

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: P182690

Luminaire Tested: **LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182690
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: LDSQA4A13927D010TE 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1201.1 lumens
Efficiency: N/A
Efficacy: 53.9 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

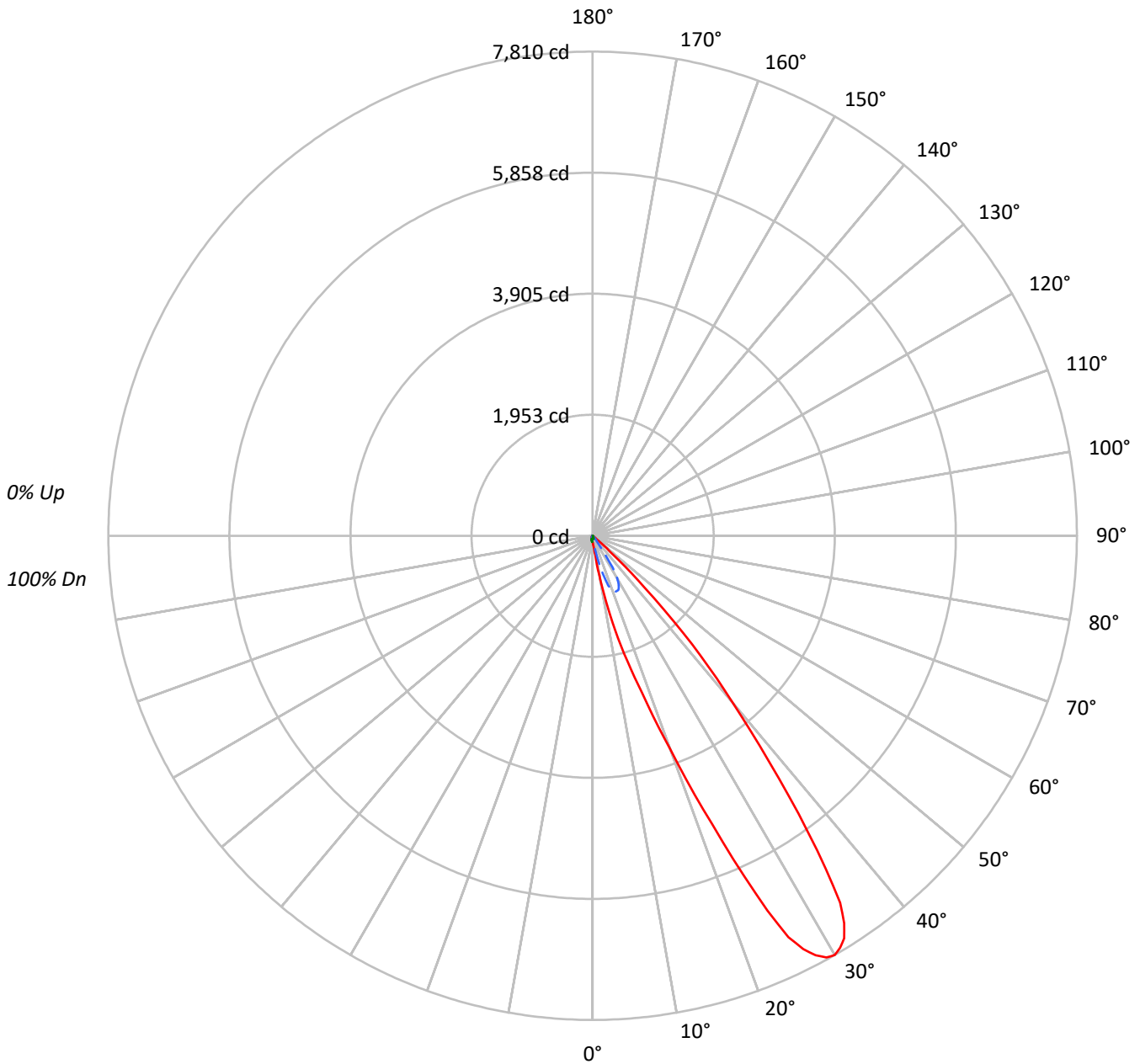
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

