

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: P182785

Luminaire Tested: **LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182785
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: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1516.8 lumens
Efficiency: N/A
Efficacy: 68.1 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

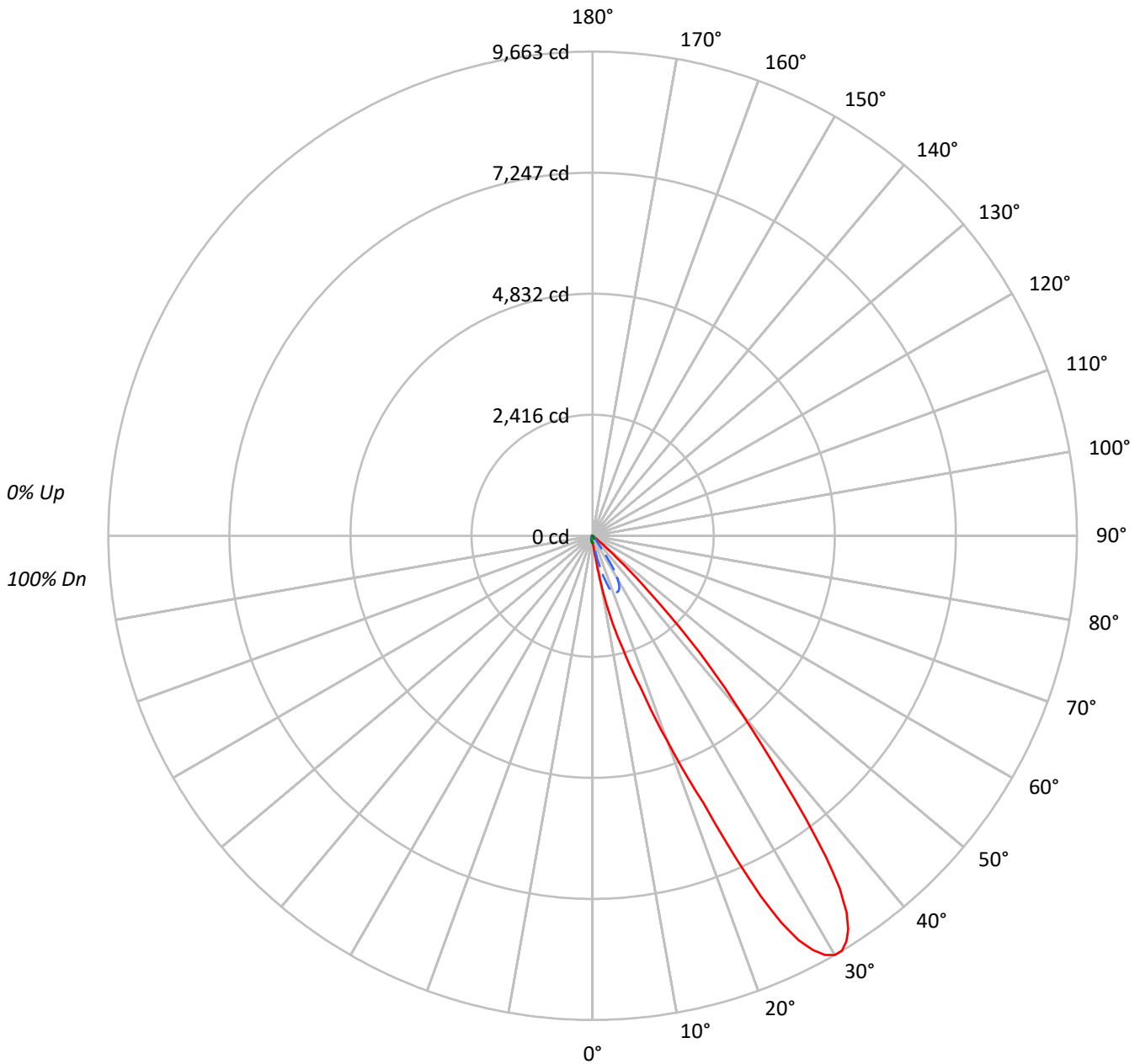
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

