

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: P182676

Luminaire Tested: **LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182676
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: LDSQA4A18935D010TE 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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1580.6 lumens
Efficiency: N/A
Efficacy: 54.3 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

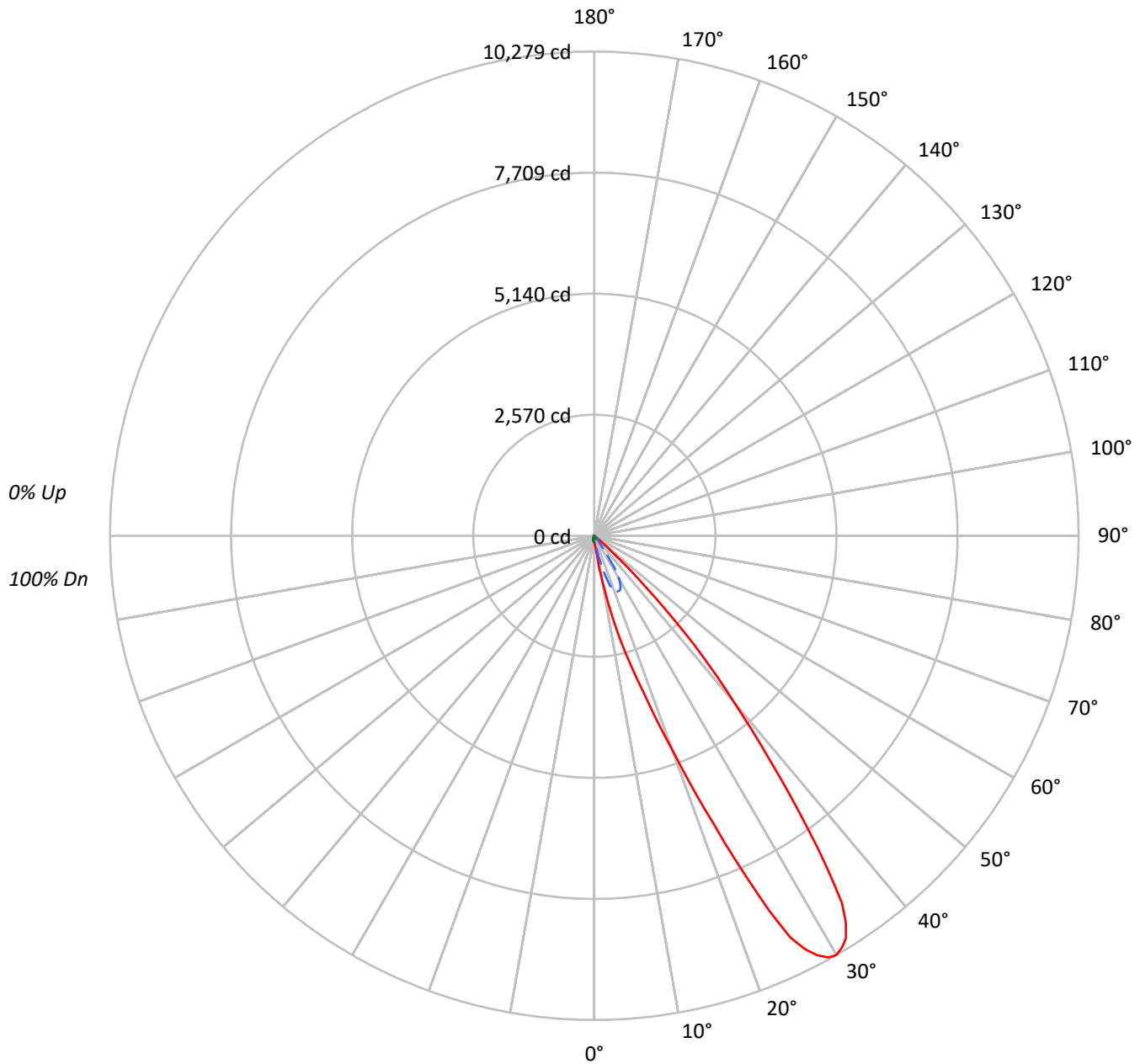
Input Watts (W): 29.12
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	13204	13204	13204
5°	21977	12457	10629
10°	93747	10919	9227
15°	259498	8675	8184
20°	497731	6144	7320
25°	938464	4094	6456
30°	1149786	2741	5660
35°	1021131	1833	4825
40°	581978	1239	4021
45°	212285	1000	3357
50°	23360	738	2833
55°	3446	557	2348
60°	794	639	1899
65°	550	756	1307
70°	453	935	1161
75°	599	1235	898
80°	0	1841	893
85°	0	2668	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.1	1.1
10°-20°	171.3	10.8
20°-30°	562.6	35.6
30°-40°	616.9	39.0
40°-50°	192.7	12.2
50°-60°	10.5	0.7
60°-70°	4.2	0.3
70°-80°	3.2	0.2
80°-90°	2.0	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°	751.0	47.5
0°-40°	1367.9	86.5
0°-60°	1571.2	99.4
0°-90°	1580.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1580.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	136	136	136	136	136	
5°	226	181	128	113	109	42
15°	2587	832	86	78	82	813
25°	8780	1277	38	47	60	3914
35°	8634	251	16	27	41	5048
45°	1550	26	7	16	24	1423
55°	20	5	3	9	14	32
65°	2	2	3	6	6	2
75°	2	2	3	5	2	1
85°	0	2	2	2	1	0
90°	0	0	0	0	0	



