

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: P182788

Luminaire Tested: **LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182788
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26802)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1180.3 lumens
Efficiency: N/A
Efficacy: 53.0 lumens/watt
Spacing Criteria (0/90/45): 2.26 / 0.62 / 1.11
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

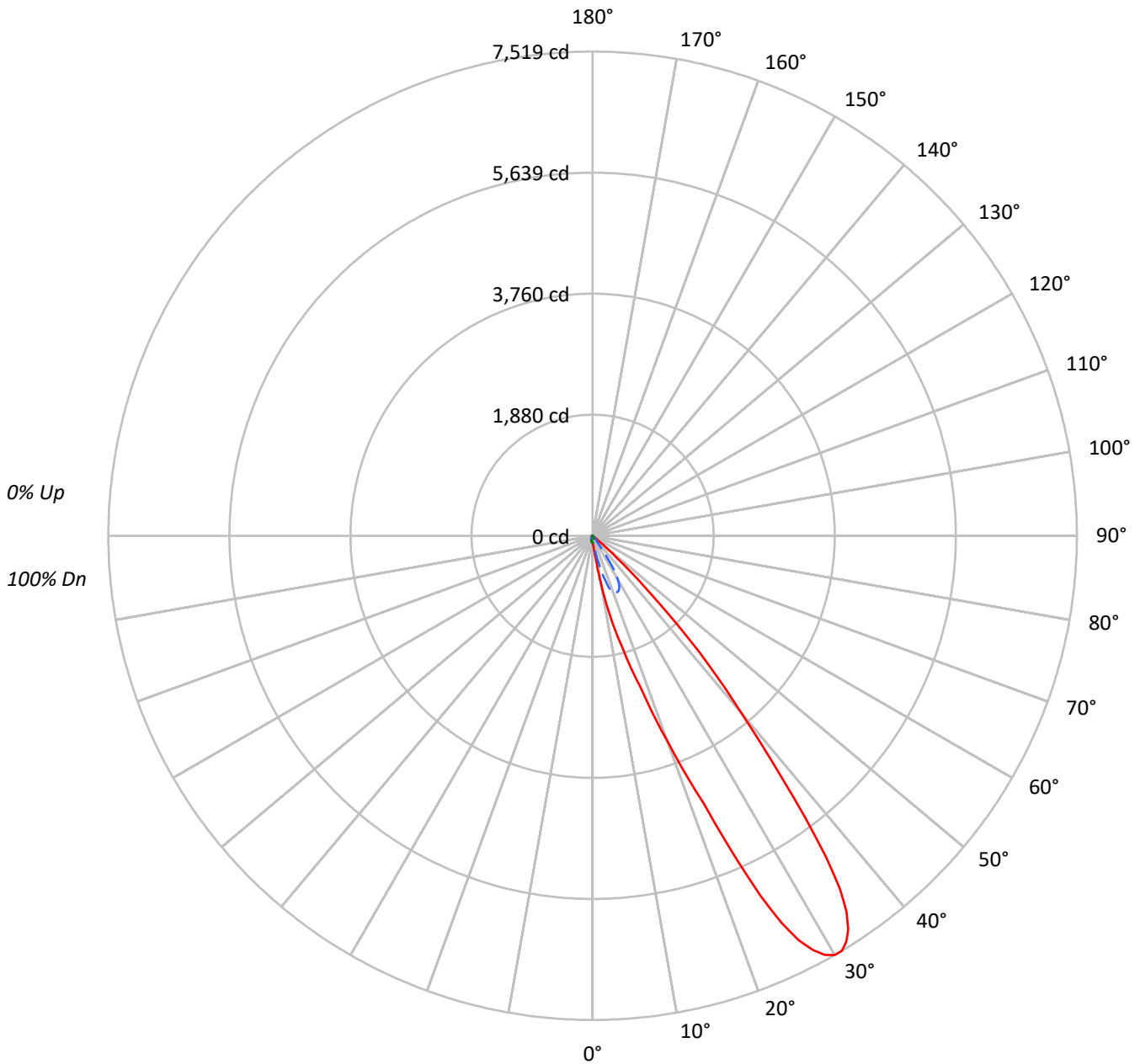
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

