

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: P182784

Luminaire Tested: **LDSQA4A13835D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182784
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: LDSQA4A13835D010TE LAR15SP 4LSQAL1H 30°
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1446.4 lumens
Efficiency: N/A
Efficacy: 64.9 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

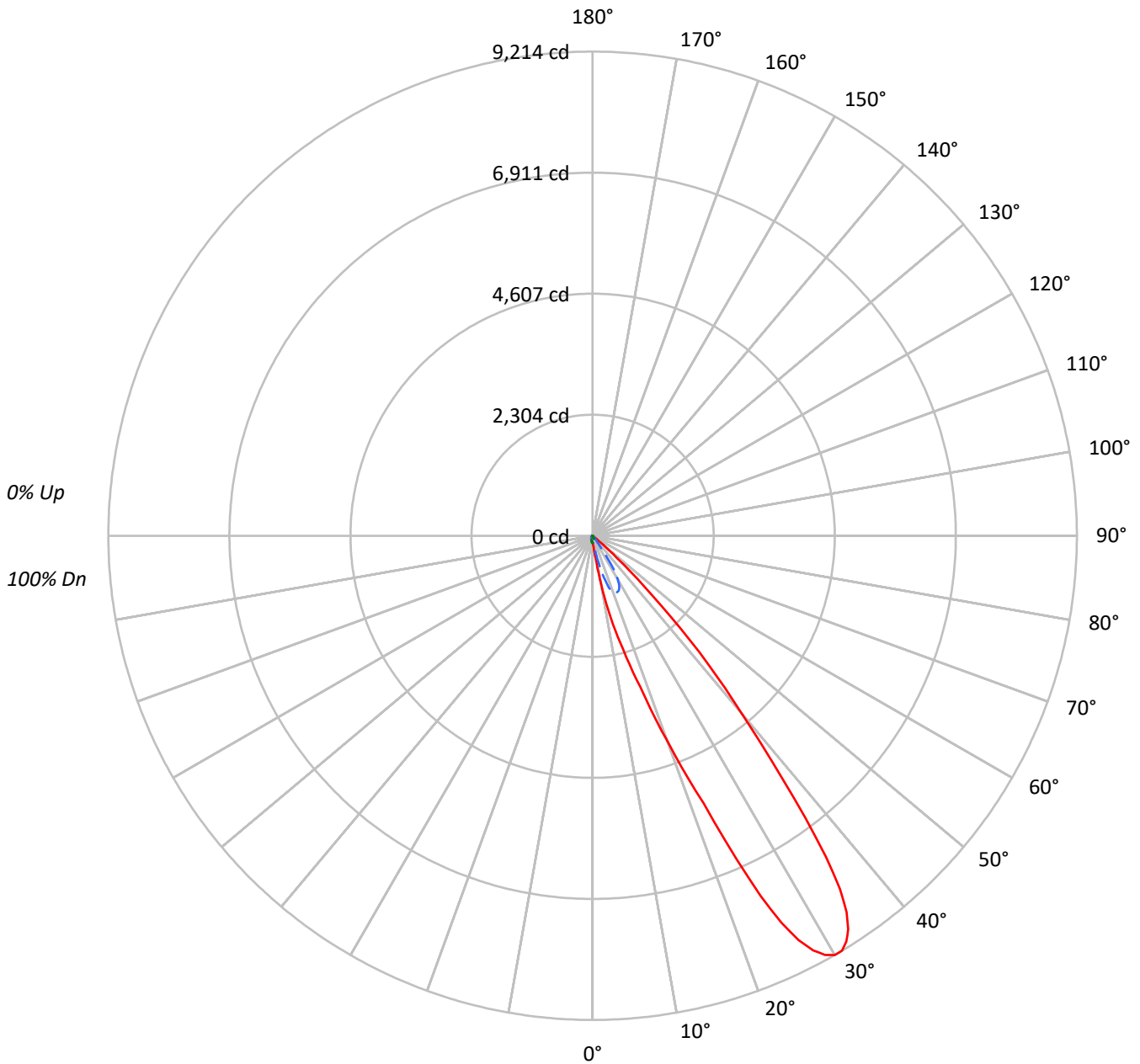
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	86	81	97	90	85	80	87	83	79	85	81	78	82	79	76	75																			
4	93	84	77	72	91	82	76	72	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°	13223	13223	13223
5°	21005	12574	10853
10°	92005	11135	9237
15°	224806	9016	8054
20°	428896	6701	7371
25°	808293	4810	6435
30°	1030619	3412	5660
35°	969485	2093	4837
40°	556167	1416	4161
45°	214697	986	3521
50°	28560	723	2909
55°	4341	676	2449
60°	1240	620	2015
65°	734	734	1467
70°	453	906	1133
75°	599	898	898
80°	0	1339	893
85°	0	2668	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.0	1.2
10°-20°	155.0	10.7
20°-30°	494.3	34.2
30°-40°	572.8	39.6
40°-50°	186.3	12.9
50°-60°	11.8	0.8
60°-70°	4.3	0.3
70°-80°	3.0	0.2
80°-90°	1.8	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°	666.4	46.1
0°-40°	1239.2	85.7
0°-60°	1437.3	99.4
0°-90°	1446.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1446.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	136	136	136	136	136	
5°	216	181	129	113	112	42
15°	2242	808	90	77	80	711
25°	7562	1162	45	47	60	3398
35°	8198	277	18	27	41	4717
45°	1567	34	7	16	26	1399
