

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: P182671

Luminaire Tested: **LDSQA4A18830D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182671
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: LDSQA4A18830D010TE 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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1902.7 lumens
Efficiency: N/A
Efficacy: 65.3 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

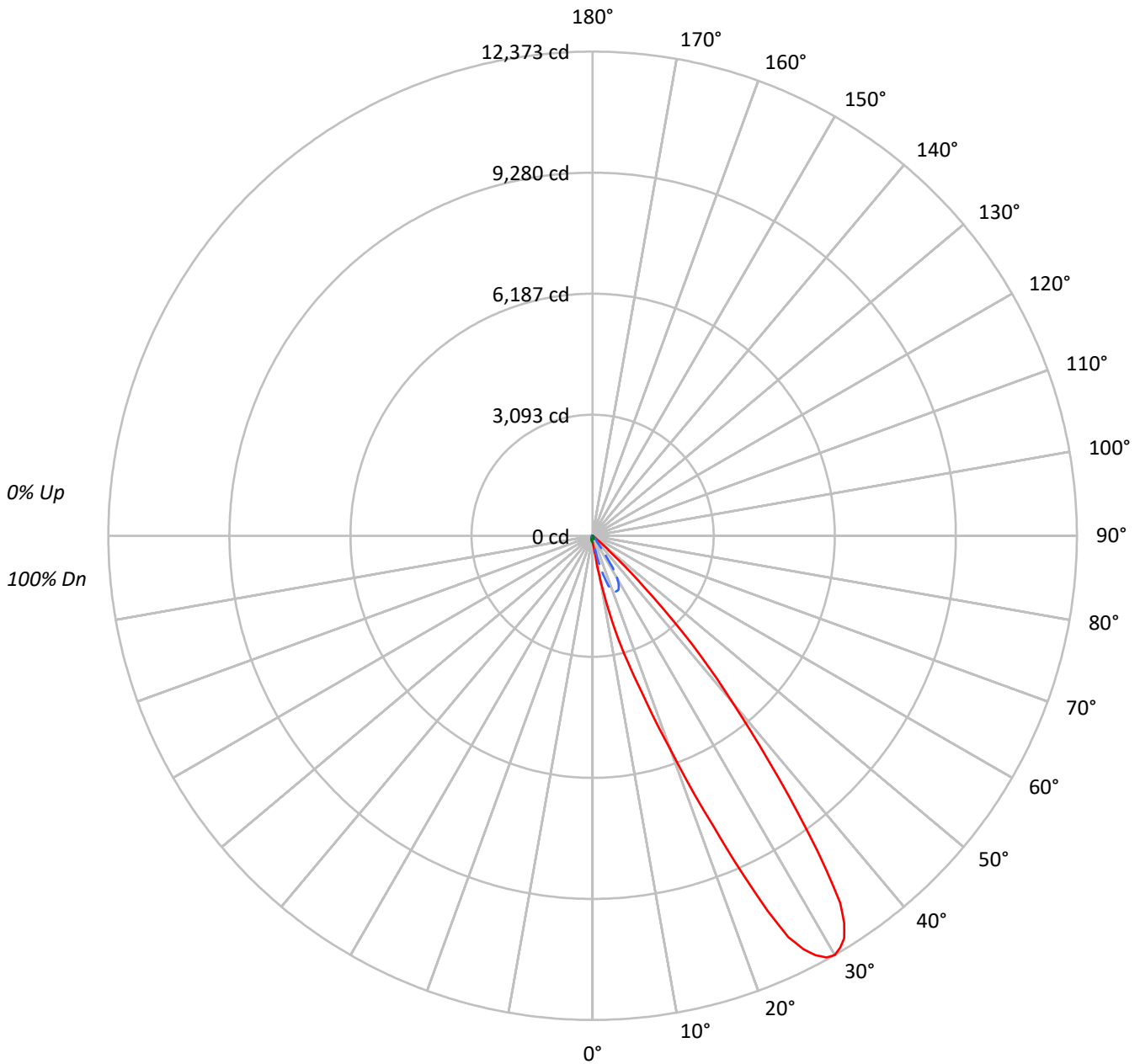
Input Watts (W): 29.12
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	15888	15888	15888
5°	26460	14995	12798
10°	112860	13142	11116
15°	312382	10440	9849
20°	599164	7392	8814
25°	1129723	4938	7771
30°	1384103	3300	6812
35°	1229238	2212	5807
40°	700586	1492	4843
45°	255551	1206	4042
50°	28123	889	3406
55°	4155	659	2821
60°	949	756	2286
65°	665	894	1582
70°	566	1105	1388
75°	749	1460	1085
80°	0	2176	1116
85°	0	3223	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.6	1.1
10°-20°	206.2	10.8
20°-30°	677.2	35.6
30°-40°	742.7	39.0
40°-50°	232.0	12.2
50°-60°	12.7	0.7
60°-70°	5.1	0.3
70°-80°	3.9	0.2
80°-90°	2.4	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°	904.0	47.5
0°-40°	1646.7	86.5
0°-60°	1891.4	99.4
0°-90°	1902.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1902.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	164	164	164	164	164	
5°	272	218	154	136	132	51
15°	3115	1001	104	93	98	979
25°	10569	1537	46	57	73	4711
35°	10394	302	19	32	49	6077
45°	1865	31	9	19	30	1712
55°	25	6	4	11	17	38
65°	3	3	4	8	7	3
75°	2	3	4	6	3	1
85°	0	3	3	3	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°	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0
2.5°	202.3	204.3	205.3	200.4	201.4	199.4	201.4	197.4	190.6	192.5	186.6
5°	272.1	268.2	267.2	259.3	257.3	253.4	253.4	244.6	231.8	229.8	218.1
7.5°	481.3	460.7	443.0	416.5	390.9	371.3	363.4	332.0	297.6	284.9	257.3
10°	1147.3	1143.3	1099.1	1015.6	919.4	849.6	809.4	687.6	533.4	439.1	340.8