Luminous Intensity Polar Plot





TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

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°	10027	10027	10027
5°	16697	9462	8081
10°	71239	8293	7014
15°	197186	6589	6218
20°	378206	4670	5557
25°	713107	3111	4906
30°	873677	2081	4296
35°	775924	1396	3666
40°	442225	936	3060
45°	161307	767	2548
50°	17754	558	2155
55°	2618	422	1773
60°	601	484	1434
65°	436	573	986
70°	340	708	878
75°	449	936	711
80°	0	1395	669
85°	0	2112	667



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.0	1.1
10°-20°	130.1	10.8
20°-30°	427.5	35.6
30°-40°	468.8	39.0
40°-50°	146.4	12.2
50°-60°	8.0	0.7
60°-70°	3.2	0.3
70°-80°	2.5	0.2
80°-90°	1.5	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°	570.6	47.5
0°-40°	1039.4	86.5
0°-60°	1193.9	99.4
0°-90°	1201.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1201.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	104	104	104	104	104	
5°	172	138	97	86	83	32
15°	1966	632	66	59	62	618
25°	6671	970	29	36	46	2974
35°	6561	191	12	20	31	3836
45°	1177	20	6	12	19	1081
55°	16	4	2	7	10	24
65°	2	2	2	5	4	2
75°	1	2	2	4	2	1
85°	0	2	2	2	1	0
90°	0	0	0	0	0	



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
2.5°	127.7	129.0	129.6	126.5	127.1	125.9	127.1	124.6	120.3	121.5	117.8
5°	171.7	169.3	168.6	163.7	162.4	160.0	160.0	154.4	146.3	145.1	137.6
7.5°	303.8	290.8	279.6	262.9	246.8	234.4	229.4	209.6	187.9	179.8	162.4
10°	724.2	721.7	693.8	641.1	580.3	536.3	510.9	434.0	336.7	277.1	215.1
12.5°	1318.2	1305.8	1266.1	1169.4	1064.6	998.8	947.4	792.4	647.9	532.0	381.3
15°	1966.1	1915.9	1857.6	1707.5	1560.6	1475.0	1401.9	1215.9	992.0	825.2	631.8
17.5°	2658.0	2680.3	2539.0	2280.4	2019.4	1885.5	1761.5	1475.6	1230.7	1057.1	839.5
20°	3668.6	3621.5	3372.9	2944.5	2559.4	2335.6	2159.5	1747.2	1377.7	1161.3	955.4
22.5°	5034.5	4884.5	4399.6	3674.8	3064.1	2753.5	2503.6	1948.1	1501.1	1214.6	974.0
25°	6671.4	6532.5	5634.7	4377.3	3474.0	3071.6	2731.8	2075.8	1550.7	1223.3	970.3
26°	7205.8	6999.4	6090.4	4627.2	3599.8	3152.2	2788.2	2100.6	1551.9	1216.5	954.2
27°	7482.4	7320.5	6467.4	4829.9	3686.0	3203.0	2819.8	2106.8	1539.5	1201.0	929.4
28°	7664.6	7513.4	6706.1	4962.6	3730.0	3222.8	2829.1	2093.2	1511.6	1173.7	890.3
29°	7777.5	7618.1	6822.7	5022.8	3733.1	3214.2	2811.8	2057.2	1473.8	1140.8	845.1
