

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: P182686

Luminaire Tested: **LDSQA4A13827D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182686
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: LDSQA4A13827D010TE LAR15SP 4LSQA1H 30°
Description: PORTFOLIO 4" SQUARE ADJUSTABLE REFLECTOR, ANGLE-CUT TRIM,
SELF-FLANGED, 15° SPOT, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1496.5 lumens
Efficiency: N/A
Efficacy: 67.2 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

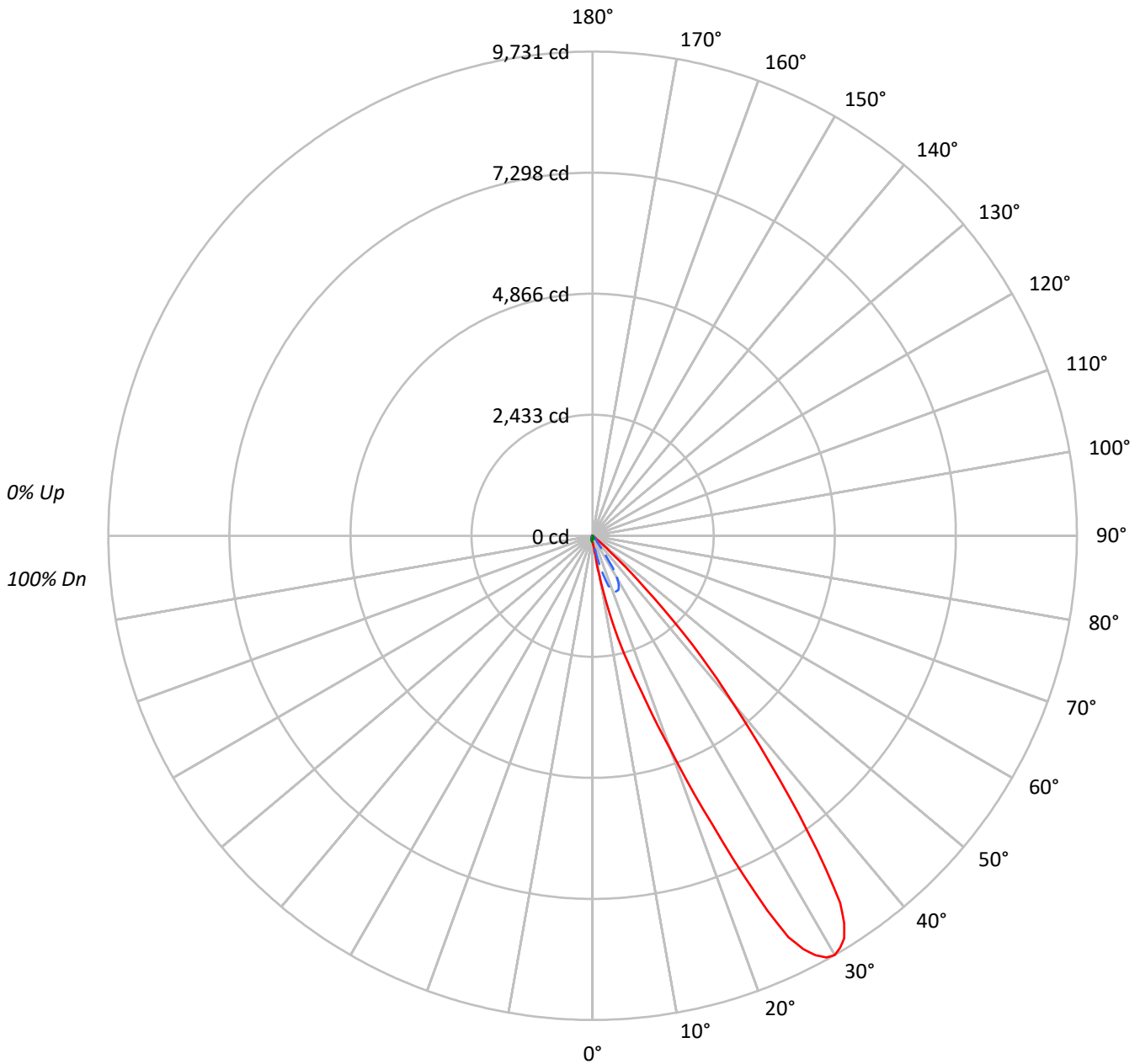
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	12497	12497	12497
5°	20811	11796	10065
10°	88759	10339	8735
15°	245677	8214	7753
20°	471237	5814	6928
25°	888493	3880	6114
30°	1088575	2595	5358
35°	966765	1738	4565
40°	550994	1176	3807
45°	200983	959	3178
50°	22124	693	2683
55°	3260	524	2213
60°	756	601	1802
65°	527	711	1238
70°	425	878	1105
75°	561	1160	861
80°	0	1729	837
85°	0	2556	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	16.2	1.1
10°-20°	162.2	10.8
20°-30°	532.6	35.6
30°-40°	584.1	39.0
40°-50°	182.4	12.2
50°-60°	10.0	0.7
60°-70°	4.0	0.3
70°-80°	3.1	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°	711.0	47.5
0°-40°	1295.1	86.5
0°-60°	1487.5	99.4
0°-90°	1496.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1496.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	129	129	129	129	129	
5°	214	172	121	107	104	40
15°	2450	787	82	73	77	770
25°	8312	1209	36	45	57	3705
35°	8175	238	15	26	39	4779
45°	1467	25	7	15	23	1347
55°	19	5	3	8	13	30
65°	2	2	3	6	5	2
75°	2	2	3	5	2	1
85°	0	2	2	2	1	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°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	159.1	160.7	161.5	157.6	158.4	156.8	158.4	155.3	149.9	151.4	146.8
5°	214.0	210.9	210.1	203.9	202.4	199.3	199.3	192.4	182.3	180.8	171.5
7.5°	378.5	362.3	348.4	327.5	307.5	292.0	285.8	261.1	234.1	224.0	202.4
10°	902.3	899.2	864.4	798.8	723.1	668.2	636.6	540.8	419.5	345.3	268.1