Luminous Intensity Polar Plot





TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE 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°	13863	13863	13863
5°	22026	13177	11378
10°	96481	11677	9689
15°	235748	9458	8445
20°	449773	7031	7722
25°	847639	5035	6745
30°	1080801	3580	5929
35°	1016684	2188	5073
40°	583242	1492	4363
45°	225150	1041	3685
50°	29946	769	3044
55°	4543	709	2567
60°	1298	659	2112
65°	779	779	1536
70°	482	963	1190
75°	636	936	936
80°	0	1395	948
85°	0	2779	889



TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.9	1.2
10°-20°	162.6	10.7
20°-30°	518.4	34.2
30°-40°	600.7	39.6
40°-50°	195.3	12.9
50°-60°	12.4	0.8
60°-70°	4.5	0.3
70°-80°	3.2	0.2
80°-90°	1.9	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°	698.8	46.1
0°-40°	1299.5	85.7
0°-60°	1507.3	99.4
0°-90°	1516.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1516.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	143	143	143	143	143	
5°	226	189	136	119	117	44
15°	2351	847	94	81	84	745
25°	7930	1218	47	50	63	3563
35°	8597	290	18	29	43	4946
45°	1643	35	8	17	27	1467
55°	27	7	4	9	15	42
65°	3	2	3	7	7	3
75°	2	2	2	4	2	1
85°	0	2	2	2	1	0
90°	0	0	0	0	0	



TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1
2.5°	174.3	176.0	176.0	173.4	173.4	170.9	169.2	168.4	167.5	165.0	164.2
5°	226.5	228.2	229.0	222.3	219.7	214.7	210.5	206.3	201.2	195.3	189.4
7.5°	437.0	401.6	407.5	357.0	347.7	325.8	308.1	280.4	260.2	239.9	224.0
10°	980.8	947.2	941.3	867.2	793.9	739.2	680.3	578.4	485.8	387.3	307.3
12.5°	1680.5	1630.8	1603.0	1457.4	1371.5	1290.7	1200.6	1041.5	863.8	712.3	554.0
15°	2350.6	2346.4	2247.1	2084.6	1921.3	1821.9	1705.7	1508.7	1298.2	1067.6	847.0
17.5°	3159.7	3192.6	3022.5	2705.1	2446.6	2285.0	2125.0	1816.9	1554.2	1330.2	1088.6
20°	4362.8	4275.3	3978.1	3481.3	3044.4	2801.1	2552.7	2098.9	1722.6	1451.5	1206.5
22.5°	5776.4	5709.1	5153.4	4324.9	3632.0	3290.2	2948.4	2358.2	1868.2	1517.1	1229.2
25°	7930.0	7653.0	6574.5	5230.0	4170.9	3686.8	3248.1	2526.6	1933.9	1525.6	1218.3
26°	8590.9	8396.5	7152.1	5589.5	4336.7	3796.2	3323.1	2561.1	1938.9	1518.0	1197.2
27°	9059.9	8911.7	7632.8	5853.9	4457.1	3872.0	3371.9	2575.4	1927.2	1502.0	1168.6
28°	9368.9	9250.2	7995.7	6045.0	4530.4	3912.4	3395.5	2572.1	1903.6	1474.2	1128.2
29°	9565.0	9450.5	8207.9	6153.6	4556.5	3919.1	3389.6	2546.8	1865.7	1432.9	1070.1
30°	9661.9	9537.3	8279.4	6165.4	4527.8	3880.4	3344.9	2491.2	1813.5	1383.3	1006.1
31°	9662.7	9524.6	8219.7	6074.4	4442.8	3797.9	3265.8	2398.6	1745.3	1324.3	920.2
32°	9550.7	9408.4	8020.1	5890.1	4309.8	3694.3	3159.7	2304.3	1673.7	1258.7	796.5
33°	9363.0	9194.6	7674.1	5634.1	4139.7	3552.9	3032.6	2199.1	1602.2	1153.4	634.0
34°	9059.9	8830.0	7190.8	5323.5	3934.3	3387.9	2886.9	2085.4	1529.8	1006.9	453.0
35°	8596.8	8272.7	6631.8	4979.9	3714.5	3209.4	2722.8	1966.7	1441.4	825.9	290.5
36°	7926.7	7508.2	6050.0	4624.7	3488.1	3021.6	2556.1	1852.2	1301.6	626.4	190.3
37°	7051.9	6683.2	5493.5	4266.8	3253.2	2821.3	2403.7	1736.9	1129.9	437.8	154.9
38°	6153.6	5881.6	4949.6	3911.6	3009.9	2604.9	2218.5	1616.5	942.1	287.9	129.7
39°	5343.7	5161.8	4417.5	3559.6	2759.0	2415.5	2033.2	1463.3	741.7	204.6	109.4
40°	4612.0	4486.6	3903.1	3201.0	2508.1	2186.5	1859.0	1275.5	534.6	163.3	91.8
42.5°	3145.4	3083.1	2730.3	2303.5	1855.6	1671.2	1464.1	767.0	212.2	103.6	55.6
45°	1643.4	1616.5	1488.5	1348.8	1209.8	1161.8	941.3	344.3	119.6	60.6	35.4
47.5°	639.9	641.5	530.4	453.0	430.2	399.9	303.1	123.8	67.4	37.0	23.6
50°	198.7	213.8	197.0	186.1	142.3	118.7	98.5	61.5	36.2	22.7	15.2
51°	122.1	129.7	122.1	122.1	100.2	87.6	74.9	47.1	28.6	18.5	13.5
52°	79.1	83.3	79.1	74.1	69.0	62.3	53.9	35.4	22.7	15.2	10.9
53°	53.9	56.4	53.9	50.5	46.3	42.9	37.9	26.1	18.5	12.6	9.3
54°	37.9	39.6	37.9	35.4	32.8	30.3	27.8	20.2	15.2	10.9	8.4
55°	26.9	28.6	27.8	26.1	23.6	22.7	21.0	16.0	12.6	9.3	6.7
57.5°	12.6	13.5	13.5	12.6	12.6	11.8	10.9	10.1	7.6	5.9	5.1
60°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	5.1	4.2	4.2
61°	5.1	5.1	5.1	5.1	5.1	5.1	5.9	5.1	4.2	4.2	3.4
62°	4.2	4.2	4.2	4.2	4.2	5.1	5.1	4.2	4.2	3.4	3.4
63°	3.4	3.4	3.4	3.4	4.2	4.2	4.2	4.2	3.4	3.4	3.4
64°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.5
65°	3.4	3.4	2.5	2.5	2.5	3.4	2.5	3.4	2.5	2.5	2.5
66°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5



TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5
75°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5
77.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.7	1.7	2.5
80°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.7	1.7	1.7
82.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.7	1.7
85°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.7	1.7	1.7
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.7	1.7
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: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1
2.5°	159.1	154.9	153.2	151.5	150.7	149.0	146.5	144.0	143.1	139.8	136.4
5°	179.3	171.8	165.9	160.0	158.3	154.1	149.0	143.1	140.6	135.5	131.3
7.5°	202.9	187.7	176.8	166.7	162.5	157.4	148.2	140.6	135.5	128.0	122.9
10°	242.5	207.1	186.1	168.4	161.6	154.9	143.1	133.0	126.3	118.7	112.8
12.5°	383.9	268.6	202.1	169.2	160.0	149.9	135.5	123.8	115.3	106.9	101.9
15°	605.3	409.2	261.8	177.6	156.6	141.4	124.6	111.1	102.7	94.3	89.2
17.5°	808.2	550.6	341.8	197.9	158.3	133.9	111.1	97.7	88.4	80.8	77.5
20°	905.9	617.1	380.5	202.1	148.2	119.6	96.0	83.3	74.9	68.2	64.8
22.5°	915.2	612.9	357.0	172.6	122.9	101.0	80.8	69.0	62.3	57.3	53.9
25°	871.4	543.9	286.3	127.1	96.0	84.2	66.5	56.4	51.4	47.1	44.6
26°	837.7	504.3	251.7	110.3	87.6	76.6	60.6	52.2	47.1	43.8	41.3
27°	791.4	458.0	211.3	95.1	80.8	69.0	55.6	48.0	43.8	41.3	38.7
28°	735.8	412.5	175.1	84.2	73.2	62.3	51.4	43.8	40.4	37.9	35.4
29°	676.1	352.8	137.2	75.8	65.7	56.4	46.3	39.6	36.2	34.5	32.8
30°	591.9	274.5	105.2	68.2	58.9	50.5	42.1	36.2	33.7	32.0	30.3
31°	473.2	188.6	85.0	60.6	53.0	45.5	37.9	32.8	30.3	28.6	27.8
32°	339.3	116.2	74.1	53.9	47.1	41.3	32.8	29.5	26.9	26.1	25.3
33°	208.8	95.1	65.7	48.0	41.3	36.2	29.5	26.1	24.4	23.6	22.7
34°	137.2	82.5	58.1	41.3	36.2	31.2	25.3	22.7	21.9	21.0	21.0
35°	116.2	73.2	50.5	35.4	30.3	26.9	21.9	20.2	19.4	18.5	19.4
36°	100.2	64.0	42.1	30.3	26.1	22.7	19.4	17.7	16.8	16.8	17.7
37°	88.4	53.9	35.4	25.3	22.7	20.2	16.8	16.0	15.2	15.2	16.0
38°	74.9	43.8	29.5	21.9	19.4	16.8	15.2	14.3	14.3	14.3	15.2
39°	61.5	37.0	25.3	18.5	16.8	15.2	13.5	12.6	12.6	13.5	13.5
40°	50.5	31.2	21.0	16.0	14.3	13.5	11.8	11.8	11.8	11.8	12.6
42.5°	32.8	21.0	15.2	11.8	10.9	10.1	9.3	9.3	9.3	9.3	10.1
45°	21.9	15.2	11.8	9.3	8.4	7.6	7.6	6.7	7.6	7.6	8.4
47.5°	15.2	10.9	8.4	6.7	5.9	5.1	5.1	5.1	5.9	6.7	6.7
50°	10.9	7.6	5.9	4.2	4.2	4.2	4.2	4.2	5.1	5.1	5.9
51°	9.3	6.7	5.1	4.2	4.2	3.4	3.4	3.4	4.2	5.1	5.9
52°	7.6	5.9	4.2	3.4	3.4	3.4	3.4	3.4	4.2	4.2	5.1
53°	6.7	5.1	4.2	3.4	3.4	3.4	3.4	3.4	4.2	4.2	5.1
54°	5.9	4.2	3.4	3.4	3.4	2.5	2.5	3.4	3.4	4.2	5.1
55°	5.1	4.2	3.4	3.4	2.5	2.5	2.5	2.5	3.4	4.2	4.2
57.5°	4.2	3.4	3.4	2.5	2.5	2.5	2.5	2.5	3.4	3.4	4.2
60°	3.4	3.4	3.4	2.5	2.5	2.5	2.5	2.5	3.4	3.4	4.2
61°	3.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.4	3.4	4.2
62°	3.4	2.5	3.4	3.4	3.4	2.5	2.5	2.5	3.4	3.4	4.2
63°	3.4	3.4	3.4	3.4	3.4	2.5	2.5	2.5	3.4	3.4	3.4
64°	3.4	3.4	3.4	3.4	3.4	3.4	2.5	2.5	3.4	3.4	4.2
65°	2.5	3.4	3.4	3.4	3.4	3.4	2.5	2.5	3.4	3.4	4.2
66°	2.5	3.4	3.4	3.4	3.4	3.4	3.4	2.5	3.4	3.4	3.4



TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.5	2.5	3.4	3.4	3.4	3.4	3.4	2.5	2.5	3.4	3.4
75°	2.5	2.5	3.4	3.4	3.4	3.4	3.4	2.5	2.5	2.5	3.4
77.5°	2.5	2.5	3.4	3.4	3.4	3.4	3.4	2.5	2.5	2.5	3.4
80°	2.5	2.5	3.4	3.4	3.4	3.4	2.5	2.5	2.5	2.5	2.5
82.5°	2.5	2.5	2.5	3.4	3.4	2.5	2.5	2.5	2.5	2.5	2.5
85°	2.5	2.5	2.5	3.4	3.4	2.5	2.5	2.5	2.5	2.5	2.5
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1
2.5°	134.7	134.7	133.9	132.2	133.9	132.2	130.5	129.7	128.8	128.0	126.3
5°	128.0	127.1	125.4	124.6	124.6	122.9	121.2	119.6	118.7	117.9	116.2
7.5°	119.6	118.7	116.2	115.3	115.3	113.7	111.1	110.3	109.4	108.6	106.9
10°	109.4	108.6	106.1	105.2	105.2	103.6	101.9	100.2	99.3	98.5	96.8
12.5°	97.7	96.8	95.1	94.3	94.3	92.6	90.9	90.1	90.1	89.2	88.4
15°	85.9	85.0	83.3	83.3	83.3	81.7	80.8	80.0	80.8	80.8	80.0
17.5°	74.1	73.2	71.6	71.6	71.6	71.6	70.7	70.7	71.6	72.4	72.4
20°	62.3	61.5	61.5	60.6	61.5	62.3	61.5	62.3	64.0	64.8	65.7
22.5°	51.4	51.4	51.4	51.4	52.2	53.0	53.0	54.7	56.4	57.3	58.9
25°	42.9	42.9	43.8	43.8	44.6	45.5	46.3	47.1	49.7	51.4	52.2
26°	39.6	40.4	40.4	41.3	42.1	42.9	43.8	44.6	47.1	48.8	49.7
27°	37.0	37.0	37.9	38.7	39.6	40.4	41.3	42.9	44.6	46.3	48.0
28°	34.5	34.5	35.4	36.2	37.0	37.9	38.7	40.4	42.1	44.6	45.5
29°	32.0	32.8	32.8	33.7	34.5	35.4	37.0	37.9	40.4	42.1	43.8
30°	29.5	30.3	31.2	31.2	32.0	32.8	34.5	36.2	37.9	40.4	41.3
31°	27.8	28.6	28.6	29.5	30.3	31.2	32.8	34.5	36.2	37.9	39.6