12.5°	2088.3	2068.6	2005.7	1852.5	1686.5	1582.4	1500.9	1255.3	1026.4	842.8	604.1
15°	3114.7	3035.1	2942.8	2705.1	2472.3	2336.8	2220.9	1926.2	1571.6	1307.4	1000.9
17.5°	4210.9	4246.2	4022.3	3612.7	3199.2	2987.0	2790.6	2337.7	1949.8	1674.7	1330.0
20°	5811.9	5737.3	5343.4	4664.7	4054.7	3700.1	3421.2	2768.0	2182.5	1839.7	1513.6
22.5°	7975.8	7738.1	6970.0	5821.8	4854.3	4362.2	3966.3	3086.2	2378.0	1924.2	1543.1
25°	10569.0	10348.9	8926.6	6934.7	5503.5	4866.0	4327.8	3288.6	2456.6	1938.0	1537.2
26°	11415.7	11088.6	9648.6	7330.5	5702.9	4993.7	4417.2	3327.8	2458.6	1927.2	1511.7
27°	11853.7	11597.4	10245.8	7651.7	5839.4	5074.3	4467.3	3337.7	2438.9	1902.6	1472.4
28°	12142.5	11902.9	10624.0	7861.9	5909.2	5105.7	4482.0	3316.1	2394.7	1859.4	1410.5
29°	12321.3	12068.9	10808.6	7957.2	5914.1	5092.0	4454.5	3259.1	2334.8	1807.3	1338.8
30°	12373.3	12100.3	10813.5	7917.9	5841.4	5018.3	4376.9	3166.8	2262.1	1741.5	1259.2
31°	12281.0	11999.1	10635.8	7739.1	5692.1	4874.9	4255.1	3045.0	2171.7	1671.8	1136.5
32°	12127.8	11753.5	10263.5	7442.5	5487.8	4702.0	4102.8	2912.4	2075.5	1583.4	963.6
33°	11801.7	11349.8	9693.8	7070.2	5242.2	4503.6	3925.1	2765.0	1984.1	1431.1	716.1
34°	11311.5	10740.9	8995.4	6637.0	4964.3	4256.1	3720.7	2628.5	1888.9	1229.8	490.1
35°	10394.1	9862.7	8224.3	6175.4	4664.7	4016.4	3495.8	2449.7	1759.2	986.2	302.5
36°	9367.7	8976.7	7476.9	5705.9	4358.2	3767.9	3264.0	2318.1	1567.7	725.9	205.3
37°	8318.6	7971.9	6771.6	5244.2	4050.8	3492.9	3028.3	2168.8	1339.8	484.2	165.0
38°	7319.7	7044.7	6101.7	4790.4	3731.6	3205.1	2780.7	2009.7	1094.2	311.4	135.5
39°	6402.3	6196.0	5445.6	4351.3	3411.3	2923.2	2543.0	1809.3	834.9	222.0	113.0
40°	5539.9	5394.5	4813.0	3918.2	3093.1	2646.2	2327.9	1566.7	579.5	175.8	91.3
42.5°	3767.9	3731.6	3386.8	2820.0	2297.5	2036.2	1840.7	881.1	223.0	106.1	51.1
45°	1865.3	1890.8	1753.3	1612.8	1503.8	1424.3	1160.0	367.4	123.8	58.0	31.4
47.5°	660.1	661.1	568.7	506.8	484.2	482.3	350.7	129.7	65.8	35.4	22.6