30°	7810.3	7638.0	6825.8	4998.0	3687.2	3167.7	2762.8	1998.9	1427.9	1099.3	794.9
31°	7752.1	7574.1	6713.5	4885.1	3593.0	3077.1	2685.9	1922.1	1370.9	1055.3	717.4
32°	7655.3	7419.1	6478.6	4697.9	3464.0	2968.0	2589.8	1838.3	1310.1	999.5	608.2
33°	7449.5	7164.3	6118.9	4462.9	3309.0	2842.8	2477.6	1745.3	1252.4	903.4	452.0
34°	7140.1	6779.9	5678.1	4189.5	3133.6	2686.5	2348.6	1659.2	1192.3	776.3	309.4
35°	6561.0	6225.6	5191.4	3898.0	2944.5	2535.2	2206.6	1546.3	1110.4	622.5	191.0
36°	5913.1	5666.3	4719.6	3601.7	2751.0	2378.4	2060.3	1463.2	989.5	458.2	129.6
37°	5250.9	5032.1	4274.4	3310.3	2556.9	2204.8	1911.5	1369.0	845.7	305.7	104.2
38°	4620.4	4446.8	3851.5	3023.8	2355.4	2023.1	1755.3	1268.6	690.7	196.5	85.6
39°	4041.3	3911.1	3437.4	2746.7	2153.3	1845.2	1605.2	1142.1	527.0	140.1	71.3
40°	3496.9	3405.1	3038.1	2473.2	1952.4	1670.3	1469.4	988.9	365.8	111.0	57.7
42.5°	2378.4	2355.4	2137.8	1780.1	1450.2	1285.3	1161.9	556.2	140.7	67.0	32.2
45°	1177.4	1193.5	1106.7	1018.1	949.2	899.0	732.2	231.9	78.1	36.6	19.8
47.5°	416.7	417.3	359.0	319.9	305.7	304.4	221.3	81.8	41.5	22.3	14.3
50°	117.8	127.1	119.7	122.1	95.5	81.2	66.3	39.7	21.1	14.3	9.3
51°	72.5	78.1	73.2	75.6	65.7	58.9	49.6	29.8	16.7	11.8	8.7
52°	46.5	49.6	47.1	47.7	44.0	38.4	33.5	21.7	13.6	9.9	7.4
53°	31.6	33.5	31.6	31.6	29.1	27.3	23.6	16.1	11.2	8.1	5.6
54°	21.7	22.3	22.3	22.3	20.5	19.2	16.7	12.4	9.3	7.4	5.0
55°	15.5	16.1	15.5	15.5	14.9	13.6	12.4	9.3	7.4	6.2	3.7
57.5°	6.8	6.8	6.8	7.4	6.8	6.8	6.2	5.6	5.0	3.7	2.5
60°	3.1	3.1	3.1	3.1	3.7	3.7	3.7	3.7	3.1	2.5	2.5
61°	2.5	2.5	2.5	2.5	2.5	3.1	3.1	3.1	2.5	2.5	1.9
62°	1.9	1.9	1.9	1.9	2.5	2.5	2.5	2.5	2.5	1.9	1.9
63°	1.9	1.9	1.9	1.9	1.9	1.9	2.5	2.5	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	1.2	1.2	1.2	1.2	1.9	1.9	1.9	1.9	1.9	1.9
66°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9
75°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9
77.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2	1.9
80°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2	1.9
82.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2	1.9
85°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2	1.9
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2	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