32°	25.3	26.9	26.9	26.9	27.8	29.5	31.2	32.0	34.5	36.2	37.0
33°	23.6	24.4	25.3	25.3	26.1	27.8	29.5	30.3	32.8	34.5	35.4
34°	21.9	22.7	23.6	23.6	24.4	26.1	27.8	28.6	31.2	32.0	33.7
35°	20.2	21.0	21.9	21.9	22.7	24.4	26.1	26.9	28.6	30.3	32.0
36°	18.5	19.4	20.2	21.0	21.9	23.6	24.4	26.1	26.9	28.6	30.3
37°	16.8	17.7	19.4	19.4	21.0	21.9	23.6	24.4	26.1	26.9	28.6
38°	15.2	16.8	17.7	18.5	19.4	21.0	21.9	22.7	24.4	26.1	26.9
39°	14.3	16.0	16.8	17.7	18.5	19.4	20.2	21.9	22.7	24.4	25.3
40°	13.5	14.3	16.0	16.0	17.7	18.5	19.4	20.2	21.9	22.7	24.4
42.5°	10.9	12.6	13.5	14.3	15.2	16.0	16.8	17.7	18.5	20.2	21.0
45°	9.3	10.9	11.8	11.8	12.6	13.5	14.3	15.2	16.8	17.7	18.5
47.5°	7.6	9.3	10.1	10.9	10.9	11.8	12.6	13.5	14.3	15.2	16.0
50°	6.7	7.6	8.4	9.3	10.1	10.1	10.9	11.8	12.6	13.5	13.5
51°	6.7	7.6	8.4	8.4	9.3	10.1	10.9	10.9	11.8	12.6	12.6
52°	5.9	6.7	7.6	8.4	9.3	9.3	10.1	10.9	10.9	11.8	12.6
53°	5.9	6.7	7.6	7.6	8.4	9.3	9.3	10.1	10.9	10.9	11.8
54°	5.1	6.7	7.6	7.6	8.4	8.4	9.3	10.1	10.1	10.1	10.9
55°	5.1	5.9	6.7	7.6	7.6	8.4	8.4	9.3	9.3	10.1	10.1
57.5°	5.1	5.9	6.7	6.7	7.6	7.6	8.4	8.4	8.4	8.4	9.3
60°	4.2	5.1	5.9	6.7	6.7	7.6	7.6	7.6	7.6	7.6	8.4
61°	4.2	5.1	5.9	5.9	6.7	6.7	7.6	7.6	7.6	7.6	7.6
62°	4.2	5.1	5.9	5.9	6.7	6.7	6.7	7.6	7.6	7.6	7.6
63°	4.2	5.1	5.9	5.9	6.7	6.7	6.7	6.7	6.7	6.7	7.6
64°	4.2	5.1	5.9	5.9	6.7	6.7	6.7	6.7	6.7	6.7	6.7
65°	4.2	5.1	5.9	5.9	5.9	6.7	6.7	6.7	6.7	6.7	6.7
66°	4.2	5.1	5.9	5.9	5.9	5.9	6.7	6.7	6.7	6.7	5.9



TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.4	4.2	4.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.2
75°	3.4	4.2	4.2	4.2	5.1	5.1	5.1	4.2	4.2	4.2	4.2
77.5°	3.4	3.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	3.4	3.4
80°	3.4	3.4	3.4	4.2	4.2	4.2	4.2	3.4	3.4	3.4	2.5
82.5°	2.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.5	2.5	2.5
85°	2.5	3.4	3.4	3.4	3.4	3.4	3.4	2.5	2.5	2.5	1.7
87.5°	2.5	2.5	2.5	3.4	3.4	3.4	2.5	2.5	1.7	1.7	1.7
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: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	143.1	143.1	143.1	143.1	143.1	143.1	143.1	143.1
2.5°	128.0	128.8	128.0	128.0	126.3	127.1	125.4	128.0
5°	117.0	117.9	117.0	117.0	115.3	115.3	114.5	117.0
7.5°	107.8	108.6	106.9	106.9	105.2	106.1	105.2	106.9
10°	98.5	98.5	98.5	97.7	96.8	97.7	96.8	98.5
12.5°	89.2	90.1	90.1	90.1	89.2	89.2	88.4	90.9
15°	81.7	82.5	83.3	83.3	82.5	83.3	82.5	84.2
17.5°	74.9	76.6	76.6	77.5	77.5	78.3	78.3	80.0
20°	68.2	70.7	70.7	71.6	71.6	73.2	73.2	74.9
22.5°	61.5	64.0	64.8	64.8	65.7	67.4	67.4	69.0
25°	55.6	58.1	58.9	58.9	59.8	61.5	61.5	63.1
26°	53.0	55.6	56.4	57.3	58.1	59.8	59.8	61.5
27°	50.5	53.0	53.9	54.7	55.6	57.3	57.3	58.9
28°	48.8	51.4	52.2	53.0	53.9	55.6	55.6	56.4
29°	46.3	48.8	49.7	50.5	51.4	53.0	53.0	54.7
30°	44.6	46.3	47.1	48.0	48.8	51.4	51.4	53.0
31°	42.1	44.6	45.5	46.3	47.1	48.8	48.8	51.4
32°	40.4	42.1	42.9	43.8	45.5	46.3	47.1	48.8
33°	37.9	40.4	41.3	42.1	42.9	44.6	45.5	47.1
34°	36.2	37.9	39.6	40.4	41.3	42.9	43.8	45.5
35°	34.5	36.2	37.0	37.9	39.6	41.3	41.3	42.9
36°	32.8	34.5	35.4	36.2	37.9	39.6	39.6	41.3
37°	31.2	32.8	33.7	34.5	36.2	37.9	37.9	39.6
38°	29.5	31.2	32.0	32.8	34.5	36.2	37.0	38.7
39°	27.8	30.3	31.2	32.0	32.8	34.5	35.4	36.2
40°	26.9	28.6	29.5	30.3	31.2	32.8	33.7	34.5
42.5°	22.7	25.3	26.1	26.9	27.8	28.6	29.5	30.3
45°	20.2	21.9	21.9	22.7	23.6	25.3	25.3	26.9
47.5°	17.7	18.5	19.4	19.4	20.2	21.9	21.9	22.7
50°	15.2	16.0	16.8	16.8	17.7	18.5	19.4	20.2
51°	14.3	15.2	15.2	16.0	16.8	17.7	18.5	19.4
52°	13.5	14.3	14.3	15.2	16.0	16.8	16.8	17.7
53°	12.6	13.5	13.5	14.3	14.3	16.0	16.0	16.8
54°	11.8	12.6	12.6	13.5	13.5	15.2	15.2	16.0
55°	10.9	11.8	12.6	12.6	12.6	13.5	14.3	15.2
57.5°	10.1	10.9	10.9	10.9	11.8	11.8	12.6	12.6
60°	8.4	9.3	9.3	9.3	10.1	10.1	10.1	10.9
61°	8.4	8.4	9.3	9.3	8.4	8.4	8.4	9.3
62°	7.6	8.4	8.4	7.6	7.6	7.6	7.6	8.4
63°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
64°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
65°	6.7	6.7	6.7	6.7	6.7	6.7	5.9	6.7
66°	5.9	6.7	6.7	5.9	5.9	5.9	5.9	5.9



TEST NUMBER: P182785

CATALOG NUMBER: LDSQA4A13840D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	4.2	4.2	4.2	4.2	4.2	3.4	3.4	3.4
75°	4.2	3.4	3.4	3.4	3.4	3.4	3.4	2.5
77.5°	3.4	3.4	3.4	3.4	2.5	2.5	2.5	2.5
80°	2.5	2.5	2.5	2.5	2.5	2.5	1.7	1.7
82.5°	2.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	1.7	1.7	0.8	0.8	0.8	0.8
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	2.5
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.5	2.5





67.5°	2.5	2.5	3.4	3.4	3.4	3.4	2.5	2.5	2.5	3.4	3.4
70°	2.5	3.4	3.4	3.4	3.4	3.4	3.4	2.5	2.5	3.4	3.4





67.5°	4.2	5.1	5.1	5.1	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.2	4.2	5.1	5.1	5.1	5.9	5.9	5.1	5.1	5.1	5.1





67.5°	5.9	5.9	5.9	5.9	5.1	5.1	5.1	5.1
70°	5.1	5.1	5.1	5.1	4.2	4.2	4.2	4.2



(END OF REPORT)