50°	186.6	201.4	189.6	193.5	151.3	128.7	105.1	62.9	33.4	22.6	14.7
51°	114.9	123.8	115.9	119.8	104.1	93.3	78.6	47.1	26.5	18.7	13.8
52°	73.7	78.6	74.7	75.6	69.7	60.9	53.0	34.4	21.6	15.7	11.8
53°	50.1	53.0	50.1	50.1	46.2	43.2	37.3	25.5	17.7	12.8	8.8
54°	34.4	35.4	35.4	35.4	32.4	30.4	26.5	19.6	14.7	11.8	7.9
55°	24.6	25.5	24.6	24.6	23.6	21.6	19.6	14.7	11.8	9.8	5.9
57.5°	10.8	10.8	10.8	11.8	10.8	10.8	9.8	8.8	7.9	5.9	3.9
60°	4.9	4.9	4.9	4.9	5.9	5.9	5.9	5.9	4.9	3.9	3.9
61°	3.9	3.9	3.9	3.9	3.9	4.9	4.9	4.9	3.9	3.9	2.9
62°	2.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9
63°	2.9	2.9	2.9	2.9	2.9	2.9	3.9	3.9	2.9	2.9	2.9
64°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
65°	2.9	2.0	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	2.9
66°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	2.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9
75°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9
77.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9
80°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9
82.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9
85°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0	2.9
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°	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0
2.5°	182.7	181.7	176.8	171.9	172.9	170.9	168.9	166.0	164.0	159.1	159.1
5°	208.2	203.3	192.5	182.7	181.7	177.8	171.9	166.0	161.1	154.2	152.2
7.5°	237.7	224.0	206.3	190.6	187.6	181.7	170.9	163.1	154.2	145.4	142.4
10°	279.9	247.5	217.1	193.5	187.6	178.8	165.0	154.2	144.4	133.6	129.7
12.5°	430.2	305.5	230.8	193.5	182.7	171.9	155.2	142.4	130.6	118.9	114.9
15°	717.0	488.2	292.7	193.5	173.9	161.1	140.5	127.7	114.9	104.1	100.2
17.5°	990.1	694.4	407.6	218.1	174.8	148.3	122.8	109.0	98.2	87.4	84.5
20°	1148.2	809.4	483.3	242.6	172.9	133.6	105.1	90.4	79.6	71.7	68.8
22.5°	1168.9	814.3	466.6	217.1	145.4	111.0	87.4	73.7	64.8	58.0	56.0