55°	26	6	4	9	14	40
65°	3	2	3	6	6	3
75°	2	2	2	4	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°	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5
2.5°	166.2	167.8	167.8	165.4	165.4	163.0	161.4	160.6	159.8	157.4	156.6
5°	216.0	217.6	218.4	211.9	209.5	204.7	200.7	196.7	191.9	186.3	180.6
7.5°	416.7	383.0	388.6	340.4	331.6	310.7	293.8	267.3	248.1	228.8	213.6
10°	935.3	903.2	897.6	826.9	757.1	704.9	648.7	551.5	463.2	369.3	293.0
12.5°	1602.5	1555.1	1528.6	1389.7	1307.8	1230.7	1144.8	993.1	823.7	679.2	528.3
15°	2241.5	2237.5	2142.8	1987.8	1832.1	1737.3	1626.5	1438.7	1238.0	1018.0	807.6
17.5°	3013.0	3044.3	2882.2	2579.5	2333.0	2178.9	2026.3	1732.5	1482.0	1268.5	1038.1
20°	4160.3	4076.8	3793.4	3319.7	2903.0	2671.0	2434.2	2001.5	1642.6	1384.1	1150.5
22.5°	5508.2	5444.0	4914.1	4124.1	3463.4	3137.5	2811.5	2248.7	1781.5	1446.7	1172.1
25°	7561.9	7297.7	6269.3	4987.2	3977.2	3515.6	3097.3	2409.3	1844.1	1454.7	1161.7
26°	8192.1	8006.6	6820.1	5330.0	4135.4	3620.0	3168.8	2442.2	1848.9	1447.5	1141.6
27°	8639.3	8498.0	7278.5	5582.1	4250.2	3692.2	3215.3	2455.9	1837.7	1432.3	1114.3
28°	8933.9	8820.7	7624.5	5764.3	4320.0	3730.8	3237.8	2452.7	1815.2	1405.8	1075.8
29°	9121.0	9011.8	7826.8	5867.9	4344.9	3737.2	3232.2	2428.6	1779.1	1366.4	1020.4
30°	9213.3	9094.5	7895.1	5879.1	4317.6	3700.3	3189.7	2375.6	1729.3	1319.1	959.4
31°	9214.1	9082.4	7838.1	5792.4	4236.5	3621.6	3114.2	2287.3	1664.3	1262.9	877.5
32°	9107.3	8971.6	7647.8	5616.6	4109.7	3522.8	3013.0	2197.4	1596.0	1200.2	759.5
33°	8928.3	8767.7	7317.8	5372.6	3947.5	3388.0	2891.8	2097.0	1527.8	1099.9	604.5