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
2.5°	115.3	114.7	111.6	108.5	109.1	107.9	106.6	104.8	103.5	100.4	100.4
5°	131.4	128.3	121.5	115.3	114.7	112.2	108.5	104.8	101.7	97.3	96.1
7.5°	150.0	141.4	130.2	120.3	118.4	114.7	107.9	102.9	97.3	91.8	89.9
10°	176.7	156.2	137.0	122.1	118.4	112.8	104.2	97.3	91.1	84.3	81.8
12.5°	271.6	192.8	145.7	122.1	115.3	108.5	98.0	89.9	82.5	75.0	72.5
15°	452.6	308.1	184.8	122.1	109.7	101.7	88.7	80.6	72.5	65.7	63.2
17.5°	625.0	438.4	257.3	137.6	110.4	93.6	77.5	68.8	62.0	55.2	53.3
20°	724.8	510.9	305.0	153.1	109.1	84.3	66.3	57.0	50.2	45.3	43.4
22.5°	737.8	514.0	294.5	137.0	91.8	70.1	55.2	46.5	40.9	36.6	35.3
25°	703.1	453.9	235.6	97.3	68.2	57.0	43.4	37.2	32.9	29.1	28.5
26°	676.4	417.9	205.2	80.6	60.1	50.8	39.1	33.5	29.8	26.7	26.0
27°	638.6	379.5	175.5	67.0	53.3	45.9	34.7	30.4	27.3	24.2	24.2
28°	595.8	337.9	141.4	56.4	47.7	40.9	31.6	27.3	24.2	22.3	22.3
29°	544.4	277.8	103.5	49.0	42.2	36.0	27.9	24.2	21.7	20.5	20.5
30°	468.1	201.5	71.3	42.8	36.6	31.6	24.8	21.7	19.8	18.6	18.6
31°	365.8	124.0	55.8	37.2	32.2	27.9	22.3	19.2	18.0	16.7	17.4
32°	249.2	77.5	47.7	32.2	28.5	24.2	19.8	17.4	16.1	15.5	15.5
33°	142.0	64.5	41.5	27.9	24.2	21.1	17.4	15.5	14.9	14.3	14.3
34°	94.2	55.2	36.0	23.6	19.8	18.0	14.9	13.6	13.0	13.0	13.0
35°	79.4	47.7	29.1	19.8	17.4	15.5	13.0	12.4	11.8	11.8	12.4
36°	67.0	39.7	23.6	16.7	14.9	13.6	11.8	11.2	10.5	10.5	11.2
37°	56.4	31.6	19.8	14.3	12.4	11.8	10.5	9.9	9.9	9.9	10.5
38°	45.9	25.4	16.7	12.4	11.2	9.9	9.3	8.7	8.7	9.3	9.9
39°	36.0	20.5	13.6	10.5	9.3	8.7	8.1	8.1	8.1	8.1	8.7
40°	28.5	17.4	11.8	9.3	8.1	8.1	7.4	6.8	7.4	7.4	8.7
42.5°	18.0	12.4	8.7	6.8	6.2	6.2	5.6	5.6	5.6	6.2	6.8
45°	13.0	9.9	6.8	5.6	5.0	4.3	4.3	4.3	5.0	5.6	6.2
47.5°	9.9	6.8	5.0	3.7	3.1	3.1	3.1	3.1	3.7	4.3	5.0
50°	6.8	4.3	3.1	2.5	2.5	2.5	2.5	2.5	3.1	3.7	4.3
51°	5.6	3.7	3.1	2.5	2.5	1.9	1.9	2.5	3.1	3.1	3.7
52°	4.3	3.1	2.5	1.9	1.9	1.9	1.9	2.5	2.5	3.1	3.7
53°	3.7	3.1	2.5	1.9	1.9	1.9	1.9	1.9	2.5	3.1	3.7
54°	3.1	2.5	1.9	1.9	1.9	1.9	1.9	1.9	2.5	3.1	3.7
55°	2.5	2.5	1.9	1.9	1.9	1.9	1.9	1.9	2.5	2.5	3.1
57.5°	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	3.1
60°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	3.1
61°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	3.1
62°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	3.1
63°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.5	2.5	3.1
64°	1.9	1.9	1.9	1.9	2.5	2.5	1.9	1.9	2.5	2.5	3.1
65°	1.9	1.9	2.5	2.5	2.5	2.5	1.9	1.9	2.5	2.5	3.1
66°	1.9	2.5	2.5	2.5	2.5	2.5	1.9	1.9	2.5	2.5	3.1