25°	1113.9	719.0	373.3	154.2	108.0	90.4	68.8	58.9	52.1	46.2	45.2
26°	1071.6	662.0	325.1	127.7	95.3	80.5	61.9	53.0	47.1	42.2	41.3
27°	1011.7	601.1	278.0	106.1	84.5	72.7	55.0	48.1	43.2	38.3	38.3
28°	943.9	535.3	224.0	89.4	75.6	64.8	50.1	43.2	38.3	35.4	35.4
29°	862.4	440.0	164.0	77.6	66.8	57.0	44.2	38.3	34.4	32.4	32.4
30°	741.6	319.2	113.0	67.8	58.0	50.1	39.3	34.4	31.4	29.5	29.5
31°	579.5	196.4	88.4	58.9	51.1	44.2	35.4	30.4	28.5	26.5	27.5
32°	394.9	122.8	75.6	51.1	45.2	38.3	31.4	27.5	25.5	24.6	24.6
33°	224.9	102.2	65.8	44.2	38.3	33.4	27.5	24.6	23.6	22.6	22.6
34°	149.3	87.4	57.0	37.3	31.4	28.5	23.6	21.6	20.6	20.6	20.6
35°	125.7	75.6	46.2	31.4	27.5	24.6	20.6	19.6	18.7	18.7	19.6
36°	106.1	62.9	37.3	26.5	23.6	21.6	18.7	17.7	16.7	16.7	17.7
37°	89.4	50.1	31.4	22.6	19.6	18.7	16.7	15.7	15.7	15.7	16.7
38°	72.7	40.3	26.5	19.6	17.7	15.7	14.7	13.8	13.8	14.7	15.7
39°	57.0	32.4	21.6	16.7	14.7	13.8	12.8	12.8	12.8	12.8	13.8
40°	45.2	27.5	18.7	14.7	12.8	12.8	11.8	10.8	11.8	11.8	13.8
42.5°	28.5	19.6	13.8	10.8	9.8	9.8	8.8	8.8	8.8	9.8	10.8
45°	20.6	15.7	10.8	8.8	7.9	6.9	6.9	6.9	7.9	8.8	9.8
47.5°	15.7	10.8	7.9	5.9	4.9	4.9	4.9	4.9	5.9	6.9	7.9
50°	10.8	6.9	4.9	3.9	3.9	3.9	3.9	3.9	4.9	5.9	6.9
51°	8.8	5.9	4.9	3.9	3.9	2.9	2.9	3.9	4.9	4.9	5.9
52°	6.9	4.9	3.9	2.9	2.9	2.9	2.9	3.9	3.9	4.9	5.9
53°	5.9	4.9	3.9	2.9	2.9	2.9	2.9	2.9	3.9	4.9	5.9
54°	4.9	3.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	4.9	5.9
55°	3.9	3.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	3.9	4.9
57.5°	3.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	4.9
60°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	4.9
61°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	4.9
62°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	4.9
63°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	3.9	4.9
64°	2.9	2.9	2.9	2.9	3.9	3.9	2.9	2.9	3.9	3.9	4.9
65°	2.9	2.9	3.9	3.9	3.9	3.9	2.9	2.9	3.9	3.9	4.9
66°	2.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	3.9	3.9	4.9