34°	8639.3	8420.1	6857.0	5076.3	3751.6	3230.6	2752.9	1988.6	1458.7	960.2	431.9
35°	8197.7	7888.6	6323.9	4748.8	3542.1	3060.4	2596.4	1875.4	1374.4	787.6	277.0
36°	7558.7	7159.7	5769.2	4410.0	3326.1	2881.4	2437.4	1766.2	1241.2	597.3	181.4
37°	6724.5	6372.9	5238.5	4068.8	3102.1	2690.3	2292.1	1656.2	1077.4	417.5	147.7
38°	5867.9	5608.6	4719.9	3730.0	2870.1	2484.0	2115.5	1541.4	898.4	274.6	123.6
39°	5095.6	4922.2	4212.5	3394.4	2630.9	2303.3	1938.8	1395.3	707.3	195.1	104.4
40°	4397.9	4278.3	3721.9	3052.4	2391.6	2085.0	1772.7	1216.3	509.8	155.7	87.5
42.5°	2999.4	2940.0	2603.6	2196.5	1769.4	1593.6	1396.1	731.4	202.3	98.7	53.0
45°	1567.1	1541.4	1419.4	1286.1	1153.7	1107.9	897.6	328.4	114.0	57.8	33.7
47.5°	610.2	611.8	505.8	431.9	410.2	381.3	289.0	118.0	64.2	35.3	22.5
50°	189.5	203.9	187.9	177.4	135.7	113.2	93.9	58.6	34.5	21.7	14.5
51°	116.4	123.6	116.4	116.4	95.5	83.5	71.5	45.0	27.3	17.7	12.8
52°	75.5	79.5	75.5	70.6	65.8	59.4	51.4	33.7	21.7	14.5	10.4
53°	51.4	53.8	51.4	48.2	44.2	40.9	36.1	24.9	17.7	12.0	8.8
54°	36.1	37.7	36.1	33.7	31.3	28.9	26.5	19.3	14.5	10.4	8.0
55°	25.7	27.3	26.5	24.9	22.5	21.7	20.1	15.3	12.0	8.8	6.4
57.5°	12.0	12.8	12.8	12.0	12.0	11.2	10.4	9.6	7.2	5.6	4.8
60°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	4.8	4.0	4.0
61°	4.8	4.8	4.8	4.8	4.8	4.8	5.6	4.8	4.0	4.0	3.2
62°	4.0	4.0	4.0	4.0	4.0	4.8	4.8	4.0	4.0	3.2	3.2
63°	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0	3.2	3.2	3.2
64°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.4
65°	3.2	3.2	2.4	2.4	2.4	3.2	2.4	3.2	2.4	2.4	2.4
66°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4