TEST NUMBER: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	168.1	169.7	170.5	166.5	167.3	165.6	167.3	164.0	158.3	159.9	155.0
5°	226.0	222.8	221.9	215.4	213.8	210.5	210.5	203.2	192.6	190.9	181.1
7.5°	399.8	382.7	368.0	346.0	324.7	308.4	301.9	275.8	247.2	236.6	213.8
10°	953.0	949.8	913.1	843.7	763.7	705.8	672.3	571.2	443.1	364.7	283.1
12.5°	1734.7	1718.4	1666.2	1538.9	1401.0	1314.5	1246.8	1042.8	852.7	700.1	501.8
15°	2587.4	2521.3	2444.6	2247.1	2053.8	1941.2	1844.9	1600.1	1305.5	1086.0	831.5
17.5°	3498.0	3527.4	3341.3	3001.1	2657.6	2481.3	2318.1	1942.0	1619.7	1391.2	1104.8
20°	4828.0	4766.0	4438.8	3875.0	3368.3	3073.7	2842.0	2299.4	1813.0	1528.3	1257.4
22.5°	6625.5	6428.1	5790.0	4836.2	4032.4	3623.6	3294.8	2563.7	1975.4	1598.5	1281.9
25°	8779.7	8596.9	7415.4	5760.6	4571.8	4042.2	3595.1	2731.8	2040.7	1609.9	1277.0
26°	9483.0	9211.3	8015.1	6089.5	4737.4	4148.3	3669.3	2764.4	2042.3	1600.9	1255.8
27°	9846.9	9634.0	8511.2	6356.3	4850.8	4215.2	3711.0	2772.6	2026.0	1580.5	1223.1
28°	10086.8	9887.7	8825.3	6530.9	4908.8	4241.3	3723.2	2754.7	1989.3	1544.6	1171.7
29°	10235.3	10025.6	8978.7	6610.0	4912.9	4229.9	3700.3	2707.3	1939.5	1501.4	1112.1
30°	10278.6	10051.7	8982.8	6577.4	4852.5	4168.7	3635.9	2630.6	1879.1	1446.7	1046.1
31°	10201.9	9967.7	8835.1	6428.9	4728.4	4049.6	3534.7	2529.5	1804.1	1388.8	944.1
32°	10074.6	9763.7	8525.9	6182.5	4558.7	3906.0	3408.2	2419.3	1724.1	1315.3	800.4
33°	9803.7	9428.3	8052.6	5873.2	4354.7	3741.1	3260.5	2296.9	1648.2	1188.8	594.8
34°	9396.5	8922.4	7472.5	5513.4	4123.8	3535.5	3090.8	2183.5	1569.1	1021.6	407.2
35°	8634.4	8193.0	6832.0	5129.9	3875.0	3336.4	2904.0	2035.0	1461.4	819.2	251.3
36°	7781.7	7457.0	6211.0	4739.9	3620.4	3130.0	2711.4	1925.6	1302.3	603.0	170.5
37°	6910.3	6622.3	5625.2	4356.4	3365.0	2901.5	2515.6	1801.6	1113.0	402.3	137.1
38°	6080.5	5852.0	5068.7	3979.4	3099.8	2662.5	2310.0	1669.4	909.0	258.7	112.6
39°	5318.4	5147.0	4523.6	3614.7	2833.8	2428.3	2112.5	1503.0	693.6	184.4	93.8
40°	4602.0	4481.2	3998.2	3254.8	2569.4	2198.2	1933.8	1301.4	481.4	146.1	75.9
42.5°	3130.0	3099.8	2813.4	2342.6	1908.5	1691.5	1529.1	731.9	185.2	88.1	42.4
45°	1549.5	1570.7	1456.5	1339.8	1249.2	1183.1	963.6	305.2	102.8	48.1	26.1
47.5°	548.3	549.1	472.4	421.0	402.3	400.6	291.3	107.7	54.7	29.4	18.8
50°	155.0	167.3	157.5	160.7	125.7	106.9	87.3	52.2	27.7	18.8	12.2
51°	95.5	102.8	96.3	99.5	86.5	77.5	65.3	39.2	22.0	15.5	11.4
52°	61.2	65.3	62.0	62.8	57.9	50.6	44.1	28.6	18.0	13.1	9.8
53°	41.6	44.1	41.6	41.6	38.3	35.9	31.0	21.2	14.7	10.6	7.3
54°	28.6	29.4	29.4	29.4	26.9	25.3	22.0	16.3	12.2	9.8	6.5
55°	20.4	21.2	20.4	20.4	19.6	18.0	16.3	12.2	9.8	8.2	4.9
57.5°	9.0	9.0	9.0	9.8	9.0	9.0	8.2	7.3	6.5	4.9	3.3
60°	4.1	4.1	4.1	4.1	4.9	4.9	4.9	4.9	4.1	3.3	3.3
61°	3.3	3.3	3.3	3.3	3.3	4.1	4.1	4.1	3.3	3.3	2.4
62°	2.4	2.4	2.4	2.4	3.3	3.3	3.3	3.3	3.3	2.4	2.4
63°	2.4	2.4	2.4	2.4	2.4	2.4	3.3	3.3	2.4	2.4	2.4
64°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
65°	2.4	1.6	1.6	1.6	1.6	2.4	2.4	2.4	2.4	2.4	2.4
66°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4



