°	75.9	81.7	76.5	79.1	68.8	61.6	51.9	31.1	17.5	12.3	9.1
52°	48.7	51.9	49.3	50.0	46.1	40.2	35.0	22.7	14.3	10.4	7.8
53°	33.1	35.0	33.1	33.1	30.5	28.5	24.7	16.9	11.7	8.4	5.8
54°	22.7	23.4	23.4	23.4	21.4	20.1	17.5	13.0	9.7	7.8	5.2
55°	16.2	16.9	16.2	16.2	15.6	14.3	13.0	9.7	7.8	6.5	3.9
57.5°	7.1	7.1	7.1	7.8	7.1	7.1	6.5	5.8	5.2	3.9	2.6
60°	3.2	3.2	3.2	3.2	3.9	3.9	3.9	3.9	3.2	2.6	2.6
61°	2.6	2.6	2.6	2.6	2.6	3.2	3.2	3.2	2.6	2.6	1.9
62°	1.9	1.9	1.9	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9
63°	1.9	1.9	1.9	1.9	1.9	1.9	2.6	2.6	1.9	1.9	1.9
64°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
65°	1.9	1.3	1.3	1.3	1.3	1.9	1.9	1.9	1.9	1.9	1.9
66°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9
77.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.9
80°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.9
82.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.9
85°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.9
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.9
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°	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3
2.5°	120.7	120.0	116.8	113.5	114.2	112.9	111.6	109.6	108.3	105.1	105.1
5°	137.5	134.3	127.1	120.7	120.0	117.4	113.5	109.6	106.4	101.8	100.6
7.5°	157.0	147.9	136.2	125.9	123.9	120.0	112.9	107.7	101.8	96.0	94.1
10°	184.9	163.5	143.4	127.8	123.9	118.1	109.0	101.8	95.4	88.2	85.6
12.5°	284.1	201.8	152.4	127.8	120.7	113.5	102.5	94.1	86.3	78.5	75.9
15°	473.6	322.4	193.3	127.8	114.8	106.4	92.8	84.3	75.9	68.8	66.2
17.5°	653.9	458.6	269.2	144.0	115.5	98.0	81.1	72.0	64.9	57.7	55.8
20°	758.4	534.5	319.2	160.2	114.2	88.2	69.4	59.7	52.5	47.4	45.4
22.5°	772.0	537.8	308.1	143.4	96.0	73.3	57.7	48.7	42.8	38.3	37.0
25°	735.6	474.9	246.5	101.8	71.4	59.7	45.4	38.9	34.4	30.5	29.8
26°	707.8	437.2	214.7	84.3	62.9	53.2	40.9	35.0	31.1	27.9	27.2
27°	668.2	397.0	183.6	70.1	55.8	48.0	36.3	31.8	28.5	25.3	25.3
28°	623.4	353.6	147.9	59.0	50.0	42.8	33.1	28.5	25.3	23.4	23.4
29°	569.6	290.6	108.3	51.2	44.1	37.6	29.2	25.3	22.7	21.4	21.4
30°	489.8	210.8	74.6	44.8	38.3	33.1	25.9	22.7	20.8	19.5	19.5
31°	382.7	129.7	58.4	38.9	33.7	29.2	23.4	20.1	18.8	17.5	18.2
32°	260.8	81.1	50.0	33.7	29.8	25.3	20.8	18.2	16.9	16.2	16.2
33°	148.6	67.5	43.5	29.2	25.3	22.1	18.2	16.2	15.6	14.9	14.9
34°	98.6	57.7	37.6	24.7	20.8	18.8	15.6	14.3	13.6	13.6	13.6
35°	83.0	50.0	30.5	20.8	18.2	16.2	13.6	13.0	12.3	12.3	13.0
36°	70.1	41.5	24.7	17.5	15.6	14.3	12.3	11.7	11.0	11.0	11.7
37°	59.0	33.1	20.8	14.9	13.0	12.3	11.0	10.4	10.4	10.4	11.0
38°	48.0	26.6	17.5	13.0	11.7	10.4	9.7	9.1	9.1	9.7	10.4
39°	37.6	21.4	14.3	11.0	9.7	9.1	8.4	8.4	8.4	8.4	9.1
40°	29.8	18.2	12.3	9.7	8.4	8.4	7.8	7.1	7.8	7.8	9.1
42.5°	18.8	13.0	9.1	7.1	6.5	6.5	5.8	5.8	5.8	6.5	7.1
45°	13.6	10.4	7.1	5.8	5.2	4.5	4.5	4.5	5.2	5.8	6.5
47.5°	10.4	7.1	5.2	3.9	3.2	3.2	3.2	3.2	3.9	4.5	5.2
50°	7.1	4.5	3.2	2.6	2.6	2.6	2.6	2.6	3.2	3.9	4.5
51°	5.8	3.9	3.2	2.6	2.6	1.9	1.9	2.6	3.2	3.2	3.9
52°	4.5	3.2	2.6	1.9	1.9	1.9	1.9	2.6	2.6	3.2	3.9
53°	3.9	3.2	2.6	1.9	1.9	1.9	1.9	1.9	2.6	3.2	3.9
54°	3.2	2.6	1.9	1.9	1.9	1.9	1.9	1.9	2.6	3.2	3.9
55°	2.6	2.6	1.9	1.9	1.9	1.9	1.9	1.9	2.6	2.6	3.2
57.5°	2.6	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	3.2
60°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	3.2
61°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	3.2
62°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	3.2
63°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	2.6	3.2
64°	1.9	1.9	1.9	1.9	2.6	2.6	1.9	1.9	2.6	2.6	3.2
65°	1.9	1.9	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6	3.2
66°	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6	3.2