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	1.9	2.5	2.5	2.5	2.5	2.5	2.5	1.9	2.5	2.5	2.5
75°	1.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
77.5°	1.9	2.5	2.5	2.5	2.5	2.5	2.5	1.9	1.9	2.5	2.5
80°	1.9	2.5	2.5	2.5	2.5	2.5	2.5	1.9	1.9	2.5	2.5
82.5°	1.9	2.5	2.5	2.5	2.5	2.5	2.5	1.9	1.9	1.9	2.5
85°	1.9	1.9	2.5	2.5	2.5	2.5	2.5	1.9	1.9	1.9	1.9
87.5°	1.9	1.9	2.5	2.5	2.5	2.5	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



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
2.5°	99.2	97.3	96.1	95.5	96.1	94.9	93.0	93.6	93.0	92.4	92.4
5°	94.2	91.1	89.9	89.3	89.3	88.7	86.2	86.8	86.2	85.6	85.6
7.5°	87.4	84.9	83.1	82.5	82.5	81.8	79.4	80.6	79.4	78.7	79.4
10°	79.4	76.9	76.3	75.0	75.0	74.4	72.5	73.2	72.5	72.5	72.5
12.5°	70.7	68.2	67.6	67.0	67.6	67.0	65.1	66.3	65.7	65.7	66.3
15°	61.4	59.5	59.5	58.9	59.5	58.9	58.3	58.9	58.9	58.9	60.1
17.5°	52.1	50.8	50.8	50.2	50.8	50.8	50.2	52.1	52.1	53.3	54.6
20°	42.8	41.5	42.2	42.2	43.4	43.4	43.4	45.3	45.9	47.1	49.0
22.5°	35.3	34.7	35.3	35.3	36.6	37.2	37.2	39.1	40.9	42.2	44.0
25°	28.5	28.5	29.8	29.8	30.4	31.6	32.2	34.7	36.0	37.2	39.1
26°	26.7	26.7	27.3	27.9	28.5	29.8	30.4	32.9	34.1	35.3	37.2
27°	24.2	24.2	25.4	26.0	26.7	27.9	29.1	31.0	32.2	34.1	35.3
28°	22.3	22.3	23.6	24.2	24.8	26.7	27.3	29.1	30.4	32.2	34.1
29°	20.5	21.1	22.3	22.3	23.6	24.8	25.4	27.9	29.1	30.4	32.2
30°	19.2	19.8	20.5	21.1	21.7	22.9	24.2	26.0	27.3	28.5	30.4
31°	18.0	18.6	19.2	19.8	20.5	21.7	22.9	24.8	26.0	27.3	29.1
32°	16.7	16.7	18.0	18.6	19.2	20.5	21.7	23.6	24.8	26.0	27.9
33°	15.5	16.1	16.7	17.4	18.0	19.2	20.5	21.7	22.9	24.8	26.7
34°	14.3	14.9	16.1	16.7	17.4	18.6	19.2	20.5	21.7	23.6	24.8
35°	13.0	14.3	14.9	15.5	16.1	17.4	18.0	19.8	20.5	22.3	23.6
36°	12.4	13.0	14.3	14.9	15.5	16.1	16.7	18.6	19.8	21.1	22.3
37°	11.2	12.4	13.0	13.6	14.3	15.5	16.1	17.4	18.6	19.8	21.1
38°	10.5	11.2	12.4	13.0	13.6	14.3	14.9	16.7	17.4	18.6	19.8
39°	9.9	10.5	11.8	12.4	12.4	13.6	14.3	15.5	16.1	17.4	19.2
40°	9.3	9.9	11.2	11.2	11.8	13.0	13.6	14.9	15.5	16.7	18.0
42.5°	8.1	8.7	9.3	9.9	10.5	11.2	11.8	13.0	13.6	14.3	15.5
45°	6.8	7.4	8.7	8.7	9.3	9.9	10.5	11.2	11.8	13.0	13.6
47.5°	5.6	6.8	7.4	8.1	8.1	8.7	9.3	9.9	10.5	11.2	11.8
50°	5.0	5.6	6.2	6.8	6.8	7.4	8.1	8.7	8.7	9.3	10.5
51°	5.0	5.6	6.2	6.2	6.8	7.4	7.4	8.1	8.7	8.7	9.3
52°	4.3	5.0	5.6	6.2	6.2	6.8	7.4	7.4	8.1	8.7	9.3
53°	4.3	5.0	5.6	5.6	6.2	6.8	6.8	7.4	7.4	8.1	8.7
54°	4.3	5.0	5.6	5.6	6.2	6.2	6.8	6.8	7.4	7.4	8.1
55°	3.7	4.3	5.0	5.6	5.6	6.2	6.2	6.8	6.8	7.4	7.4
57.5°	3.7	4.3	5.0	5.0	5.0	5.6	5.6	6.2	6.2	6.2	6.8
60°	3.7	4.3	4.3	5.0	5.0	5.6	5.6	5.6	5.6	6.2	6.2
61°	3.7	3.7	4.3	5.0	5.0	5.0	5.6	5.6	5.6	5.6	6.2
62°	3.7	3.7	4.3	4.3	5.0	5.0	5.0	5.6	5.6	5.6	5.6
63°	3.1	3.7	4.3	4.3	5.0	5.0	5.0	5.0	5.0	5.6	5.6
64°	3.1	3.7	4.3	4.3	4.3	5.0	5.0	5.0	5.0	5.0	5.0
65°	3.1	3.7	4.3	4.3	4.3	5.0	5.0	5.0	5.0	5.0	5.0
66°	3.1	3.7	4.3	4.3	4.3	5.0	5.0	5.0	5.0	5.0	5.0



