

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: P182683

Luminaire Tested: **LDSQA4A09930D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182683  
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: LDSQA4A09930D010TE 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: 848.6 lumens  
Efficiency: N/A  
Efficacy: 61.3 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

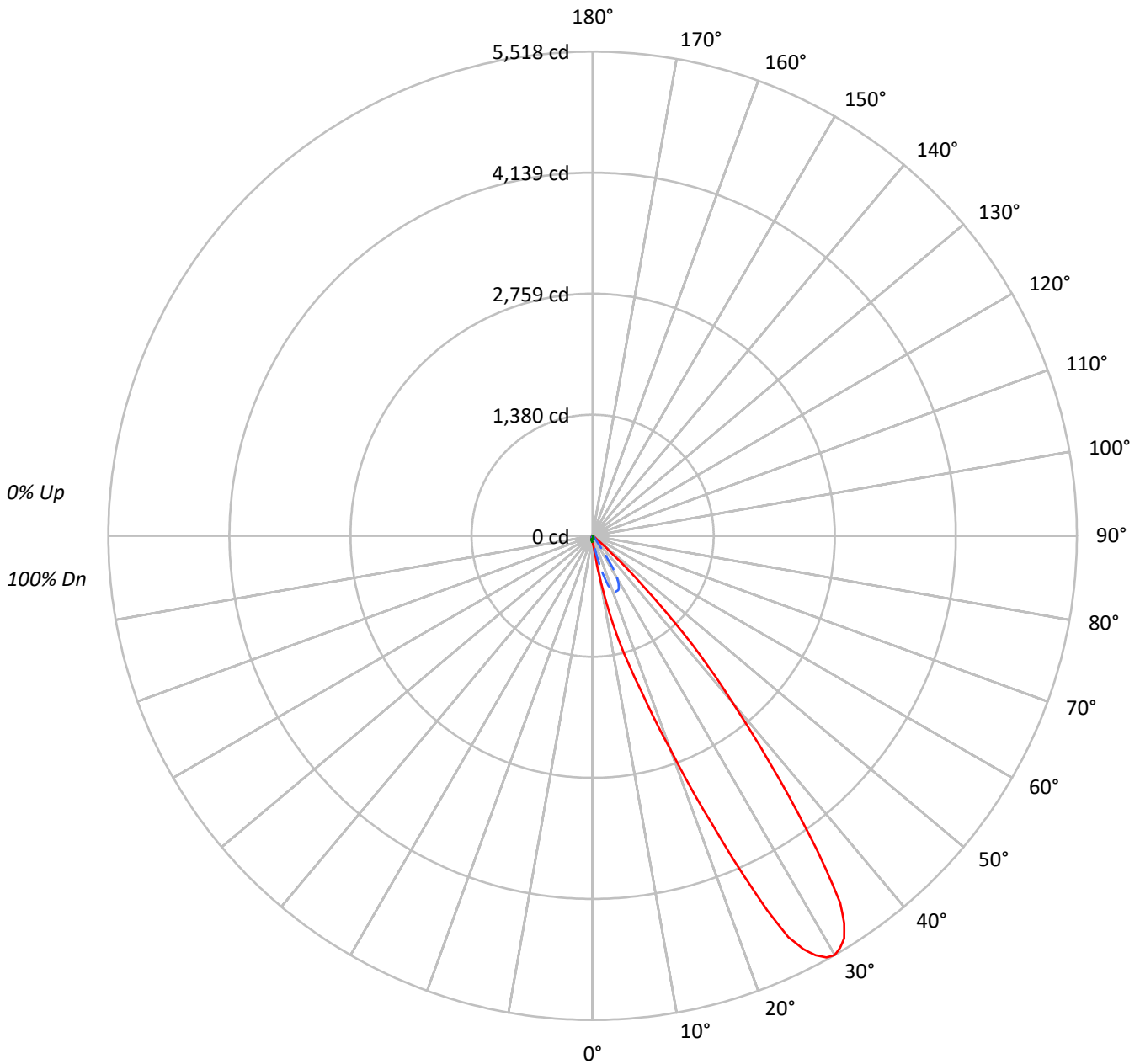
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	106	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°	7091	7091	7091
5°	11796	6690	5708
10°	50326	5863	4958
15°	139317	4654	4393
20°	267206	3299	3928
25°	503816	2202	3463
30°	617266	1465	3043
35°	548197	982	2590
40°	312437	670	2162
45°	113972	534	1795
50°	12539	392	1522
55°	1858	304	1250
60°	426	349	1027
65°	298	413	711
70°	255	510	623
75°	337	674	487
80°	0	1004	502
85°	0	1445	445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	9.2	1.1
10°-20°	91.9	10.8
20°-30°	302.0	35.6
30°-40°	331.2	39.0
40°-50°	103.5	12.2
50°-60°	5.7	0.7
60°-70°	2.3	0.3
70°-80°	1.8	0.2
80°-90°	1.1	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°	403.2	47.5
0°-40°	734.4	86.5
0°-60°	843.5	99.4
0°-90°	848.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	848.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	73	73	73	73	73	
5°	121	97	69	61	59	23
15°	1389	446	46	42	44	436
25°	4713	686	21	25	32	2101
35°	4635	135	8	14	22	2710
45°	832	14	4	8	13	764
55°	11	3	2	5	7	17
65°	1	1	2	4	3	1
75°	1	1	2	3	1	1
85°	0	1	1	1	0	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°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	90.2	91.1	91.6	89.4	89.8	88.9	89.8	88.0	85.0	85.9	83.2
5°	121.3	119.6	119.1	115.6	114.8	113.0	113.0	109.1	103.4	102.5	97.2
7.5°	214.6	205.4	197.6	185.7	174.3	165.6	162.1	148.1	132.7	127.0	114.8
10°	511.6	509.9	490.2	452.9	410.0	378.9	361.0	306.6	237.9	195.8	152.0