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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	0.8	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	1.6
82.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.6	1.6
85°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	1.6
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5
2.5°	151.7	147.7	146.1	144.5	143.7	142.1	139.7	137.3	136.5	133.3	130.1
5°	171.0	163.8	158.2	152.5	150.9	146.9	142.1	136.5	134.1	129.3	125.2
7.5°	193.5	179.0	168.6	159.0	154.9	150.1	141.3	134.1	129.3	122.0	117.2
10°	231.2	197.5	177.4	160.6	154.1	147.7	136.5	126.8	120.4	113.2	107.6
12.5°	366.1	256.1	192.7	161.4	152.5	142.9	129.3	118.0	110.0	102.0	97.1
15°	577.2	390.2	249.7	169.4	149.3	134.9	118.8	106.0	97.9	89.9	85.1
17.5°	770.7	525.1	325.9	188.7	150.9	127.7	106.0	93.1	84.3	77.1	73.9
20°	863.8	588.5	362.9	192.7	141.3	114.0	91.5	79.5	71.5	65.0	61.8
22.5°	872.7	584.5	340.4	164.6	117.2	96.3	77.1	65.8	59.4	54.6	51.4
25°	830.9	518.6	273.0	121.2	91.5	80.3	63.4	53.8	49.0	45.0	42.6
26°	798.8	480.9	240.0	105.2	83.5	73.1	57.8	49.8	45.0	41.7	39.3
27°	754.7	436.7	201.5	90.7	77.1	65.8	53.0	45.8	41.7	39.3	36.9
28°	701.7	393.4	167.0	80.3	69.8	59.4	49.0	41.7	38.5	36.1	33.7
29°	644.7	336.4	130.9	72.3	62.6	53.8	44.2	37.7	34.5	32.9	31.3
30°	564.4	261.7	100.4	65.0	56.2	48.2	40.1	34.5	32.1	30.5	28.9
31°	451.2	179.8	81.1	57.8	50.6	43.4	36.1	31.3	28.9	27.3	26.5
32°	323.5	110.8	70.6	51.4	45.0	39.3	31.3	28.1	25.7	24.9	24.1
33°	199.1	90.7	62.6	45.8	39.3	34.5	28.1	24.9	23.3	22.5	21.7
34°	130.9	78.7	55.4	39.3	34.5	29.7	24.1	21.7	20.9	20.1	20.1
35°	110.8	69.8	48.2	33.7	28.9	25.7	20.9	19.3	18.5	17.7	18.5
36°	95.5	61.0	40.1	28.9	24.9	21.7	18.5	16.9	16.1	16.1	16.9
37°	84.3	51.4	33.7	24.1	21.7	19.3	16.1	15.3	14.5	14.5	15.3
38°	71.5	41.7	28.1	20.9	18.5	16.1	14.5	13.6	13.6	13.6	14.5
39°	58.6	35.3	24.1	17.7	16.1	14.5	12.8	12.0	12.0	12.8	12.8
40°	48.2	29.7	20.1	15.3	13.6	12.8	11.2	11.2	11.2	11.2	12.0
42.5°	31.3	20.1	14.5	11.2	10.4	9.6	8.8	8.8	8.8	8.8	9.6
45°	20.9	14.5	11.2	8.8	8.0	7.2	7.2	6.4	7.2	7.2	8.0
47.5°	14.5	10.4	8.0	6.4	5.6	4.8	4.8	4.8	5.6	6.4	6.4
50°	10.4	7.2	5.6	4.0	4.0	4.0	4.0	4.0	4.8	4.8	5.6
51°	8.8	6.4	4.8	4.0	4.0	3.2	3.2	3.2	4.0	4.8	5.6
52°	7.2	5.6	4.0	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.8
53°	6.4	4.8	4.0	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.8
54°	5.6	4.0	3.2	3.2	3.2	2.4	2.4	3.2	3.2	4.0	4.8
55°	4.8	4.0	3.2	3.2	2.4	2.4	2.4	2.4	3.2	4.0	4.0
57.5°	4.0	3.2	3.2	2.4	2.4	2.4	2.4	2.4	3.2	3.2	4.0
60°	3.2	3.2	3.2	2.4	2.4	2.4	2.4	2.4	3.2	3.2	4.0
61°	3.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	4.0
62°	3.2	2.4	3.2	3.2	3.2	2.4	2.4	2.4	3.2	3.2	4.0
63°	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	3.2	3.2	3.2
64°	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2	4.0
65°	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2	4.0
66°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	3.2	3.2	3.2