12.5°	1642.4	1626.9	1577.5	1457.0	1326.4	1244.5	1180.4	987.3	807.3	662.8	475.1
15°	2449.6	2387.1	2314.5	2127.5	1944.4	1837.8	1746.7	1514.9	1236.0	1028.2	787.2
17.5°	3311.8	3339.6	3163.4	2841.3	2516.1	2349.2	2194.7	1838.6	1533.4	1317.1	1046.0
20°	4571.0	4512.3	4202.5	3668.7	3188.9	2910.1	2690.7	2176.9	1716.5	1446.9	1190.4
22.5°	6272.8	6085.9	5481.8	4578.7	3817.8	3430.7	3119.4	2427.2	1870.3	1513.4	1213.6
25°	8312.2	8139.2	7020.6	5453.9	4328.4	3827.0	3403.7	2586.4	1932.1	1524.2	1209.0
26°	8978.2	8720.9	7588.4	5765.3	4485.2	3927.5	3474.0	2617.3	1933.6	1515.7	1188.9
27°	9322.7	9121.1	8058.1	6017.9	4592.6	3990.8	3513.4	2625.0	1918.2	1496.4	1158.0
28°	9549.8	9361.3	8355.5	6183.2	4647.4	4015.5	3525.0	2608.0	1883.4	1462.4	1109.3
29°	9690.4	9491.9	8500.7	6258.1	4651.3	4004.7	3503.3	2563.2	1836.3	1421.4	1052.9
30°	9731.4	9516.6	8504.6	6227.2	4594.1	3946.8	3442.3	2490.6	1779.1	1369.7	990.4
31°	9658.7	9437.0	8364.8	6086.6	4476.7	3834.0	3346.5	2394.8	1708.0	1314.8	893.8
32°	9538.2	9243.9	8072.0	5853.3	4316.0	3698.0	3226.8	2290.5	1632.3	1245.3	757.8
33°	9281.7	8926.4	7623.9	5560.6	4122.9	3542.0	3087.0	2174.6	1560.5	1125.6	563.2
34°	8896.3	8447.4	7074.7	5219.9	3904.3	3347.3	2926.3	2067.2	1485.5	967.2	385.5
35°	8174.7	7756.8	6468.3	4856.8	3668.7	3158.8	2749.4	1926.6	1383.6	775.6	237.9
36°	7367.5	7060.0	5880.4	4487.5	3427.6	2963.4	2567.1	1823.1	1232.9	570.9	161.5
37°	6542.4	6269.7	5325.7	4124.4	3185.8	2747.1	2381.7	1705.7	1053.7	380.8	129.8
38°	5756.8	5540.5	4798.9	3767.5	2934.8	2520.7	2187.0	1580.6	860.6	244.9	106.6
39°	5035.2	4873.0	4282.8	3422.2	2682.9	2299.0	2000.0	1423.0	656.6	174.6	88.8
40°	4357.0	4242.6	3785.3	3081.6	2432.6	2081.2	1830.9	1232.2	455.8	138.3	71.8
42.5°	2963.4	2934.8	2663.6	2217.9	1806.9	1601.4	1447.7	692.9	175.4	83.4	40.2
45°	1467.0	1487.1	1378.9	1268.5	1182.7	1120.1	912.3	288.9	97.3	45.6	24.7
47.5°	519.1	519.9	447.3	398.6	380.8	379.3	275.8	102.0	51.8	27.8	17.8