12.5°	931.3	922.5	894.5	826.2	752.1	705.7	669.3	559.8	457.8	375.8	269.4
15°	1389.1	1353.6	1312.4	1206.4	1102.6	1042.1	990.4	859.0	700.9	583.0	446.4
17.5°	1877.9	1893.7	1793.8	1611.1	1426.7	1332.1	1244.5	1042.6	869.5	746.9	593.1
20°	2591.9	2558.6	2383.0	2080.3	1808.3	1650.1	1525.7	1234.4	973.3	820.5	675.0
22.5°	3557.0	3451.0	3108.4	2596.3	2164.8	1945.4	1768.8	1376.4	1060.5	858.1	688.2
25°	4713.4	4615.3	3981.0	3092.6	2454.4	2170.1	1930.0	1466.6	1095.6	864.3	685.5
26°	5091.0	4945.1	4303.0	3269.2	2543.3	2227.0	1969.9	1484.1	1096.4	859.5	674.2
27°	5286.4	5172.1	4569.3	3412.4	2604.2	2263.0	1992.3	1488.5	1087.7	848.5	656.6
28°	5415.2	5308.3	4737.9	3506.2	2635.3	2277.0	1998.8	1478.9	1068.0	829.2	629.0
29°	5494.9	5382.3	4820.3	3548.6	2637.5	2270.9	1986.6	1453.4	1041.2	806.0	597.1
30°	5518.1	5396.3	4822.5	3531.1	2605.1	2238.0	1952.0	1412.3	1008.8	776.7	561.6
31°	5476.9	5351.2	4743.2	3451.4	2538.5	2174.0	1897.6	1358.0	968.5	745.6	506.8
32°	5408.6	5241.7	4577.2	3319.1	2447.4	2096.9	1829.7	1298.8	925.6	706.1	429.7
33°	5263.2	5061.7	4323.1	3153.1	2337.9	2008.5	1750.4	1233.1	884.9	638.2	319.3
34°	5044.6	4790.1	4011.7	2959.9	2213.9	1898.1	1659.3	1172.2	842.4	548.4	218.6
35°	4635.4	4398.5	3667.8	2754.0	2080.3	1791.2	1559.0	1092.5	784.5	439.8	134.9
36°	4177.7	4003.3	3334.4	2544.6	1943.6	1680.4	1455.6	1033.8	699.1	323.7	91.6
37°	3709.8	3555.2	3019.9	2338.7	1806.5	1557.7	1350.5	967.2	597.5	216.0	73.6
38°	3264.3	3141.7	2721.2	2136.4	1664.2	1429.4	1240.1	896.3	488.0	138.9	60.5
39°	2855.2	2763.2	2428.5	1940.6	1521.3	1303.6	1134.1	806.9	372.3	99.0	50.4
40°	2470.6	2405.8	2146.4	1747.4	1379.4	1180.1	1038.2	698.7	258.4	78.4	40.7
42.5°	1680.4	1664.2	1510.4	1257.6	1024.6	908.1	820.9	392.9	99.4	47.3	22.8
45°	831.9	843.2	781.9	719.3	670.7	635.2	517.3	163.8	55.2	25.8	14.0
47.5°	294.4	294.8	253.6	226.0	216.0	215.1	156.4	57.8	29.3	15.8	10.1