Luminous Intensity Polar Plot





TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 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	112	109	106	104	110	107	105	102	103	101	99	99	98	96	96	94	93	91																			
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83																			
3	99	91	85	81	97	90	85	80	87	83	79	85	81	78	82	79	76	75																			
4	93	84	77	72	91	82	76	71	80	75	71	78	73	70	76	72	69	67																			
5	86	76	69	64	85	75	69	64	74	68	63	72	67	63	70	66	62	61																			
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55																			
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	60	55	51	49																			
8	70	59	52	47	69	58	52	47	57	51	47	56	50	46	55	50	46	44																			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40																			
10	62	50	43	38	60	50	43	38	49	42	38	48	42	38	47	42	38	36																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10792	10792	10792
5°	17135	10259	8859
10°	75076	9089	7545
15°	183446	7361	6569
20°	349989	5474	6010
25°	659587	3923	5248
30°	841013	2785	4620
35°	791133	1703	3950
40°	453846	1163	3402
45°	175199	808	2877
50°	23300	588	2366
55°	3547	557	1993
60°	1008	504	1647
65°	596	596	1192
70°	368	736	935
75°	487	749	749
80°	0	1116	725
85°	0	2223	778



TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.9	1.2
10°-20°	126.5	10.7
20°-30°	403.4	34.2
30°-40°	467.4	39.6
40°-50°	152.0	12.9
50°-60°	9.6	0.8
60°-70°	3.5	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°	543.8	46.1
0°-40°	1011.2	85.7
0°-60°	1172.9	99.4
0°-90°	1180.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1180.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	111	111	111	111	111	
5°	176	147	106	92	91	34
15°	1829	659	73	63	66	580
25°	6171	948	37	39	49	2773
35°	6690	226	14	22	33	3849
45°	1279	28	6	13	21	1142
55°	21	5	3	7	12	32
65°	3	2	3	5	5	2
75°	1	2	2	3	2	1
85°	0	1	2	2	1	0
90°	0	0	0	0	0	



TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4
2.5°	135.6	136.9	136.9	135.0	135.0	133.0	131.7	131.0	130.4	128.4	127.8
5°	176.2	177.5	178.2	173.0	171.0	167.1	163.8	160.5	156.6	152.0	147.4
7.5°	340.0	312.5	317.1	277.8	270.6	253.5	239.8	218.2	202.4	186.7	174.3
10°	763.2	737.0	732.4	674.8	617.8	575.2	529.3	450.1	378.0	301.4	239.1
12.5°	1307.6	1269.0	1247.4	1134.0	1067.2	1004.3	934.2	810.4	672.2	554.2	431.1
15°	1829.1	1825.9	1748.6	1622.1	1495.0	1417.7	1327.3	1174.0	1010.2	830.7	659.1
17.5°	2458.7	2484.3	2351.9	2104.9	1903.8	1778.0	1653.6	1413.8	1209.4	1035.1	847.1
20°	3394.9	3326.8	3095.5	2709.0	2369.0	2179.6	1986.4	1633.2	1340.4	1129.4	938.8
22.5°	4494.9	4442.5	4010.1	3365.4	2826.2	2560.3	2294.3	1835.0	1453.7	1180.5	956.5
25°	6170.7	5955.2	5115.9	4069.7	3245.5	2868.8	2527.5	1966.1	1504.8	1187.1	948.0
26°	6685.0	6533.6	5565.4	4349.4	3374.6	2954.0	2585.8	1992.9	1508.8	1181.2	931.6
27°	7049.9	6934.6	5939.4	4555.1	3468.3	3013.0	2623.8	2004.1	1499.6	1168.8	909.3
28°	7290.3	7197.9	6221.8	4703.9	3525.3	3044.4	2642.2	2001.4	1481.3	1147.1	877.9
29°	7443.0	7353.9	6386.9	4788.4	3545.6	3049.6	2637.6	1981.8	1451.8	1115.0	832.7
30°	7518.3	7421.3	6442.6	4797.5	3523.3	3019.5	2602.8	1938.5	1411.2	1076.4	782.9
31°	7519.0	7411.5	6396.1	4726.8	3457.1	2955.3	2541.3	1866.5	1358.1	1030.5	716.1
32°	7431.8	7321.1	6240.8	4583.3	3353.6	2874.7	2458.7	1793.1	1302.4	979.4	619.8
33°	7285.7	7154.7	5971.5	4384.2	3221.3	2764.7	2359.8	1711.2	1246.7	897.5	493.3
34°	7049.9	6871.0	5595.5	4142.4	3061.4	2636.3	2246.5	1622.8	1190.4	783.5	352.5
35°	6689.6	6437.3	5160.5	3875.1	2890.4	2497.4	2118.7	1530.4	1121.6	642.7	226.0
36°	6168.1	5842.5	4707.8	3598.6	2714.2	2351.3	1989.0	1441.3	1012.8	487.4	148.1
37°	5487.4	5200.4	4274.7	3320.2	2531.4	2195.4	1870.4	1351.5	879.2	340.7	120.5
38°	4788.4	4576.8	3851.5	3043.7	2342.1	2027.0	1726.3	1257.9	733.1	224.1	100.9
39°	4158.1	4016.6	3437.5	2769.9	2146.9	1879.6	1582.1	1138.6	577.2	159.2	85.2
40°	3588.8	3491.2	3037.2	2490.8	1951.6	1701.4	1446.5	992.5	416.0	127.1	71.4
42.5°	2447.6	2399.1	2124.6	1792.4	1443.9	1300.4	1139.3	596.8	165.1	80.6	43.2
45°	1278.8	1257.9	1158.3	1049.5	941.4	904.1	732.4	267.9	93.0	47.2	27.5
47.5°	497.9	499.2	412.7	352.5	334.8	311.2	235.8	96.3	52.4	28.8	18.3
50°	154.6	166.4	153.3	144.8	110.7	92.4	76.7	47.8	28.2	17.7	11.8
51°	95.0	100.9	95.0	95.0	78.0	68.1	58.3	36.7	22.3	14.4	10.5
52°	61.6	64.9	61.6	57.7	53.7	48.5	41.9	27.5	17.7	11.8	8.5
53°	41.9	43.9	41.9	39.3	36.0	33.4	29.5	20.3	14.4	9.8	7.2
54°	29.5	30.8	29.5	27.5	25.6	23.6	21.6	15.7	11.8	8.5	6.6
55°	21.0	22.3	21.6	20.3	18.3	17.7	16.4	12.4	9.8	7.2	5.2
57.5°	9.8	10.5	10.5	9.8	9.8	9.2	8.5	7.9	5.9	4.6	3.9
60°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	3.9	3.3	3.3
61°	3.9	3.9	3.9	3.9	3.9	3.9	4.6	3.9	3.3	3.3	2.6
62°	3.3	3.3	3.3	3.3	3.3	3.9	3.9	3.3	3.3	2.6	2.6
63°	2.6	2.6	2.6	2.6	3.3	3.3	3.3	3.3	2.6	2.6	2.6
64°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.0
65°	2.6	2.6	2.0	2.0	2.0	2.6	2.0	2.6	2.0	2.0	2.0
66°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0



TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

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	2.0
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.0
77.5°	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	1.3	1.3	2.0
80°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.3	1.3	1.3
82.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	1.3	1.3
85°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.3	1.3	1.3
87.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	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: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4
2.5°	123.8	120.5	119.2	117.9	117.3	116.0	114.0	112.0	111.4	108.8	106.1
5°	139.5	133.6	129.1	124.5	123.2	119.9	116.0	111.4	109.4	105.5	102.2
7.5°	157.9	146.1	137.6	129.7	126.4	122.5	115.3	109.4	105.5	99.6	95.6
10°	188.7	161.2	144.8	131.0	125.8	120.5	111.4	103.5	98.3	92.4	87.8
12.5°	298.7	209.0	157.2	131.7	124.5	116.6	105.5	96.3	89.8	83.2	79.3
15°	471.0	318.4	203.7	138.2	121.9	110.1	97.0	86.5	79.9	73.4	69.4
17.5°	628.9	428.5	266.0	154.0	123.2	104.2	86.5	76.0	68.8	62.9	60.3
20°	704.9	480.2	296.1	157.2	115.3	93.0	74.7	64.9	58.3	53.1	50.4
22.5°	712.1	476.9	277.8	134.3	95.6	78.6	62.9	53.7	48.5	44.5	41.9
25°	678.1	423.2	222.7	98.9	74.7	65.5	51.8	43.9	40.0	36.7	34.7
26°	651.9	392.4	195.9	85.8	68.1	59.6	47.2	40.6	36.7	34.1	32.1
27°	615.8	356.4	164.4	74.0	62.9	53.7	43.2	37.3	34.1	32.1	30.1
28°	572.6	321.0	136.3	65.5	57.0	48.5	40.0	34.1	31.4	29.5	27.5
29°	526.1	274.5	106.8	59.0	51.1	43.9	36.0	30.8	28.2	26.9	25.6
30°	460.6	213.6	81.9	53.1	45.9	39.3	32.8	28.2	26.2	24.9	23.6
31°	368.2	146.7	66.2	47.2	41.3	35.4	29.5	25.6	23.6	22.3	21.6
32°	264.0	90.4	57.7	41.9	36.7	32.1	25.6	22.9	21.0	20.3	19.7
33°	162.5	74.0	51.1	37.3	32.1	28.2	22.9	20.3	19.0	18.3	17.7
34°	106.8	64.2	45.2	32.1	28.2	24.2	19.7	17.7	17.0	16.4	16.4
35°	90.4	57.0	39.3	27.5	23.6	21.0	17.0	15.7	15.1	14.4	15.1
36°	78.0	49.8	32.8	23.6	20.3	17.7	15.1	13.8	13.1	13.1	13.8
37°	68.8	41.9	27.5	19.7	17.7	15.7	13.1	12.4	11.8	11.8	12.4
38°	58.3	34.1	22.9	17.0	15.1	13.1	11.8	11.1	11.1	11.1	11.8
39°	47.8	28.8	19.7	14.4	13.1	11.8	10.5	9.8	9.8	10.5	10.5
40°	39.3	24.2	16.4	12.4	11.1	10.5	9.2	9.2	9.2	9.2	9.8
42.5°	25.6	16.4	11.8	9.2	8.5	7.9	7.2	7.2	7.2	7.2	7.9
45°	17.0	11.8	9.2	7.2	6.6	5.9	5.9	5.2	5.9	5.9	6.6
47.5°	11.8	8.5	6.6	5.2	4.6	3.9	3.9	3.9	4.6	5.2	5.2
50°	8.5	5.9	4.6	3.3	3.3	3.3	3.3	3.3	3.9	3.9	4.6
51°	7.2	5.2	3.9	3.3	3.3	2.6	2.6	2.6	3.3	3.9	4.6
52°	5.9	4.6	3.3	2.6	2.6	2.6	2.6	2.6	3.3	3.3	3.9
53°	5.2	3.9	3.3	2.6	2.6	2.6	2.6	2.6	3.3	3.3	3.9
54°	4.6	3.3	2.6	2.6	2.6	2.0	2.0	2.6	2.6	3.3	3.9
55°	3.9	3.3	2.6	2.6	2.0	2.0	2.0	2.0	2.6	3.3	3.3
57.5°	3.3	2.6	2.6	2.0	2.0	2.0	2.0	2.0	2.6	2.6	3.3
60°	2.6	2.6	2.6	2.0	2.0	2.0	2.0	2.0	2.6	2.6	3.3
61°	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.6	2.6	3.3
62°	2.6	2.0	2.6	2.6	2.6	2.0	2.0	2.0	2.6	2.6	3.3
63°	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.0	2.6	2.6	2.6
64°	2.6	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.6	2.6	3.3
65°	2.0	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.6	2.6	3.3
66°	2.0	2.6	2.6	2.6	2.6	2.6	2.6	2.0	2.6	2.6	2.6



TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.0	2.0	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.6	2.6
75°	2.0	2.0	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.0	2.6
77.5°	2.0	2.0	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.0	2.6
80°	2.0	2.0	2.6	2.6	2.6	2.6	2.0	2.0	2.0	2.0	2.0
82.5°	2.0	2.0	2.0	2.6	2.6	2.0	2.0	2.0	2.0	2.0	2.0
85°	2.0	2.0	2.0	2.6	2.6	2.0	2.0	2.0	2.0	2.0	2.0
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4
2.5°	104.8	104.8	104.2	102.9	104.2	102.9	101.5	100.9	100.2	99.6	98.3
5°	99.6	98.9	97.6	97.0	97.0	95.6	94.3	93.0	92.4	91.7	90.4
7.5°	93.0	92.4	90.4	89.8	89.8	88.4	86.5	85.8	85.2	84.5	83.2
10°	85.2	84.5	82.5	81.9	81.9	80.6	79.3	78.0	77.3	76.7	75.3
12.5°	76.0	75.3	74.0	73.4	73.4	72.1	70.8	70.1	70.1	69.4	68.8
15°	66.8	66.2	64.9	64.9	64.9	63.5	62.9	62.2	62.9	62.9	62.2
17.5°	57.7	57.0	55.7	55.7	55.7	55.7	55.0	55.0	55.7	56.3	56.3
20°	48.5	47.8	47.8	47.2	47.8	48.5	47.8	48.5	49.8	50.4	51.1
22.5°	40.0	40.0	40.0	40.0	40.6	41.3	41.3	42.6	43.9	44.5	45.9
25°	33.4	33.4	34.1	34.1	34.7	35.4	36.0	36.7	38.7	40.0	40.6
26°	30.8	31.4	31.4	32.1	32.8	33.4	34.1	34.7	36.7	38.0	38.7
27°	28.8	28.8	29.5	30.1	30.8	31.4	32.1	33.4	34.7	36.0	37.3
28°	26.9	26.9	27.5	28.2	28.8	29.5	30.1	31.4	32.8	34.7	35.4
29°	24.9	25.6	25.6	26.2	26.9	27.5	28.8	29.5	31.4	32.8	34.1
30°	22.9	23.6	24.2	24.2	24.9	25.6	26.9	28.2	29.5	31.4	32.1
31°	21.6	22.3	22.3	22.9	23.6	24.2	25.6	26.9	28.2	29.5	30.8