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CATALOG NUMBER: LDSQA4A18830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	3.9	3.9	3.9
75°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
77.5°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	3.9	3.9
80°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	3.9	3.9
82.5°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9	3.9
85°	2.9	2.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9	2.9
87.5°	2.9	2.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9	2.9	2.9
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: P182671

CATALOG NUMBER: LDSQA4A18830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0
2.5°	157.2	154.2	152.2	151.3	152.2	150.3	147.3	148.3	147.3	146.4	146.4
5°	149.3	144.4	142.4	141.4	141.4	140.5	136.5	137.5	136.5	135.5	135.5
7.5°	138.5	134.6	131.6	130.6	130.6	129.7	125.7	127.7	125.7	124.7	125.7
10°	125.7	121.8	120.8	118.9	118.9	117.9	114.9	115.9	114.9	114.9	114.9
12.5°	112.0	108.0	107.1	106.1	107.1	106.1	103.1	105.1	104.1	104.1	105.1
15°	97.2	94.3	94.3	93.3	94.3	93.3	92.3	93.3	93.3	93.3	95.3
17.5°	82.5	80.5	80.5	79.6	80.5	80.5	79.6	82.5	82.5	84.5	86.4
20°	67.8	65.8	66.8	66.8	68.8	68.8	68.8	71.7	72.7	74.7	77.6
22.5°	56.0	55.0	56.0	56.0	58.0	58.9	58.9	61.9	64.8	66.8	69.7
25°	45.2	45.2	47.1	47.1	48.1	50.1	51.1	55.0	57.0	58.9	61.9
26°	42.2	42.2	43.2	44.2	45.2	47.1	48.1	52.1	54.0	56.0	58.9
27°	38.3	38.3	40.3	41.3	42.2	44.2	46.2	49.1	51.1	54.0	56.0
28°	35.4	35.4	37.3	38.3	39.3	42.2	43.2	46.2	48.1	51.1	54.0
29°	32.4	33.4	35.4	35.4	37.3	39.3	40.3	44.2	46.2	48.1	51.1
30°	30.4	31.4	32.4	33.4	34.4	36.3	38.3	41.3	43.2	45.2	48.1
31°	28.5	29.5	30.4	31.4	32.4	34.4	36.3	39.3	41.3	43.2	46.2
32°	26.5	26.5	28.5	29.5	30.4	32.4	34.4	37.3	39.3	41.3	44.2
33°	24.6	25.5	26.5	27.5	28.5	30.4	32.4	34.4	36.3	39.3	42.2
34°	22.6	23.6	25.5	26.5	27.5	29.5	30.4	32.4	34.4	37.3	39.3
35°	20.6	22.6	23.6	24.6	25.5	27.5	28.5	31.4	32.4	35.4	37.3
36°	19.6	20.6	22.6	23.6	24.6	25.5	26.5	29.5	31.4	33.4	35.4
37°	17.7	19.6	20.6	21.6	22.6	24.6	25.5	27.5	29.5	31.4	33.4
38°	16.7	17.7	19.6	20.6	21.6	22.6	23.6	26.5	27.5	29.5	31.4
39°	15.7	16.7	18.7	19.6	19.6	21.6	22.6	24.6	25.5	27.5	30.4
40°	14.7	15.7	17.7	17.7	18.7	20.6	21.6	23.6	24.6	26.5	28.5
42.5°	12.8	13.8	14.7	15.7	16.7	17.7	18.7	20.6	21.6	22.6	24.6
45°	10.8	11.8	13.8	13.8	14.7	15.7	16.7	17.7	18.7	20.6	21.6
47.5°	8.8	10.8	11.8	12.8	12.8	13.8	14.7	15.7	16.7	17.7	18.7
50°	7.9	8.8	9.8	10.8	10.8	11.8	12.8	13.8	13.8	14.7	16.7
51°	7.9	8.8	9.8	9.8	10.8	11.8	11.8	12.8	13.8	13.8	14.7
52°	6.9	7.9	8.8	9.8	9.8	10.8	11.8	11.8	12.8	13.8	14.7
53°	6.9	7.9	8.8	8.8	9.8	10.8	10.8	11.8	11.8	12.8	13.8
54°	6.9	7.9	8.8	8.8	9.8	9.8	10.8	10.8	11.8	11.8	12.8
55°	5.9	6.9	7.9	8.8	8.8	9.8	9.8	10.8	10.8	11.8	11.8
57.5°	5.9	6.9	7.9	7.9	7.9	8.8	8.8	9.8	9.8	9.8	10.8
60°	5.9	6.9	6.9	7.9	7.9	8.8	8.8	8.8	8.8	9.8	9.8
61°	5.9	5.9	6.9	7.9	7.9	7.9	8.8	8.8	8.8	8.8	9.8
62°	5.9	5.9	6.9	6.9	7.9	7.9	7.9	8.8	8.8	8.8	8.8
63°	4.9	5.9	6.9	6.9	7.9	7.9	7.9	7.9	7.9	8.8	8.8
64°	4.9	5.9	6.9	6.9	6.9	7.9	7.9	7.9	7.9	7.9	7.9
65°	4.9	5.9	6.9	6.9	6.9	7.9	7.9	7.9	7.9	7.9	7.9
66°	4.9	5.9	6.9	6.9	6.9	7.9	7.9	7.9	7.9	7.9	7.9