50°	83.2	89.8	84.5	86.3	67.5	57.4	46.9	28.0	14.9	10.1	6.6
51°	51.3	55.2	51.7	53.4	46.4	41.6	35.0	21.0	11.8	8.3	6.1
52°	32.9	35.0	33.3	33.7	31.1	27.2	23.7	15.3	9.6	7.0	5.3
53°	22.3	23.7	22.3	22.3	20.6	19.3	16.6	11.4	7.9	5.7	3.9
54°	15.3	15.8	15.8	15.8	14.5	13.6	11.8	8.8	6.6	5.3	3.5
55°	11.0	11.4	11.0	11.0	10.5	9.6	8.8	6.6	5.3	4.4	2.6
57.5°	4.8	4.8	4.8	5.3	4.8	4.8	4.4	3.9	3.5	2.6	1.8
60°	2.2	2.2	2.2	2.2	2.6	2.6	2.6	2.6	2.2	1.8	1.8
61°	1.8	1.8	1.8	1.8	1.8	2.2	2.2	2.2	1.8	1.8	1.3
62°	1.3	1.3	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.3	1.3
63°	1.3	1.3	1.3	1.3	1.3	1.3	1.8	1.8	1.3	1.3	1.3
64°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
65°	1.3	0.9	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.3	1.3
66°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.3	1.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.3
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.3
77.5°	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3
80°	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3
82.5°	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3
85°	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3
87.5°	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.9	0.9	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	81.5	81.0	78.8	76.7	77.1	76.2	75.3	74.0	73.2	71.0	71.0
5°	92.9	90.7	85.9	81.5	81.0	79.3	76.7	74.0	71.8	68.8	67.9
7.5°	106.0	99.9	92.0	85.0	83.7	81.0	76.2	72.7	68.8	64.8	63.5
10°	124.8	110.4	96.8	86.3	83.7	79.7	73.6	68.8	64.4	59.6	57.8
12.5°	191.9	136.2	102.9	86.3	81.5	76.7	69.2	63.5	58.3	53.0	51.3
15°	319.8	217.7	130.5	86.3	77.5	71.8	62.6	56.9	51.3	46.4	44.7
17.5°	441.6	309.7	181.8	97.2	78.0	66.1	54.8	48.6	43.8	39.0	37.7
20°	512.1	361.0	215.5	108.2	77.1	59.6	46.9	40.3	35.5	32.0	30.7
22.5°	521.3	363.1	208.1	96.8	64.8	49.5	39.0	32.9	28.9	25.8	25.0