32°	19.7	21.0	21.0	21.0	21.6	22.9	24.2	24.9	26.9	28.2	28.8
33°	18.3	19.0	19.7	19.7	20.3	21.6	22.9	23.6	25.6	26.9	27.5
34°	17.0	17.7	18.3	18.3	19.0	20.3	21.6	22.3	24.2	24.9	26.2
35°	15.7	16.4	17.0	17.0	17.7	19.0	20.3	21.0	22.3	23.6	24.9
36°	14.4	15.1	15.7	16.4	17.0	18.3	19.0	20.3	21.0	22.3	23.6
37°	13.1	13.8	15.1	15.1	16.4	17.0	18.3	19.0	20.3	21.0	22.3
38°	11.8	13.1	13.8	14.4	15.1	16.4	17.0	17.7	19.0	20.3	21.0
39°	11.1	12.4	13.1	13.8	14.4	15.1	15.7	17.0	17.7	19.0	19.7
40°	10.5	11.1	12.4	12.4	13.8	14.4	15.1	15.7	17.0	17.7	19.0
42.5°	8.5	9.8	10.5	11.1	11.8	12.4	13.1	13.8	14.4	15.7	16.4
45°	7.2	8.5	9.2	9.2	9.8	10.5	11.1	11.8	13.1	13.8	14.4
47.5°	5.9	7.2	7.9	8.5	8.5	9.2	9.8	10.5	11.1	11.8	12.4
50°	5.2	5.9	6.6	7.2	7.9	7.9	8.5	9.2	9.8	10.5	10.5
51°	5.2	5.9	6.6	6.6	7.2	7.9	8.5	8.5	9.2	9.8	9.8
52°	4.6	5.2	5.9	6.6	7.2	7.2	7.9	8.5	8.5	9.2	9.8
53°	4.6	5.2	5.9	5.9	6.6	7.2	7.2	7.9	8.5	8.5	9.2
54°	3.9	5.2	5.9	5.9	6.6	6.6	7.2	7.9	7.9	7.9	8.5
55°	3.9	4.6	5.2	5.9	5.9	6.6	6.6	7.2	7.2	7.9	7.9
57.5°	3.9	4.6	5.2	5.2	5.9	5.9	6.6	6.6	6.6	6.6	7.2
60°	3.3	3.9	4.6	5.2	5.2	5.9	5.9	5.9	5.9	5.9	6.6
61°	3.3	3.9	4.6	4.6	5.2	5.2	5.9	5.9	5.9	5.9	5.9
62°	3.3	3.9	4.6	4.6	5.2	5.2	5.2	5.9	5.9	5.9	5.9
63°	3.3	3.9	4.6	4.6	5.2	5.2	5.2	5.2	5.2	5.2	5.9
64°	3.3	3.9	4.6	4.6	5.2	5.2	5.2	5.2	5.2	5.2	5.2
65°	3.3	3.9	4.6	4.6	4.6	5.2	5.2	5.2	5.2	5.2	5.2
66°	3.3	3.9	4.6	4.6	4.6	4.6	5.2	5.2	5.2	5.2	4.6



TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	2.6	3.3	3.3	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.3
75°	2.6	3.3	3.3	3.3	3.9	3.9	3.9	3.3	3.3	3.3	3.3
77.5°	2.6	2.6	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.6	2.6
80°	2.6	2.6	2.6	3.3	3.3	3.3	3.3	2.6	2.6	2.6	2.0
82.5°	2.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.0
85°	2.0	2.6	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.0	1.3
87.5°	2.0	2.0	2.0	2.6	2.6	2.6	2.0	2.0	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: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	111.4	111.4	111.4	111.4	111.4	111.4	111.4	111.4
2.5°	99.6	100.2	99.6	99.6	98.3	98.9	97.6	99.6
5°	91.1	91.7	91.1	91.1	89.8	89.8	89.1	91.1
7.5°	83.9	84.5	83.2	83.2	81.9	82.5	81.9	83.2
10°	76.7	76.7	76.7	76.0	75.3	76.0	75.3	76.7
12.5°	69.4	70.1	70.1	70.1	69.4	69.4	68.8	70.8
15°	63.5	64.2	64.9	64.9	64.2	64.9	64.2	65.5
17.5°	58.3	59.6	59.6	60.3	60.3	60.9	60.9	62.2
20°	53.1	55.0	55.0	55.7	55.7	57.0	57.0	58.3
22.5°	47.8	49.8	50.4	50.4	51.1	52.4	52.4	53.7
25°	43.2	45.2	45.9	45.9	46.5	47.8	47.8	49.1
26°	41.3	43.2	43.9	44.5	45.2	46.5	46.5	47.8
27°	39.3	41.3	41.9	42.6	43.2	44.5	44.5	45.9
28°	38.0	40.0	40.6	41.3	41.9	43.2	43.2	43.9
29°	36.0	38.0	38.7	39.3	40.0	41.3	41.3	42.6
30°	34.7	36.0	36.7	37.3	38.0	40.0	40.0	41.3
31°	32.8	34.7	35.4	36.0	36.7	38.0	38.0	40.0
32°	31.4	32.8	33.4	34.1	35.4	36.0	36.7	38.0
33°	29.5	31.4	32.1	32.8	33.4	34.7	35.4	36.7
34°	28.2	29.5	30.8	31.4	32.1	33.4	34.1	35.4
35°	26.9	28.2	28.8	29.5	30.8	32.1	32.1	33.4
36°	25.6	26.9	27.5	28.2	29.5	30.8	30.8	32.1
37°	24.2	25.6	26.2	26.9	28.2	29.5	29.5	30.8
38°	22.9	24.2	24.9	25.6	26.9	28.2	28.8	30.1
39°	21.6	23.6	24.2	24.9	25.6	26.9	27.5	28.2
40°	21.0	22.3	22.9	23.6	24.2	25.6	26.2	26.9
42.5°	17.7	19.7	20.3	21.0	21.6	22.3	22.9	23.6
45°	15.7	17.0	17.0	17.7	18.3	19.7	19.7	21.0
47.5°	13.8	14.4	15.1	15.1	15.7	17.0	17.0	17.7
50°	11.8	12.4	13.1	13.1	13.8	14.4	15.1	15.7
51°	11.1	11.8	11.8	12.4	13.1	13.8	14.4	15.1
52°	10.5	11.1	11.1	11.8	12.4	13.1	13.1	13.8
53°	9.8	10.5	10.5	11.1	11.1	12.4	12.4	13.1
54°	9.2	9.8	9.8	10.5	10.5	11.8	11.8	12.4
55°	8.5	9.2	9.8	9.8	9.8	10.5	11.1	11.8
57.5°	7.9	8.5	8.5	8.5	9.2	9.2	9.8	9.8
60°	6.6	7.2	7.2	7.2	7.9	7.9	7.9	8.5
61°	6.6	6.6	7.2	7.2	6.6	6.6	6.6	7.2
62°	5.9	6.6	6.6	5.9	5.9	5.9	5.9	6.6
63°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
64°	5.2	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	4.6	5.2
66°	4.6	5.2	5.2	4.6	4.6	4.6	4.6	4.6



TEST NUMBER: P182788

CATALOG NUMBER: LDSQA4A13935D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	3.3	3.3	3.3	3.3	3.3	2.6	2.6	2.6
75°	3.3	2.6	2.6	2.6	2.6	2.6	2.6	2.0
77.5°	2.6	2.6	2.6	2.6	2.0	2.0	2.0	2.0
80°	2.0	2.0	2.0	2.0	2.0	2.0	1.3	1.3
82.5°	2.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	1.3	1.3	0.7	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°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.0	2.0
70°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.0	2.0





67.5°	2.0	2.0	2.6	2.6	2.6	2.6	2.0	2.0	2.0	2.6	2.6
70°	2.0	2.6	2.6	2.6	2.6	2.6	2.6	2.0	2.0	2.6	2.6





67.5°	3.3	3.9	3.9	3.9	4.6	4.6	4.6	4.6	4.6	4.6	4.6
70°	3.3	3.3	3.9	3.9	3.9	4.6	4.6	3.9	3.9	3.9	3.9





67.5°	4.6	4.6	4.6	4.6	3.9	3.9	3.9	3.9
70°	3.9	3.9	3.9	3.9	3.3	3.3	3.3	3.3



(END OF REPORT)