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.4	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2
75°	2.4	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	3.2
77.5°	2.4	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	3.2
80°	2.4	2.4	3.2	3.2	3.2	3.2	2.4	2.4	2.4	2.4	2.4
82.5°	2.4	2.4	2.4	3.2	3.2	2.4	2.4	2.4	2.4	2.4	2.4
85°	2.4	2.4	2.4	3.2	3.2	2.4	2.4	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	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



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CATALOG NUMBER: LDSQA4A13835D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5
2.5°	128.5	128.5	127.7	126.0	127.7	126.0	124.4	123.6	122.8	122.0	120.4
5°	122.0	121.2	119.6	118.8	118.8	117.2	115.6	114.0	113.2	112.4	110.8
7.5°	114.0	113.2	110.8	110.0	110.0	108.4	106.0	105.2	104.4	103.6	102.0
10°	104.4	103.6	101.2	100.4	100.4	98.7	97.1	95.5	94.7	93.9	92.3
12.5°	93.1	92.3	90.7	89.9	89.9	88.3	86.7	85.9	85.9	85.1	84.3
15°	81.9	81.1	79.5	79.5	79.5	77.9	77.1	76.3	77.1	77.1	76.3
17.5°	70.6	69.8	68.2	68.2	68.2	68.2	67.4	67.4	68.2	69.0	69.0
20°	59.4	58.6	58.6	57.8	58.6	59.4	58.6	59.4	61.0	61.8	62.6
22.5°	49.0	49.0	49.0	49.0	49.8	50.6	50.6	52.2	53.8	54.6	56.2
25°	40.9	40.9	41.7	41.7	42.6	43.4	44.2	45.0	47.4	49.0	49.8
26°	37.7	38.5	38.5	39.3	40.1	40.9	41.7	42.6	45.0	46.6	47.4
27°	35.3	35.3	36.1	36.9	37.7	38.5	39.3	40.9	42.6	44.2	45.8
28°	32.9	32.9	33.7	34.5	35.3	36.1	36.9	38.5	40.1	42.6	43.4
29°	30.5	31.3	31.3	32.1	32.9	33.7	35.3	36.1	38.5	40.1	41.7
30°	28.1	28.9	29.7	29.7	30.5	31.3	32.9	34.5	36.1	38.5	39.3
31°	26.5	27.3	27.3	28.1	28.9	29.7	31.3	32.9	34.5	36.1	37.7
32°	24.1	25.7	25.7	25.7	26.5	28.1	29.7	30.5	32.9	34.5	35.3
33°	22.5	23.3	24.1	24.1	24.9	26.5	28.1	28.9	31.3	32.9	33.7
34°	20.9	21.7	22.5	22.5	23.3	24.9	26.5	27.3	29.7	30.5	32.1
35°	19.3	20.1	20.9	20.9	21.7	23.3	24.9	25.7	27.3	28.9	30.5
36°	17.7	18.5	19.3	20.1	20.9	22.5	23.3	24.9	25.7	27.3	28.9
37°	16.1	16.9	18.5	18.5	20.1	20.9	22.5	23.3	24.9	25.7	27.3
38°	14.5	16.1	16.9	17.7	18.5	20.1	20.9	21.7	23.3	24.9	25.7
39°	13.6	15.3	16.1	16.9	17.7	18.5	19.3	20.9	21.7	23.3	24.1
40°	12.8	13.6	15.3	15.3	16.9	17.7	18.5	19.3	20.9	21.7	23.3
42.5°	10.4	12.0	12.8	13.6	14.5	15.3	16.1	16.9	17.7	19.3	20.1
45°	8.8	10.4	11.2	11.2	12.0	12.8	13.6	14.5	16.1	16.9	17.7
47.5°	7.2	8.8	9.6	10.4	10.4	11.2	12.0	12.8	13.6	14.5	15.3
50°	6.4	7.2	8.0	8.8	9.6	9.6	10.4	11.2	12.0	12.8	12.8
51°	6.4	7.2	8.0	8.0	8.8	9.6	10.4	10.4	11.2	12.0	12.0
52°	5.6	6.4	7.2	8.0	8.8	8.8	9.6	10.4	10.4	11.2	12.0
53°	5.6	6.4	7.2	7.2	8.0	8.8	8.8	9.6	10.4	10.4	11.2
54°	4.8	6.4	7.2	7.2	8.0	8.0	8.8	9.6	9.6	9.6	10.4
55°	4.8	5.6	6.4	7.2	7.2	8.0	8.0	8.8	8.8	9.6	9.6
57.5°	4.8	5.6	6.4	6.4	7.2	7.2	8.0	8.0	8.0	8.0	8.8
60°	4.0	4.8	5.6	6.4	6.4	7.2	7.2	7.2	7.2	7.2	8.0
61°	4.0	4.8	5.6	5.6	6.4	6.4	7.2	7.2	7.2	7.2	7.2
62°	4.0	4.8	5.6	5.6	6.4	6.4	6.4	7.2	7.2	7.2	7.2
63°	4.0	4.8	5.6	5.6	6.4	6.4	6.4	6.4	6.4	6.4	7.2
64°	4.0	4.8	5.6	5.6	6.4	6.4	6.4	6.4	6.4	6.4	6.4
65°	4.0	4.8	5.6	5.6	5.6	6.4	6.4	6.4	6.4	6.4	6.4
66°	4.0	4.8	5.6	5.6	5.6	5.6	6.4	6.4	6.4	6.4	5.6



TEST NUMBER: P182784

CATALOG NUMBER: LDSQA4A13835D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.2	4.0	4.0	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.0
75°	3.2	4.0	4.0	4.0	4.8	4.8	4.8	4.0	4.0	4.0	4.0
77.5°	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.2	3.2
80°	3.2	3.2	3.2	4.0	4.0	4.0	4.0	3.2	3.2	3.2	2.4
82.5°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4
85°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	1.6
87.5°	2.4	2.4	2.4	3.2	3.2	3.2	2.4	2.4	1.6	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: P182784