25°	496.7	320.7	166.5	68.8	48.2	40.3	30.7	26.3	23.2	20.6	20.2
26°	477.9	295.2	145.0	56.9	42.5	35.9	27.6	23.7	21.0	18.8	18.4
27°	451.2	268.1	124.0	47.3	37.7	32.4	24.5	21.5	19.3	17.1	17.1
28°	421.0	238.7	99.9	39.9	33.7	28.9	22.3	19.3	17.1	15.8	15.8
29°	384.6	196.2	73.2	34.6	29.8	25.4	19.7	17.1	15.3	14.5	14.5
30°	330.7	142.4	50.4	30.2	25.8	22.3	17.5	15.3	14.0	13.1	13.1
31°	258.4	87.6	39.4	26.3	22.8	19.7	15.8	13.6	12.7	11.8	12.3
32°	176.1	54.8	33.7	22.8	20.2	17.1	14.0	12.3	11.4	11.0	11.0
33°	100.3	45.6	29.3	19.7	17.1	14.9	12.3	11.0	10.5	10.1	10.1
34°	66.6	39.0	25.4	16.6	14.0	12.7	10.5	9.6	9.2	9.2	9.2
35°	56.1	33.7	20.6	14.0	12.3	11.0	9.2	8.8	8.3	8.3	8.8
36°	47.3	28.0	16.6	11.8	10.5	9.6	8.3	7.9	7.4	7.4	7.9
37°	39.9	22.3	14.0	10.1	8.8	8.3	7.4	7.0	7.0	7.0	7.4
38°	32.4	18.0	11.8	8.8	7.9	7.0	6.6	6.1	6.1	6.6	7.0
39°	25.4	14.5	9.6	7.4	6.6	6.1	5.7	5.7	5.7	5.7	6.1
40°	20.2	12.3	8.3	6.6	5.7	5.7	5.3	4.8	5.3	5.3	6.1
42.5°	12.7	8.8	6.1	4.8	4.4	4.4	3.9	3.9	3.9	4.4	4.8
45°	9.2	7.0	4.8	3.9	3.5	3.1	3.1	3.1	3.5	3.9	4.4
47.5°	7.0	4.8	3.5	2.6	2.2	2.2	2.2	2.2	2.6	3.1	3.5
50°	4.8	3.1	2.2	1.8	1.8	1.8	1.8	1.8	2.2	2.6	3.1
51°	3.9	2.6	2.2	1.8	1.8	1.3	1.3	1.8	2.2	2.2	2.6
52°	3.1	2.2	1.8	1.3	1.3	1.3	1.3	1.8	1.8	2.2	2.6
53°	2.6	2.2	1.8	1.3	1.3	1.3	1.3	1.3	1.8	2.2	2.6
54°	2.2	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.8	2.2	2.6
55°	1.8	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.8	1.8	2.2
57.5°	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.8	2.2
60°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.8	2.2
61°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.8	2.2
62°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.8	2.2
63°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.8	1.8	2.2
64°	1.3	1.3	1.3	1.3	1.8	1.8	1.3	1.3	1.8	1.8	2.2
65°	1.3	1.3	1.8	1.8	1.8	1.8	1.3	1.3	1.8	1.8	2.2
66°	1.3	1.8	1.8	1.8	1.8	1.8	1.3	1.3	1.8	1.8	2.2