TEST NUMBER: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4
75°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4
77.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	2.4
80°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	2.4
82.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	2.4
85°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	2.4
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	2.4
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°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	151.8	151.0	146.9	142.8	143.6	142.0	140.3	137.9	136.3	132.2	132.2
5°	173.0	168.9	159.9	151.8	151.0	147.7	142.8	137.9	133.8	128.1	126.5
7.5°	197.5	186.0	171.4	158.3	155.8	151.0	142.0	135.4	128.1	120.8	118.3
10°	232.5	205.6	180.3	160.7	155.8	148.5	137.1	128.1	119.9	111.0	107.7
12.5°	357.4	253.8	191.7	160.7	151.8	142.8	128.9	118.3	108.5	98.7	95.5
15°	595.6	405.5	243.2	160.7	144.4	133.8	116.7	106.1	95.5	86.5	83.2
17.5°	822.5	576.9	338.6	181.1	145.2	123.2	102.0	90.6	81.6	72.6	70.2
20°	953.8	672.3	401.4	201.5	143.6	111.0	87.3	75.1	66.1	59.6	57.1
22.5°	971.0	676.4	387.6	180.3	120.8	92.2	72.6	61.2	53.9	48.1	46.5
25°	925.3	597.3	310.1	128.1	89.8	75.1	57.1	49.0	43.2	38.3	37.5
26°	890.2	550.0	270.1	106.1	79.1	66.9	51.4	44.1	39.2	35.1	34.3
27°	840.4	499.4	230.9	88.1	70.2	60.4	45.7	40.0	35.9	31.8	31.8
28°	784.1	444.7	186.0	74.3	62.8	53.9	41.6	35.9	31.8	29.4	29.4
29°	716.4	365.5	136.3	64.5	55.5	47.3	36.7	31.8	28.6	26.9	26.9
30°	616.0	265.2	93.8	56.3	48.1	41.6	32.6	28.6	26.1	24.5	24.5
31°	481.4	163.2	73.4	49.0	42.4	36.7	29.4	25.3	23.7	22.0	22.8
32°	328.0	102.0	62.8	42.4	37.5	31.8	26.1	22.8	21.2	20.4	20.4
33°	186.9	84.9	54.7	36.7	31.8	27.7	22.8	20.4	19.6	18.8	18.8
34°	124.0	72.6	47.3	31.0	26.1	23.7	19.6	18.0	17.1	17.1	17.1
35°	104.4	62.8	38.3	26.1	22.8	20.4	17.1	16.3	15.5	15.5	16.3
36°	88.1	52.2	31.0	22.0	19.6	18.0	15.5	14.7	13.9	13.9	14.7
37°	74.3	41.6	26.1	18.8	16.3	15.5	13.9	13.1	13.1	13.1	13.9
38°	60.4	33.5	22.0	16.3	14.7	13.1	12.2	11.4	11.4	12.2	13.1
39°	47.3	26.9	18.0	13.9	12.2	11.4	10.6	10.6	10.6	10.6	11.4
40°	37.5	22.8	15.5	12.2	10.6	10.6	9.8	9.0	9.8	9.8	11.4
42.5°	23.7	16.3	11.4	9.0	8.2	8.2	7.3	7.3	7.3	8.2	9.0
45°	17.1	13.1	9.0	7.3	6.5	5.7	5.7	5.7	6.5	7.3	8.2
47.5°	13.1	9.0	6.5	4.9	4.1	4.1	4.1	4.1	4.9	5.7	6.5
50°	9.0	5.7	4.1	3.3	3.3	3.3	3.3	3.3	4.1	4.9	5.7
51°	7.3	4.9	4.1	3.3	3.3	2.4	2.4	3.3	4.1	4.1	4.9
52°	5.7	4.1	3.3	2.4	2.4	2.4	2.4	3.3	3.3	4.1	4.9
53°	4.9	4.1	3.3	2.4	2.4	2.4	2.4	2.4	3.3	4.1	4.9
54°	4.1	3.3	2.4	2.4	2.4	2.4	2.4	2.4	3.3	4.1	4.9
55°	3.3	3.3	2.4	2.4	2.4	2.4	2.4	2.4	3.3	3.3	4.1
57.5°	3.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.3	4.1
60°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.3	4.1
61°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.3	4.1
62°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.3	4.1
63°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.3	3.3	4.1
64°	2.4	2.4	2.4	2.4	3.3	3.3	2.4	2.4	3.3	3.3	4.1
65°	2.4	2.4	3.3	3.3	3.3	3.3	2.4	2.4	3.3	3.3	4.1
66°	2.4	3.3	3.3	3.3	3.3	3.3	2.4	2.4	3.3	3.3	4.1