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.1	3.1	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
75°	3.1	3.1	3.1	3.7	3.7	3.7	3.7	3.7	3.7	3.1	3.1
77.5°	2.5	2.5	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.5
80°	2.5	2.5	3.1	3.1	3.1	3.1	3.1	3.1	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.9	1.9
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	1.9	1.9	1.2
87.5°	1.9	2.5	2.5	2.5	2.5	2.5	1.9	1.9	1.9	1.2	1.2
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: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
2.5°	93.0	91.1	90.5	90.5	91.1	90.5	91.1	90.5
5°	85.6	83.7	83.7	83.1	83.7	83.1	83.7	83.1
7.5°	79.4	77.5	77.5	77.5	77.5	77.5	78.1	77.5
10°	73.2	71.3	71.3	70.7	71.3	71.3	71.9	71.3
12.5°	67.0	65.7	65.7	65.1	66.3	65.7	67.0	66.3
15°	61.4	60.1	60.1	60.8	61.4	61.4	62.0	62.0
17.5°	55.8	55.8	55.8	56.4	57.0	57.7	58.3	57.7
20°	50.8	50.8	51.5	52.1	52.7	53.3	53.9	53.9
22.5°	45.9	45.9	46.5	47.7	49.0	49.6	50.2	50.2
25°	40.9	41.5	42.2	42.8	44.6	45.3	45.9	45.9
26°	39.1	39.7	40.9	41.5	42.8	43.4	44.6	44.6
27°	37.8	38.4	39.1	39.7	41.5	42.2	43.4	42.8
28°	36.0	36.6	37.2	38.4	39.7	40.9	41.5	41.5
29°	34.1	35.3	36.0	36.6	38.4	39.1	39.7	39.7
30°	32.9	33.5	34.1	35.3	36.6	37.8	38.4	38.4
31°	31.0	32.2	32.9	33.5	35.3	36.0	37.2	37.2
32°	29.8	30.4	31.0	32.2	33.5	34.7	35.3	35.3
33°	27.9	29.1	29.8	30.4	32.2	33.5	34.1	33.5
34°	26.7	27.9	27.9	29.1	30.4	31.6	32.2	32.2
35°	25.4	26.0	26.7	27.9	29.1	30.4	31.0	31.0
36°	24.2	24.8	25.4	26.7	27.9	29.1	29.8	29.8
37°	22.9	23.6	24.2	24.8	26.7	27.9	28.5	28.5
38°	21.7	22.3	22.9	24.2	25.4	26.0	27.3	27.3
39°	20.5	21.1	21.7	22.9	24.2	24.8	26.0	25.4
40°	19.2	20.5	20.5	21.7	22.9	23.6	24.8	24.2
42.5°	16.7	17.4	18.0	18.6	19.8	21.1	21.7	21.7
45°	14.9	15.5	16.1	16.7	17.4	18.0	19.2	18.6
47.5°	12.4	13.0	13.6	14.3	14.9	15.5	16.1	16.1
50°	11.2	11.2	11.8	11.8	13.0	13.6	14.3	14.3
51°	9.9	10.5	11.2	11.2	12.4	12.4	13.0	13.0
52°	9.9	9.9	10.5	10.5	11.2	11.8	12.4	12.4
53°	9.3	9.3	9.9	9.9	10.5	11.2	11.8	11.8
54°	8.7	8.7	9.3	9.3	9.9	10.5	11.2	11.2
55°	8.1	8.1	8.7	8.7	9.3	9.9	10.5	10.5
57.5°	6.8	7.4	7.4	8.1	8.1	8.7	8.7	9.3
60°	6.2	6.8	6.8	6.8	7.4	7.4	7.4	7.4
61°	6.2	6.2	6.2	6.8	6.8	6.2	6.8	6.2
62°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
63°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
64°	5.6	5.0	5.0	5.0	5.0	5.0	5.0	5.0
65°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.3
66°	5.0	5.0	4.3	5.0	4.3	4.3	4.3	4.3



TEST NUMBER: P182690

CATALOG NUMBER: LDSQA4A13927D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	3.1	3.1	3.1	3.1	3.1	2.5	2.5	2.5
75°	3.1	3.1	3.1	2.5	2.5	2.5	2.5	1.9
77.5°	2.5	2.5	2.5	2.5	1.9	1.9	1.9	1.9
80°	1.9	1.9	1.9	1.9	1.9	1.9	1.2	1.2
82.5°	1.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	1.2	1.2	1.2	1.2	1.2	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°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9
70°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.9





67.5°	1.9	2.5	2.5	2.5	2.5	2.5	2.5	1.9	2.5	2.5	3.1
70°	1.9	2.5	2.5	2.5	2.5	2.5	2.5	1.9	2.5	2.5	2.5





67.5°	3.1	3.7	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
70°	3.1	3.7	3.7	3.7	4.3	4.3	4.3	4.3	4.3	4.3	4.3





67.5°	4.3	4.3	4.3	4.3	4.3	3.7	3.7	3.7
70°	3.7	3.7	3.7	3.7	3.7	3.1	3.1	3.1



(END OF REPORT)