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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	2.6	2.6	2.6
75°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
77.5°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6
80°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6
82.5°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	2.6
85°	1.9	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.9
87.5°	1.9	1.9	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.9	1.9
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°	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3
2.5°	103.8	101.8	100.6	99.9	100.6	99.3	97.3	98.0	97.3	96.7	96.7
5°	98.6	95.4	94.1	93.4	93.4	92.8	90.2	90.8	90.2	89.5	89.5
7.5°	91.5	88.9	86.9	86.3	86.3	85.6	83.0	84.3	83.0	82.4	83.0
10°	83.0	80.4	79.8	78.5	78.5	77.8	75.9	76.5	75.9	75.9	75.9
12.5°	74.0	71.4	70.7	70.1	70.7	70.1	68.1	69.4	68.8	68.8	69.4
15°	64.2	62.3	62.3	61.6	62.3	61.6	61.0	61.6	61.6	61.6	62.9
17.5°	54.5	53.2	53.2	52.5	53.2	53.2	52.5	54.5	54.5	55.8	57.1
20°	44.8	43.5	44.1	44.1	45.4	45.4	45.4	47.4	48.0	49.3	51.2
22.5°	37.0	36.3	37.0	37.0	38.3	38.9	38.9	40.9	42.8	44.1	46.1
25°	29.8	29.8	31.1	31.1	31.8	33.1	33.7	36.3	37.6	38.9	40.9
26°	27.9	27.9	28.5	29.2	29.8	31.1	31.8	34.4	35.7	37.0	38.9
27°	25.3	25.3	26.6	27.2	27.9	29.2	30.5	32.4	33.7	35.7	37.0
28°	23.4	23.4	24.7	25.3	25.9	27.9	28.5	30.5	31.8	33.7	35.7
29°	21.4	22.1	23.4	23.4	24.7	25.9	26.6	29.2	30.5	31.8	33.7
30°	20.1	20.8	21.4	22.1	22.7	24.0	25.3	27.2	28.5	29.8	31.8
31°	18.8	19.5	20.1	20.8	21.4	22.7	24.0	25.9	27.2	28.5	30.5
32°	17.5	17.5	18.8	19.5	20.1	21.4	22.7	24.7	25.9	27.2	29.2
33°	16.2	16.9	17.5	18.2	18.8	20.1	21.4	22.7	24.0	25.9	27.9
34°	14.9	15.6	16.9	17.5	18.2	19.5	20.1	21.4	22.7	24.7	25.9
35°	13.6	14.9	15.6	16.2	16.9	18.2	18.8	20.8	21.4	23.4	24.7
36°	13.0	13.6	14.9	15.6	16.2	16.9	17.5	19.5	20.8	22.1	23.4
37°	11.7	13.0	13.6	14.3	14.9	16.2	16.9	18.2	19.5	20.8	22.1
38°	11.0	11.7	13.0	13.6	14.3	14.9	15.6	17.5	18.2	19.5	20.8
39°	10.4	11.0	12.3	13.0	13.0	14.3	14.9	16.2	16.9	18.2	20.1
40°	9.7	10.4	11.7	11.7	12.3	13.6	14.3	15.6	16.2	17.5	18.8
42.5°	8.4	9.1	9.7	10.4	11.0	11.7	12.3	13.6	14.3	14.9	16.2
45°	7.1	7.8	9.1	9.1	9.7	10.4	11.0	11.7	12.3	13.6	14.3
47.5°	5.8	7.1	7.8	8.4	8.4	9.1	9.7	10.4	11.0	11.7	12.3
50°	5.2	5.8	6.5	7.1	7.1	7.8	8.4	9.1	9.1	9.7	11.0
51°	5.2	5.8	6.5	6.5	7.1	7.8	7.8	8.4	9.1	9.1	9.7
52°	4.5	5.2	5.8	6.5	6.5	7.1	7.8	7.8	8.4	9.1	9.7
53°	4.5	5.2	5.8	5.8	6.5	7.1	7.1	7.8	7.8	8.4	9.1
54°	4.5	5.2	5.8	5.8	6.5	6.5	7.1	7.1	7.8	7.8	8.4
55°	3.9	4.5	5.2	5.8	5.8	6.5	6.5	7.1	7.1	7.8	7.8
57.5°	3.9	4.5	5.2	5.2	5.2	5.8	5.8	6.5	6.5	6.5	7.1
60°	3.9	4.5	4.5	5.2	5.2	5.8	5.8	5.8	5.8	6.5	6.5
61°	3.9	3.9	4.5	5.2	5.2	5.2	5.8	5.8	5.8	5.8	6.5
62°	3.9	3.9	4.5	4.5	5.2	5.2	5.2	5.8	5.8	5.8	5.8
63°	3.2	3.9	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.8	5.8
64°	3.2	3.9	4.5	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2
65°	3.2	3.9	4.5	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2
66°	3.2	3.9	4.5	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2