CATALOG NUMBER: LDSQA4A13835D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	136.5	136.5	136.5	136.5	136.5	136.5	136.5	136.5
2.5°	122.0	122.8	122.0	122.0	120.4	121.2	119.6	122.0
5°	111.6	112.4	111.6	111.6	110.0	110.0	109.2	111.6
7.5°	102.8	103.6	102.0	102.0	100.4	101.2	100.4	102.0
10°	93.9	93.9	93.9	93.1	92.3	93.1	92.3	93.9
12.5°	85.1	85.9	85.9	85.9	85.1	85.1	84.3	86.7
15°	77.9	78.7	79.5	79.5	78.7	79.5	78.7	80.3
17.5°	71.5	73.1	73.1	73.9	73.9	74.7	74.7	76.3
20°	65.0	67.4	67.4	68.2	68.2	69.8	69.8	71.5
22.5°	58.6	61.0	61.8	61.8	62.6	64.2	64.2	65.8
25°	53.0	55.4	56.2	56.2	57.0	58.6	58.6	60.2
26°	50.6	53.0	53.8	54.6	55.4	57.0	57.0	58.6
27°	48.2	50.6	51.4	52.2	53.0	54.6	54.6	56.2
28°	46.6	49.0	49.8	50.6	51.4	53.0	53.0	53.8
29°	44.2	46.6	47.4	48.2	49.0	50.6	50.6	52.2
30°	42.6	44.2	45.0	45.8	46.6	49.0	49.0	50.6
31°	40.1	42.6	43.4	44.2	45.0	46.6	46.6	49.0
32°	38.5	40.1	40.9	41.7	43.4	44.2	45.0	46.6
33°	36.1	38.5	39.3	40.1	40.9	42.6	43.4	45.0
34°	34.5	36.1	37.7	38.5	39.3	40.9	41.7	43.4
35°	32.9	34.5	35.3	36.1	37.7	39.3	39.3	40.9
36°	31.3	32.9	33.7	34.5	36.1	37.7	37.7	39.3
37°	29.7	31.3	32.1	32.9	34.5	36.1	36.1	37.7
38°	28.1	29.7	30.5	31.3	32.9	34.5	35.3	36.9
39°	26.5	28.9	29.7	30.5	31.3	32.9	33.7	34.5
40°	25.7	27.3	28.1	28.9	29.7	31.3	32.1	32.9
42.5°	21.7	24.1	24.9	25.7	26.5	27.3	28.1	28.9
45°	19.3	20.9	20.9	21.7	22.5	24.1	24.1	25.7
47.5°	16.9	17.7	18.5	18.5	19.3	20.9	20.9	21.7
50°	14.5	15.3	16.1	16.1	16.9	17.7	18.5	19.3
51°	13.6	14.5	14.5	15.3	16.1	16.9	17.7	18.5
52°	12.8	13.6	13.6	14.5	15.3	16.1	16.1	16.9
53°	12.0	12.8	12.8	13.6	13.6	15.3	15.3	16.1
54°	11.2	12.0	12.0	12.8	12.8	14.5	14.5	15.3
55°	10.4	11.2	12.0	12.0	12.0	12.8	13.6	14.5
57.5°	9.6	10.4	10.4	10.4	11.2	11.2	12.0	12.0
60°	8.0	8.8	8.8	8.8	9.6	9.6	9.6	10.4
61°	8.0	8.0	8.8	8.8	8.0	8.0	8.0	8.8
62°	7.2	8.0	8.0	7.2	7.2	7.2	7.2	8.0
63°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
64°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
65°	6.4	6.4	6.4	6.4	6.4	6.4	5.6	6.4
66°	5.6	6.4	6.4	5.6	5.6	5.6	5.6	5.6



TEST NUMBER: P182784

CATALOG NUMBER: LDSQA4A13835D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	4.0	4.0	4.0	4.0	4.0	3.2	3.2	3.2
75°	4.0	3.2	3.2	3.2	3.2	3.2	3.2	2.4
77.5°	3.2	3.2	3.2	3.2	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	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



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— 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	2.4	3.2	3.2	3.2	3.2	2.4	2.4	2.4	3.2	3.2
70°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2





67.5°	4.0	4.8	4.8	4.8	5.6	5.6	5.6	5.6	5.6	5.6	5.6
70°	4.0	4.0	4.8	4.8	4.8	5.6	5.6	4.8	4.8	4.8	4.8





67.5°	5.6	5.6	5.6	5.6	4.8	4.8	4.8	4.8
70°	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0



(END OF REPORT)