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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.8	1.8	1.8
75°	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.3	1.8	1.8
80°	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.3	1.8	1.8
82.5°	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.3	1.3	1.8
85°	1.3	1.3	1.8	1.8	1.8	1.8	1.8	1.3	1.3	1.3	1.3
87.5°	1.3	1.3	1.8	1.8	1.8	1.8	1.3	1.3	1.3	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: P182683

CATALOG NUMBER: LDSQA4A09930D010TE LAR15SP 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	70.1	68.8	67.9	67.5	67.9	67.0	65.7	66.1	65.7	65.3	65.3
5°	66.6	64.4	63.5	63.1	63.1	62.6	60.9	61.3	60.9	60.5	60.5
7.5°	61.8	60.0	58.7	58.3	58.3	57.8	56.1	56.9	56.1	55.6	56.1
10°	56.1	54.3	53.9	53.0	53.0	52.6	51.3	51.7	51.3	51.3	51.3
12.5°	49.9	48.2	47.7	47.3	47.7	47.3	46.0	46.9	46.4	46.4	46.9
15°	43.4	42.1	42.1	41.6	42.1	41.6	41.2	41.6	41.6	41.6	42.5
17.5°	36.8	35.9	35.9	35.5	35.9	35.9	35.5	36.8	36.8	37.7	38.5
20°	30.2	29.3	29.8	29.8	30.7	30.7	30.7	32.0	32.4	33.3	34.6
22.5°	25.0	24.5	25.0	25.0	25.8	26.3	26.3	27.6	28.9	29.8	31.1
25°	20.2	20.2	21.0	21.0	21.5	22.3	22.8	24.5	25.4	26.3	27.6
26°	18.8	18.8	19.3	19.7	20.2	21.0	21.5	23.2	24.1	25.0	26.3
27°	17.1	17.1	18.0	18.4	18.8	19.7	20.6	21.9	22.8	24.1	25.0
28°	15.8	15.8	16.6	17.1	17.5	18.8	19.3	20.6	21.5	22.8	24.1
29°	14.5	14.9	15.8	15.8	16.6	17.5	18.0	19.7	20.6	21.5	22.8
30°	13.6	14.0	14.5	14.9	15.3	16.2	17.1	18.4	19.3	20.2	21.5
31°	12.7	13.1	13.6	14.0	14.5	15.3	16.2	17.5	18.4	19.3	20.6
32°	11.8	11.8	12.7	13.1	13.6	14.5	15.3	16.6	17.5	18.4	19.7
33°	11.0	11.4	11.8	12.3	12.7	13.6	14.5	15.3	16.2	17.5	18.8
34°	10.1	10.5	11.4	11.8	12.3	13.1	13.6	14.5	15.3	16.6	17.5
35°	9.2	10.1	10.5	11.0	11.4	12.3	12.7	14.0	14.5	15.8	16.6
36°	8.8	9.2	10.1	10.5	11.0	11.4	11.8	13.1	14.0	14.9	15.8
37°	7.9	8.8	9.2	9.6	10.1	11.0	11.4	12.3	13.1	14.0	14.9
38°	7.4	7.9	8.8	9.2	9.6	10.1	10.5	11.8	12.3	13.1	14.0
39°	7.0	7.4	8.3	8.8	8.8	9.6	10.1	11.0	11.4	12.3	13.6
40°	6.6	7.0	7.9	7.9	8.3	9.2	9.6	10.5	11.0	11.8	12.7
42.5°	5.7	6.1	6.6	7.0	7.4	7.9	8.3	9.2	9.6	10.1	11.0
45°	4.8	5.3	6.1	6.1	6.6	7.0	7.4	7.9	8.3	9.2	9.6
47.5°	3.9	4.8	5.3	5.7	5.7	6.1	6.6	7.0	7.4	7.9	8.3
50°	3.5	3.9	4.4	4.8	4.8	5.3	5.7	6.1	6.1	6.6	7.4
51°	3.5	3.9	4.4	4.4	4.8	5.3	5.3	5.7	6.1	6.1	6.6
52°	3.1	3.5	3.9	4.4	4.4	4.8	5.3	5.3	5.7	6.1	6.6
53°	3.1	3.5	3.9	3.9	4.4	4.8	4.8	5.3	5.3	5.7	6.1
54°	3.1	3.5	3.9	3.9	4.4	4.4	4.8	4.8	5.3	5.3	5.7
55°	2.6	3.1	3.5	3.9	3.9	4.4	4.4	4.8	4.8	5.3	5.3
57.5°	2.6	3.1	3.5	3.5	3.5	3.9	3.9	4.4	4.4	4.4	4.8
60°	2.6	3.1	3.1	3.5	3.5	3.9	3.9	3.9	3.9	4.4	4.4
61°	2.6	2.6	3.1	3.5	3.5	3.5	3.9	3.9	3.9	3.9	4.4
62°	2.6	2.6	3.1	3.1	3.5	3.5	3.5	3.9	3.9	3.9	3.9
63°	2.2	2.6	3.1	3.1	3.5	3.5	3.5	3.5	3.5	3.9	3.9
64°	2.2	2.6	3.1	3.1	3.1	3.5	3.5	3.5	3.5	3.5	3.5
65°	2.2	2.6	3.1	3.1	3.1	3.5	3.5	3.5	3.5	3.5	3.5
66°	2.2	2.6	3.1	3.1	3.1	3.5	3.5	3.5	3.5	3.5	3.5