50°	146.8	158.4	149.1	152.2	119.0	101.2	82.7	49.4	26.3	17.8	11.6
51°	90.4	97.3	91.2	94.2	81.9	73.4	61.8	37.1	20.9	14.7	10.8
52°	57.9	61.8	58.7	59.5	54.8	47.9	41.7	27.0	17.0	12.4	9.3
53°	39.4	41.7	39.4	39.4	36.3	34.0	29.4	20.1	13.9	10.0	7.0
54°	27.0	27.8	27.8	27.8	25.5	23.9	20.9	15.5	11.6	9.3	6.2
55°	19.3	20.1	19.3	19.3	18.5	17.0	15.5	11.6	9.3	7.7	4.6
57.5°	8.5	8.5	8.5	9.3	8.5	8.5	7.7	7.0	6.2	4.6	3.1
60°	3.9	3.9	3.9	3.9	4.6	4.6	4.6	4.6	3.9	3.1	3.1
61°	3.1	3.1	3.1	3.1	3.1	3.9	3.9	3.9	3.1	3.1	2.3
62°	2.3	2.3	2.3	2.3	3.1	3.1	3.1	3.1	3.1	2.3	2.3
63°	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.1	2.3	2.3	2.3
64°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
65°	2.3	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3	2.3
66°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3	2.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3
75°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3
77.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	1.5	2.3
80°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	1.5	2.3
82.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	1.5	2.3
85°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	1.5	2.3
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	1.5	2.3
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°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	143.7	142.9	139.1	135.2	136.0	134.4	132.9	130.6	129.0	125.1	125.1
5°	163.8	159.9	151.4	143.7	142.9	139.8	135.2	130.6	126.7	121.3	119.7
7.5°	186.9	176.1	162.2	149.9	147.6	142.9	134.4	128.2	121.3	114.3	112.0
10°	220.2	194.7	170.7	152.2	147.6	140.6	129.8	121.3	113.6	105.1	102.0
12.5°	338.4	240.3	181.5	152.2	143.7	135.2	122.1	112.0	102.7	93.5	90.4
15°	563.9	383.9	230.2	152.2	136.7	126.7	110.5	100.4	90.4	81.9	78.8
17.5°	778.7	546.2	320.6	171.5	137.5	116.6	96.6	85.7	77.3	68.8	66.4
20°	903.1	636.6	380.1	190.8	136.0	105.1	82.7	71.1	62.6	56.4	54.1
22.5°	919.3	640.4	366.9	170.7	114.3	87.3	68.8	57.9	51.0	45.6	44.0