TEST NUMBER: P182671

CATALOG NUMBER: LDSQA4A18830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	4.9	4.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
75°	4.9	4.9	4.9	5.9	5.9	5.9	5.9	5.9	5.9	4.9	4.9
77.5°	3.9	3.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	3.9
80°	3.9	3.9	4.9	4.9	4.9	4.9	4.9	4.9	3.9	3.9	3.9
82.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9
85°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.0
87.5°	2.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9	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: P182671

CATALOG NUMBER: LDSQA4A18830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	164.0	164.0	164.0	164.0	164.0	164.0	164.0	164.0
2.5°	147.3	144.4	143.4	143.4	144.4	143.4	144.4	143.4
5°	135.5	132.6	132.6	131.6	132.6	131.6	132.6	131.6
7.5°	125.7	122.8	122.8	122.8	122.8	122.8	123.8	122.8
10°	115.9	113.0	113.0	112.0	113.0	113.0	113.9	113.0
12.5°	106.1	104.1	104.1	103.1	105.1	104.1	106.1	105.1
15°	97.2	95.3	95.3	96.3	97.2	97.2	98.2	98.2
17.5°	88.4	88.4	88.4	89.4	90.4	91.3	92.3	91.3
20°	80.5	80.5	81.5	82.5	83.5	84.5	85.5	85.5
22.5°	72.7	72.7	73.7	75.6	77.6	78.6	79.6	79.6
25°	64.8	65.8	66.8	67.8	70.7	71.7	72.7	72.7
26°	61.9	62.9	64.8	65.8	67.8	68.8	70.7	70.7
27°	59.9	60.9	61.9	62.9	65.8	66.8	68.8	67.8
28°	57.0	58.0	58.9	60.9	62.9	64.8	65.8	65.8
29°	54.0	56.0	57.0	58.0	60.9	61.9	62.9	62.9
30°	52.1	53.0	54.0	56.0	58.0	59.9	60.9	60.9
31°	49.1	51.1	52.1	53.0	56.0	57.0	58.9	58.9
32°	47.1	48.1	49.1	51.1	53.0	55.0	56.0	56.0
33°	44.2	46.2	47.1	48.1	51.1	53.0	54.0	53.0
34°	42.2	44.2	44.2	46.2	48.1	50.1	51.1	51.1
35°	40.3	41.3	42.2	44.2	46.2	48.1	49.1	49.1
36°	38.3	39.3	40.3	42.2	44.2	46.2	47.1	47.1
37°	36.3	37.3	38.3	39.3	42.2	44.2	45.2	45.2
38°	34.4	35.4	36.3	38.3	40.3	41.3	43.2	43.2
39°	32.4	33.4	34.4	36.3	38.3	39.3	41.3	40.3
40°	30.4	32.4	32.4	34.4	36.3	37.3	39.3	38.3
42.5°	26.5	27.5	28.5	29.5	31.4	33.4	34.4	34.4
45°	23.6	24.6	25.5	26.5	27.5	28.5	30.4	29.5
47.5°	19.6	20.6	21.6	22.6	23.6	24.6	25.5	25.5
50°	17.7	17.7	18.7	18.7	20.6	21.6	22.6	22.6
51°	15.7	16.7	17.7	17.7	19.6	19.6	20.6	20.6
52°	15.7	15.7	16.7	16.7	17.7	18.7	19.6	19.6
53°	14.7	14.7	15.7	15.7	16.7	17.7	18.7	18.7
54°	13.8	13.8	14.7	14.7	15.7	16.7	17.7	17.7
55°	12.8	12.8	13.8	13.8	14.7	15.7	16.7	16.7
57.5°	10.8	11.8	11.8	12.8	12.8	13.8	13.8	14.7
60°	9.8	10.8	10.8	10.8	11.8	11.8	11.8	11.8
61°	9.8	9.8	9.8	10.8	10.8	9.8	10.8	9.8
62°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
63°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
64°	8.8	7.9	7.9	7.9	7.9	7.9	7.9	7.9
65°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.9
66°	7.9	7.9	6.9	7.9	6.9	6.9	6.9	6.9



TEST NUMBER: P182671

CATALOG NUMBER: LDSQA4A18830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	4.9	4.9	4.9	4.9	4.9	3.9	3.9	3.9
75°	4.9	4.9	4.9	3.9	3.9	3.9	3.9	2.9
77.5°	3.9	3.9	3.9	3.9	2.9	2.9	2.9	2.9
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.0	2.0
82.5°	2.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
85°	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	2.9
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	2.9





67.5°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	3.9	3.9	4.9
70°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	3.9	3.9	3.9





67.5°	4.9	5.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
70°	4.9	5.9	5.9	5.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9





67.5°	6.9	6.9	6.9	6.9	6.9	5.9	5.9	5.9
70°	5.9	5.9	5.9	5.9	5.9	4.9	4.9	4.9



(END OF REPORT)