TEST NUMBER: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.4	3.3	3.3	3.3	3.3	3.3	3.3	2.4	3.3	3.3	3.3
75°	2.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
77.5°	2.4	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	3.3	3.3
80°	2.4	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	3.3	3.3
82.5°	2.4	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	2.4	3.3
85°	2.4	2.4	3.3	3.3	3.3	3.3	3.3	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	3.3	3.3	3.3	3.3	2.4	2.4	2.4	2.4	2.4
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: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	130.6	128.1	126.5	125.7	126.5	124.8	122.4	123.2	122.4	121.6	121.6
5°	124.0	119.9	118.3	117.5	117.5	116.7	113.4	114.2	113.4	112.6	112.6
7.5°	115.0	111.8	109.3	108.5	108.5	107.7	104.4	106.1	104.4	103.6	104.4
10°	104.4	101.2	100.4	98.7	98.7	97.9	95.5	96.3	95.5	95.5	95.5
12.5°	93.0	89.8	88.9	88.1	88.9	88.1	85.7	87.3	86.5	86.5	87.3
15°	80.8	78.3	78.3	77.5	78.3	77.5	76.7	77.5	77.5	77.5	79.1
17.5°	68.5	66.9	66.9	66.1	66.9	66.9	66.1	68.5	68.5	70.2	71.8
20°	56.3	54.7	55.5	55.5	57.1	57.1	57.1	59.6	60.4	62.0	64.5
22.5°	46.5	45.7	46.5	46.5	48.1	49.0	49.0	51.4	53.9	55.5	57.9
25°	37.5	37.5	39.2	39.2	40.0	41.6	42.4	45.7	47.3	49.0	51.4
26°	35.1	35.1	35.9	36.7	37.5	39.2	40.0	43.2	44.9	46.5	49.0
27°	31.8	31.8	33.5	34.3	35.1	36.7	38.3	40.8	42.4	44.9	46.5
28°	29.4	29.4	31.0	31.8	32.6	35.1	35.9	38.3	40.0	42.4	44.9
29°	26.9	27.7	29.4	29.4	31.0	32.6	33.5	36.7	38.3	40.0	42.4
30°	25.3	26.1	26.9	27.7	28.6	30.2	31.8	34.3	35.9	37.5	40.0
31°	23.7	24.5	25.3	26.1	26.9	28.6	30.2	32.6	34.3	35.9	38.3
32°	22.0	22.0	23.7	24.5	25.3	26.9	28.6	31.0	32.6	34.3	36.7
33°	20.4	21.2	22.0	22.8	23.7	25.3	26.9	28.6	30.2	32.6	35.1
34°	18.8	19.6	21.2	22.0	22.8	24.5	25.3	26.9	28.6	31.0	32.6
35°	17.1	18.8	19.6	20.4	21.2	22.8	23.7	26.1	26.9	29.4	31.0
36°	16.3	17.1	18.8	19.6	20.4	21.2	22.0	24.5	26.1	27.7	29.4
37°	14.7	16.3	17.1	18.0	18.8	20.4	21.2	22.8	24.5	26.1	27.7
38°	13.9	14.7	16.3	17.1	18.0	18.8	19.6	22.0	22.8	24.5	26.1
39°	13.1	13.9	15.5	16.3	16.3	18.0	18.8	20.4	21.2	22.8	25.3
40°	12.2	13.1	14.7	14.7	15.5	17.1	18.0	19.6	20.4	22.0	23.7
42.5°	10.6	11.4	12.2	13.1	13.9	14.7	15.5	17.1	18.0	18.8	20.4
45°	9.0	9.8	11.4	11.4	12.2	13.1	13.9	14.7	15.5	17.1	18.0
47.5°	7.3	9.0	9.8	10.6	10.6	11.4	12.2	13.1	13.9	14.7	15.5
50°	6.5	7.3	8.2	9.0	9.0	9.8	10.6	11.4	11.4	12.2	13.9
51°	6.5	7.3	8.2	8.2	9.0	9.8	9.8	10.6	11.4	11.4	12.2
52°	5.7	6.5	7.3	8.2	8.2	9.0	9.8	9.8	10.6	11.4	12.2
53°	5.7	6.5	7.3	7.3	8.2	9.0	9.0	9.8	9.8	10.6	11.4
54°	5.7	6.5	7.3	7.3	8.2	8.2	9.0	9.0	9.8	9.8	10.6
55°	4.9	5.7	6.5	7.3	7.3	8.2	8.2	9.0	9.0	9.8	9.8
57.5°	4.9	5.7	6.5	6.5	6.5	7.3	7.3	8.2	8.2	8.2	9.0
60°	4.9	5.7	5.7	6.5	6.5	7.3	7.3	7.3	7.3	8.2	8.2
61°	4.9	4.9	5.7	6.5	6.5	6.5	7.3	7.3	7.3	7.3	8.2
62°	4.9	4.9	5.7	5.7	6.5	6.5	6.5	7.3	7.3	7.3	7.3
63°	4.1	4.9	5.7	5.7	6.5	6.5	6.5	6.5	6.5	7.3	7.3
64°	4.1	4.9	5.7	5.7	5.7	6.5	6.5	6.5	6.5	6.5	6.5
65°	4.1	4.9	5.7	5.7	5.7	6.5	6.5	6.5	6.5	6.5	6.5
66°	4.1	4.9	5.7	5.7	5.7	6.5	6.5	6.5	6.5	6.5	6.5