TEST NUMBER: P182691

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.2	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	3.2	3.2	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2
77.5°	2.6	2.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.6
80°	2.6	2.6	3.2	3.2	3.2	3.2	3.2	3.2	2.6	2.6	2.6
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.3
87.5°	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.3	1.3
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: P182691

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3
2.5°	97.3	95.4	94.7	94.7	95.4	94.7	95.4	94.7
5°	89.5	87.6	87.6	86.9	87.6	86.9	87.6	86.9
7.5°	83.0	81.1	81.1	81.1	81.1	81.1	81.7	81.1
10°	76.5	74.6	74.6	74.0	74.6	74.6	75.3	74.6
12.5°	70.1	68.8	68.8	68.1	69.4	68.8	70.1	69.4
15°	64.2	62.9	62.9	63.6	64.2	64.2	64.9	64.9
17.5°	58.4	58.4	58.4	59.0	59.7	60.3	61.0	60.3
20°	53.2	53.2	53.8	54.5	55.1	55.8	56.4	56.4
22.5°	48.0	48.0	48.7	50.0	51.2	51.9	52.5	52.5
25°	42.8	43.5	44.1	44.8	46.7	47.4	48.0	48.0
26°	40.9	41.5	42.8	43.5	44.8	45.4	46.7	46.7
27°	39.6	40.2	40.9	41.5	43.5	44.1	45.4	44.8
28°	37.6	38.3	38.9	40.2	41.5	42.8	43.5	43.5
29°	35.7	37.0	37.6	38.3	40.2	40.9	41.5	41.5
30°	34.4	35.0	35.7	37.0	38.3	39.6	40.2	40.2
31°	32.4	33.7	34.4	35.0	37.0	37.6	38.9	38.9
32°	31.1	31.8	32.4	33.7	35.0	36.3	37.0	37.0
33°	29.2	30.5	31.1	31.8	33.7	35.0	35.7	35.0
34°	27.9	29.2	29.2	30.5	31.8	33.1	33.7	33.7
35°	26.6	27.2	27.9	29.2	30.5	31.8	32.4	32.4
36°	25.3	25.9	26.6	27.9	29.2	30.5	31.1	31.1
37°	24.0	24.7	25.3	25.9	27.9	29.2	29.8	29.8
38°	22.7	23.4	24.0	25.3	26.6	27.2	28.5	28.5
39°	21.4	22.1	22.7	24.0	25.3	25.9	27.2	26.6
40°	20.1	21.4	21.4	22.7	24.0	24.7	25.9	25.3
42.5°	17.5	18.2	18.8	19.5	20.8	22.1	22.7	22.7
45°	15.6	16.2	16.9	17.5	18.2	18.8	20.1	19.5
47.5°	13.0	13.6	14.3	14.9	15.6	16.2	16.9	16.9
50°	11.7	11.7	12.3	12.3	13.6	14.3	14.9	14.9
51°	10.4	11.0	11.7	11.7	13.0	13.0	13.6	13.6
52°	10.4	10.4	11.0	11.0	11.7	12.3	13.0	13.0
53°	9.7	9.7	10.4	10.4	11.0	11.7	12.3	12.3
54°	9.1	9.1	9.7	9.7	10.4	11.0	11.7	11.7
55°	8.4	8.4	9.1	9.1	9.7	10.4	11.0	11.0
57.5°	7.1	7.8	7.8	8.4	8.4	9.1	9.1	9.7
60°	6.5	7.1	7.1	7.1	7.8	7.8	7.8	7.8
61°	6.5	6.5	6.5	7.1	7.1	6.5	7.1	6.5
62°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
63°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
64°	5.8	5.2	5.2	5.2	5.2	5.2	5.2	5.2
65°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.5
66°	5.2	5.2	4.5	5.2	4.5	4.5	4.5	4.5



TEST NUMBER: P182691

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	3.2	3.2	3.2	3.2	3.2	2.6	2.6	2.6
75°	3.2	3.2	3.2	2.6	2.6	2.6	2.6	1.9
77.5°	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.9
80°	1.9	1.9	1.9	1.9	1.9	1.9	1.3	1.3
82.5°	1.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	1.3	1.3	1.3	0.6	0.6	0.6
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9
70°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9





67.5°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	2.6	2.6	3.2
70°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	2.6	2.6	2.6





67.5°	3.2	3.9	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
70°	3.2	3.9	3.9	3.9	4.5	4.5	4.5	4.5	4.5	4.5	4.5







67.5°	4.5	4.5	4.5	4.5	4.5	3.9	3.9	3.9
70°	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2



(END OF REPORT)