TEST NUMBER: P182683

CATALOG NUMBER: LDSQA4A09930D010TE LAR15SP 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	2.2	2.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
75°	2.2	2.2	2.2	2.6	2.6	2.6	2.6	2.6	2.6	2.2	2.2
77.5°	1.8	1.8	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.8
80°	1.8	1.8	2.2	2.2	2.2	2.2	2.2	2.2	1.8	1.8	1.8
82.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.3
85°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.3	0.9
87.5°	1.3	1.8	1.8	1.8	1.8	1.8	1.3	1.3	1.3	0.9	0.9
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: P182683

CATALOG NUMBER: LDSQA4A09930D010TE LAR15SP 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	73.2	73.2	73.2	73.2	73.2	73.2	73.2	73.2
2.5°	65.7	64.4	64.0	64.0	64.4	64.0	64.4	64.0
5°	60.5	59.1	59.1	58.7	59.1	58.7	59.1	58.7
7.5°	56.1	54.8	54.8	54.8	54.8	54.8	55.2	54.8
10°	51.7	50.4	50.4	49.9	50.4	50.4	50.8	50.4
12.5°	47.3	46.4	46.4	46.0	46.9	46.4	47.3	46.9
15°	43.4	42.5	42.5	42.9	43.4	43.4	43.8	43.8
17.5°	39.4	39.4	39.4	39.9	40.3	40.7	41.2	40.7
20°	35.9	35.9	36.4	36.8	37.2	37.7	38.1	38.1
22.5°	32.4	32.4	32.9	33.7	34.6	35.0	35.5	35.5
25°	28.9	29.3	29.8	30.2	31.5	32.0	32.4	32.4
26°	27.6	28.0	28.9	29.3	30.2	30.7	31.5	31.5
27°	26.7	27.2	27.6	28.0	29.3	29.8	30.7	30.2
28°	25.4	25.8	26.3	27.2	28.0	28.9	29.3	29.3
29°	24.1	25.0	25.4	25.8	27.2	27.6	28.0	28.0
30°	23.2	23.7	24.1	25.0	25.8	26.7	27.2	27.2
31°	21.9	22.8	23.2	23.7	25.0	25.4	26.3	26.3
32°	21.0	21.5	21.9	22.8	23.7	24.5	25.0	25.0
33°	19.7	20.6	21.0	21.5	22.8	23.7	24.1	23.7
34°	18.8	19.7	19.7	20.6	21.5	22.3	22.8	22.8
35°	18.0	18.4	18.8	19.7	20.6	21.5	21.9	21.9
36°	17.1	17.5	18.0	18.8	19.7	20.6	21.0	21.0
37°	16.2	16.6	17.1	17.5	18.8	19.7	20.2	20.2
38°	15.3	15.8	16.2	17.1	18.0	18.4	19.3	19.3
39°	14.5	14.9	15.3	16.2	17.1	17.5	18.4	18.0
40°	13.6	14.5	14.5	15.3	16.2	16.6	17.5	17.1
42.5°	11.8	12.3	12.7	13.1	14.0	14.9	15.3	15.3
45°	10.5	11.0	11.4	11.8	12.3	12.7	13.6	13.1
47.5°	8.8	9.2	9.6	10.1	10.5	11.0	11.4	11.4
50°	7.9	7.9	8.3	8.3	9.2	9.6	10.1	10.1
51°	7.0	7.4	7.9	7.9	8.8	8.8	9.2	9.2
52°	7.0	7.0	7.4	7.4	7.9	8.3	8.8	8.8
53°	6.6	6.6	7.0	7.0	7.4	7.9	8.3	8.3
54°	6.1	6.1	6.6	6.6	7.0	7.4	7.9	7.9
55°	5.7	5.7	6.1	6.1	6.6	7.0	7.4	7.4
57.5°	4.8	5.3	5.3	5.7	5.7	6.1	6.1	6.6
60°	4.4	4.8	4.8	4.8	5.3	5.3	5.3	5.3
61°	4.4	4.4	4.4	4.8	4.8	4.4	4.8	4.4
62°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
63°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
64°	3.9	3.5	3.5	3.5	3.5	3.5	3.5	3.5
65°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.1
66°	3.5	3.5	3.1	3.5	3.1	3.1	3.1	3.1



TEST NUMBER: P182683

CATALOG NUMBER: LDSQA4A09930D010TE LAR15SP 4LSQA1H 30°

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	2.2	2.2	2.2	2.2	2.2	1.8	1.8	1.8
75°	2.2	2.2	2.2	1.8	1.8	1.8	1.8	1.3
77.5°	1.8	1.8	1.8	1.8	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3	1.3	0.9	0.9
82.5°	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
85°	0.9	0.9	0.9	0.9	0.9	0.4	0.4	0.4
87.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.3	1.3
70°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.3	1.3





67.5°	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.8	1.8	2.2
70°	1.3	1.8	1.8	1.8	1.8	1.8	1.8	1.3	1.8	1.8	1.8





67.5°	2.2	2.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
70°	2.2	2.6	2.6	2.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1







67.5°	3.1	3.1	3.1	3.1	3.1	2.6	2.6	2.6
70°	2.6	2.6	2.6	2.6	2.6	2.2	2.2	2.2



(END OF REPORT)