TEST NUMBER: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	4.1	4.1	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
75°	4.1	4.1	4.1	4.9	4.9	4.9	4.9	4.9	4.9	4.1	4.1
77.5°	3.3	3.3	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	3.3
80°	3.3	3.3	4.1	4.1	4.1	4.1	4.1	4.1	3.3	3.3	3.3
82.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4
85°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.4	1.6
87.5°	2.4	3.3	3.3	3.3	3.3	3.3	2.4	2.4	2.4	1.6	1.6
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: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	122.4	119.9	119.1	119.1	119.9	119.1	119.9	119.1
5°	112.6	110.2	110.2	109.3	110.2	109.3	110.2	109.3
7.5°	104.4	102.0	102.0	102.0	102.0	102.0	102.8	102.0
10°	96.3	93.8	93.8	93.0	93.8	93.8	94.7	93.8
12.5°	88.1	86.5	86.5	85.7	87.3	86.5	88.1	87.3
15°	80.8	79.1	79.1	80.0	80.8	80.8	81.6	81.6
17.5°	73.4	73.4	73.4	74.3	75.1	75.9	76.7	75.9
20°	66.9	66.9	67.7	68.5	69.4	70.2	71.0	71.0
22.5°	60.4	60.4	61.2	62.8	64.5	65.3	66.1	66.1
25°	53.9	54.7	55.5	56.3	58.7	59.6	60.4	60.4
26°	51.4	52.2	53.9	54.7	56.3	57.1	58.7	58.7
27°	49.8	50.6	51.4	52.2	54.7	55.5	57.1	56.3
28°	47.3	48.1	49.0	50.6	52.2	53.9	54.7	54.7
29°	44.9	46.5	47.3	48.1	50.6	51.4	52.2	52.2
30°	43.2	44.1	44.9	46.5	48.1	49.8	50.6	50.6
31°	40.8	42.4	43.2	44.1	46.5	47.3	49.0	49.0
32°	39.2	40.0	40.8	42.4	44.1	45.7	46.5	46.5
33°	36.7	38.3	39.2	40.0	42.4	44.1	44.9	44.1
34°	35.1	36.7	36.7	38.3	40.0	41.6	42.4	42.4
35°	33.5	34.3	35.1	36.7	38.3	40.0	40.8	40.8
36°	31.8	32.6	33.5	35.1	36.7	38.3	39.2	39.2
37°	30.2	31.0	31.8	32.6	35.1	36.7	37.5	37.5
38°	28.6	29.4	30.2	31.8	33.5	34.3	35.9	35.9
39°	26.9	27.7	28.6	30.2	31.8	32.6	34.3	33.5
40°	25.3	26.9	26.9	28.6	30.2	31.0	32.6	31.8
42.5°	22.0	22.8	23.7	24.5	26.1	27.7	28.6	28.6
45°	19.6	20.4	21.2	22.0	22.8	23.7	25.3	24.5
47.5°	16.3	17.1	18.0	18.8	19.6	20.4	21.2	21.2
50°	14.7	14.7	15.5	15.5	17.1	18.0	18.8	18.8
51°	13.1	13.9	14.7	14.7	16.3	16.3	17.1	17.1
52°	13.1	13.1	13.9	13.9	14.7	15.5	16.3	16.3
53°	12.2	12.2	13.1	13.1	13.9	14.7	15.5	15.5
54°	11.4	11.4	12.2	12.2	13.1	13.9	14.7	14.7
55°	10.6	10.6	11.4	11.4	12.2	13.1	13.9	13.9
57.5°	9.0	9.8	9.8	10.6	10.6	11.4	11.4	12.2
60°	8.2	9.0	9.0	9.0	9.8	9.8	9.8	9.8
61°	8.2	8.2	8.2	9.0	9.0	8.2	9.0	8.2
62°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
63°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
64°	7.3	6.5	6.5	6.5	6.5	6.5	6.5	6.5
65°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	5.7
66°	6.5	6.5	5.7	6.5	5.7	5.7	5.7	5.7



TEST NUMBER: P182676

CATALOG NUMBER: LDSQA4A18935D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	4.1	4.1	4.1	4.1	4.1	3.3	3.3	3.3
75°	4.1	4.1	4.1	3.3	3.3	3.3	3.3	2.4
77.5°	3.3	3.3	3.3	3.3	2.4	2.4	2.4	2.4
80°	2.4	2.4	2.4	2.4	2.4	2.4	1.6	1.6
82.5°	2.4	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	1.6	1.6	1.6	1.6	1.6	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°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4





67.5°	2.4	3.3	3.3	3.3	3.3	3.3	3.3	2.4	3.3	3.3	4.1
70°	2.4	3.3	3.3	3.3	3.3	3.3	3.3	2.4	3.3	3.3	3.3





67.5°	4.1	4.9	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
70°	4.1	4.9	4.9	4.9	5.7	5.7	5.7	5.7	5.7	5.7	5.7





67.5°	5.7	5.7	5.7	5.7	5.7	4.9	4.9	4.9
70°	4.9	4.9	4.9	4.9	4.9	4.1	4.1	4.1



(END OF REPORT)