25°	876.0	565.5	293.6	121.3	85.0	71.1	54.1	46.4	40.9	36.3	35.5
26°	842.8	520.7	255.7	100.4	74.9	63.3	48.7	41.7	37.1	33.2	32.4
27°	795.7	472.8	218.6	83.4	66.4	57.2	43.3	37.9	34.0	30.1	30.1
28°	742.4	421.0	176.1	70.3	59.5	51.0	39.4	34.0	30.1	27.8	27.8
29°	678.3	346.1	129.0	61.0	52.5	44.8	34.8	30.1	27.0	25.5	25.5
30°	583.2	251.1	88.8	53.3	45.6	39.4	30.9	27.0	24.7	23.2	23.2
31°	455.8	154.5	69.5	46.4	40.2	34.8	27.8	23.9	22.4	20.9	21.6
32°	310.6	96.6	59.5	40.2	35.5	30.1	24.7	21.6	20.1	19.3	19.3
33°	176.9	80.3	51.8	34.8	30.1	26.3	21.6	19.3	18.5	17.8	17.8
34°	117.4	68.8	44.8	29.4	24.7	22.4	18.5	17.0	16.2	16.2	16.2
35°	98.9	59.5	36.3	24.7	21.6	19.3	16.2	15.5	14.7	14.7	15.5
36°	83.4	49.4	29.4	20.9	18.5	17.0	14.7	13.9	13.1	13.1	13.9
37°	70.3	39.4	24.7	17.8	15.5	14.7	13.1	12.4	12.4	12.4	13.1
38°	57.2	31.7	20.9	15.5	13.9	12.4	11.6	10.8	10.8	11.6	12.4
39°	44.8	25.5	17.0	13.1	11.6	10.8	10.0	10.0	10.0	10.0	10.8
40°	35.5	21.6	14.7	11.6	10.0	10.0	9.3	8.5	9.3	9.3	10.8
42.5°	22.4	15.5	10.8	8.5	7.7	7.7	7.0	7.0	7.0	7.7	8.5
45°	16.2	12.4	8.5	7.0	6.2	5.4	5.4	5.4	6.2	7.0	7.7
47.5°	12.4	8.5	6.2	4.6	3.9	3.9	3.9	3.9	4.6	5.4	6.2
50°	8.5	5.4	3.9	3.1	3.1	3.1	3.1	3.1	3.9	4.6	5.4
51°	7.0	4.6	3.9	3.1	3.1	2.3	2.3	3.1	3.9	3.9	4.6
52°	5.4	3.9	3.1	2.3	2.3	2.3	2.3	3.1	3.1	3.9	4.6
53°	4.6	3.9	3.1	2.3	2.3	2.3	2.3	2.3	3.1	3.9	4.6
54°	3.9	3.1	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.9	4.6
55°	3.1	3.1	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.1	3.9
57.5°	3.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.9
60°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.9
61°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.9
62°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.9
63°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.1	3.1	3.9
64°	2.3	2.3	2.3	2.3	3.1	3.1	2.3	2.3	3.1	3.1	3.9
65°	2.3	2.3	3.1	3.1	3.1	3.1	2.3	2.3	3.1	3.1	3.9
66°	2.3	3.1	3.1	3.1	3.1	3.1	2.3	2.3	3.1	3.1	3.9



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.3	3.1	3.1	3.1	3.1	3.1	3.1	2.3	3.1	3.1	3.1
75°	2.3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
77.5°	2.3	3.1	3.1	3.1	3.1	3.1	3.1	2.3	2.3	3.1	3.1
80°	2.3	3.1	3.1	3.1	3.1	3.1	3.1	2.3	2.3	3.1	3.1
82.5°	2.3	3.1	3.1	3.1	3.1	3.1	3.1	2.3	2.3	2.3	3.1
85°	2.3	2.3	3.1	3.1	3.1	3.1	3.1	2.3	2.3	2.3	2.3
87.5°	2.3	2.3	3.1	3.1	3.1	3.1	2.3	2.3	2.3	2.3	2.3
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: P182686

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	123.6	121.3	119.7	119.0	119.7	118.2	115.9	116.6	115.9	115.1	115.1
5°	117.4	113.6	112.0	111.2	111.2	110.5	107.4	108.2	107.4	106.6	106.6
7.5°	108.9	105.8	103.5	102.7	102.7	102.0	98.9	100.4	98.9	98.1	98.9
10°	98.9	95.8	95.0	93.5	93.5	92.7	90.4	91.2	90.4	90.4	90.4
12.5°	88.1	85.0	84.2	83.4	84.2	83.4	81.1	82.7	81.9	81.9	82.7
15°	76.5	74.2	74.2	73.4	74.2	73.4	72.6	73.4	73.4	73.4	74.9
17.5°	64.9	63.3	63.3	62.6	63.3	63.3	62.6	64.9	64.9	66.4	68.0
20°	53.3	51.8	52.5	52.5	54.1	54.1	54.1	56.4	57.2	58.7	61.0
22.5°	44.0	43.3	44.0	44.0	45.6	46.4	46.4	48.7	51.0	52.5	54.8
25°	35.5	35.5	37.1	37.1	37.9	39.4	40.2	43.3	44.8	46.4	48.7
26°	33.2	33.2	34.0	34.8	35.5	37.1	37.9	40.9	42.5	44.0	46.4
27°	30.1	30.1	31.7	32.4	33.2	34.8	36.3	38.6	40.2	42.5	44.0
28°	27.8	27.8	29.4	30.1	30.9	33.2	34.0	36.3	37.9	40.2	42.5
29°	25.5	26.3	27.8	27.8	29.4	30.9	31.7	34.8	36.3	37.9	40.2
30°	23.9	24.7	25.5	26.3	27.0	28.6	30.1	32.4	34.0	35.5	37.9
31°	22.4	23.2	23.9	24.7	25.5	27.0	28.6	30.9	32.4	34.0	36.3
32°	20.9	20.9	22.4	23.2	23.9	25.5	27.0	29.4	30.9	32.4	34.8
33°	19.3	20.1	20.9	21.6	22.4	23.9	25.5	27.0	28.6	30.9	33.2
34°	17.8	18.5	20.1	20.9	21.6	23.2	23.9	25.5	27.0	29.4	30.9
35°	16.2	17.8	18.5	19.3	20.1	21.6	22.4	24.7	25.5	27.8	29.4
36°	15.5	16.2	17.8	18.5	19.3	20.1	20.9	23.2	24.7	26.3	27.8
37°	13.9	15.5	16.2	17.0	17.8	19.3	20.1	21.6	23.2	24.7	26.3
38°	13.1	13.9	15.5	16.2	17.0	17.8	18.5	20.9	21.6	23.2	24.7
39°	12.4	13.1	14.7	15.5	15.5	17.0	17.8	19.3	20.1	21.6	23.9
40°	11.6	12.4	13.9	13.9	14.7	16.2	17.0	18.5	19.3	20.9	22.4
42.5°	10.0	10.8	11.6	12.4	13.1	13.9	14.7	16.2	17.0	17.8	19.3
45°	8.5	9.3	10.8	10.8	11.6	12.4	13.1	13.9	14.7	16.2	17.0
47.5°	7.0	8.5	9.3	10.0	10.0	10.8	11.6	12.4	13.1	13.9	14.7
50°	6.2	7.0	7.7	8.5	8.5	9.3	10.0	10.8	10.8	11.6	13.1
51°	6.2	7.0	7.7	7.7	8.5	9.3	9.3	10.0	10.8	10.8	11.6
52°	5.4	6.2	7.0	7.7	7.7	8.5	9.3	9.3	10.0	10.8	11.6
53°	5.4	6.2	7.0	7.0	7.7	8.5	8.5	9.3	9.3	10.0	10.8
54°	5.4	6.2	7.0	7.0	7.7	7.7	8.5	8.5	9.3	9.3	10.0
55°	4.6	5.4	6.2	7.0	7.0	7.7	7.7	8.5	8.5	9.3	9.3
57.5°	4.6	5.4	6.2	6.2	6.2	7.0	7.0	7.7	7.7	7.7	8.5
60°	4.6	5.4	5.4	6.2	6.2	7.0	7.0	7.0	7.0	7.7	7.7
61°	4.6	4.6	5.4	6.2	6.2	6.2	7.0	7.0	7.0	7.0	7.7
62°	4.6	4.6	5.4	5.4	6.2	6.2	6.2	7.0	7.0	7.0	7.0
63°	3.9	4.6	5.4	5.4	6.2	6.2	6.2	6.2	6.2	7.0	7.0
64°	3.9	4.6	5.4	5.4	5.4	6.2	6.2	6.2	6.2	6.2	6.2
65°	3.9	4.6	5.4	5.4	5.4	6.2	6.2	6.2	6.2	6.2	6.2
66°	3.9	4.6	5.4	5.4	5.4	6.2	6.2	6.2	6.2	6.2	6.2



TEST NUMBER: P182686

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.9	3.9	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
75°	3.9	3.9	3.9	4.6	4.6	4.6	4.6	4.6	4.6	3.9	3.9
77.5°	3.1	3.1	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.1
80°	3.1	3.1	3.9	3.9	3.9	3.9	3.9	3.9	3.1	3.1	3.1
82.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.3	2.3
85°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.3	2.3	1.5
87.5°	2.3	3.1	3.1	3.1	3.1	3.1	2.3	2.3	2.3	1.5	1.5
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: P182686

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	115.9	113.6	112.8	112.8	113.6	112.8	113.6	112.8
5°	106.6	104.3	104.3	103.5	104.3	103.5	104.3	103.5
7.5°	98.9	96.6	96.6	96.6	96.6	96.6	97.3	96.6
10°	91.2	88.8	88.8	88.1	88.8	88.8	89.6	88.8
12.5°	83.4	81.9	81.9	81.1	82.7	81.9	83.4	82.7
15°	76.5	74.9	74.9	75.7	76.5	76.5	77.3	77.3
17.5°	69.5	69.5	69.5	70.3	71.1	71.8	72.6	71.8
20°	63.3	63.3	64.1	64.9	65.7	66.4	67.2	67.2
22.5°	57.2	57.2	57.9	59.5	61.0	61.8	62.6	62.6
25°	51.0	51.8	52.5	53.3	55.6	56.4	57.2	57.2
26°	48.7	49.4	51.0	51.8	53.3	54.1	55.6	55.6
27°	47.1	47.9	48.7	49.4	51.8	52.5	54.1	53.3
28°	44.8	45.6	46.4	47.9	49.4	51.0	51.8	51.8
29°	42.5	44.0	44.8	45.6	47.9	48.7	49.4	49.4
30°	40.9	41.7	42.5	44.0	45.6	47.1	47.9	47.9
31°	38.6	40.2	40.9	41.7	44.0	44.8	46.4	46.4
32°	37.1	37.9	38.6	40.2	41.7	43.3	44.0	44.0
33°	34.8	36.3	37.1	37.9	40.2	41.7	42.5	41.7
34°	33.2	34.8	34.8	36.3	37.9	39.4	40.2	40.2
35°	31.7	32.4	33.2	34.8	36.3	37.9	38.6	38.6
36°	30.1	30.9	31.7	33.2	34.8	36.3	37.1	37.1
37°	28.6	29.4	30.1	30.9	33.2	34.8	35.5	35.5
38°	27.0	27.8	28.6	30.1	31.7	32.4	34.0	34.0
39°	25.5	26.3	27.0	28.6	30.1	30.9	32.4	31.7
40°	23.9	25.5	25.5	27.0	28.6	29.4	30.9	30.1
42.5°	20.9	21.6	22.4	23.2	24.7	26.3	27.0	27.0
45°	18.5	19.3	20.1	20.9	21.6	22.4	23.9	23.2
47.5°	15.5	16.2	17.0	17.8	18.5	19.3	20.1	20.1
50°	13.9	13.9	14.7	14.7	16.2	17.0	17.8	17.8
51°	12.4	13.1	13.9	13.9	15.5	15.5	16.2	16.2
52°	12.4	12.4	13.1	13.1	13.9	14.7	15.5	15.5
53°	11.6	11.6	12.4	12.4	13.1	13.9	14.7	14.7
54°	10.8	10.8	11.6	11.6	12.4	13.1	13.9	13.9
55°	10.0	10.0	10.8	10.8	11.6	12.4	13.1	13.1
57.5°	8.5	9.3	9.3	10.0	10.0	10.8	10.8	11.6
60°	7.7	8.5	8.5	8.5	9.3	9.3	9.3	9.3
61°	7.7	7.7	7.7	8.5	8.5	7.7	8.5	7.7
62°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
63°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
64°	7.0	6.2	6.2	6.2	6.2	6.2	6.2	6.2
65°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	5.4
66°	6.2	6.2	5.4	6.2	5.4	5.4	5.4	5.4



TEST NUMBER: P182686

CATALOG NUMBER: LDSQA4A13827D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	3.9	3.9	3.9	3.9	3.9	3.1	3.1	3.1
75°	3.9	3.9	3.9	3.1	3.1	3.1	3.1	2.3
77.5°	3.1	3.1	3.1	3.1	2.3	2.3	2.3	2.3
80°	2.3	2.3	2.3	2.3	2.3	2.3	1.5	1.5
82.5°	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5
85°	1.5	1.5	1.5	1.5	1.5	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°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3	2.3
70°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3	2.3





67.5°	2.3	3.1	3.1	3.1	3.1	3.1	3.1	2.3	3.1	3.1	3.9
70°	2.3	3.1	3.1	3.1	3.1	3.1	3.1	2.3	3.1	3.1	3.1





67.5°	3.9	4.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
70°	3.9	4.6	4.6	4.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4





67.5°	5.4	5.4	5.4	5.4	5.4	4.6	4.6	4.6
70°	4.6	4.6	4.6	4.6	4.6	3.9	3.9	3.9



(END OF REPORT)