

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: P182791

Luminaire Tested: **LDSQA4A28830D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182791
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: LDSQA4A28830D010TE LAR15SP 4LSQAL1H 30°
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, 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: 2424.5 lumens
Efficiency: N/A
Efficacy: 54.5 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

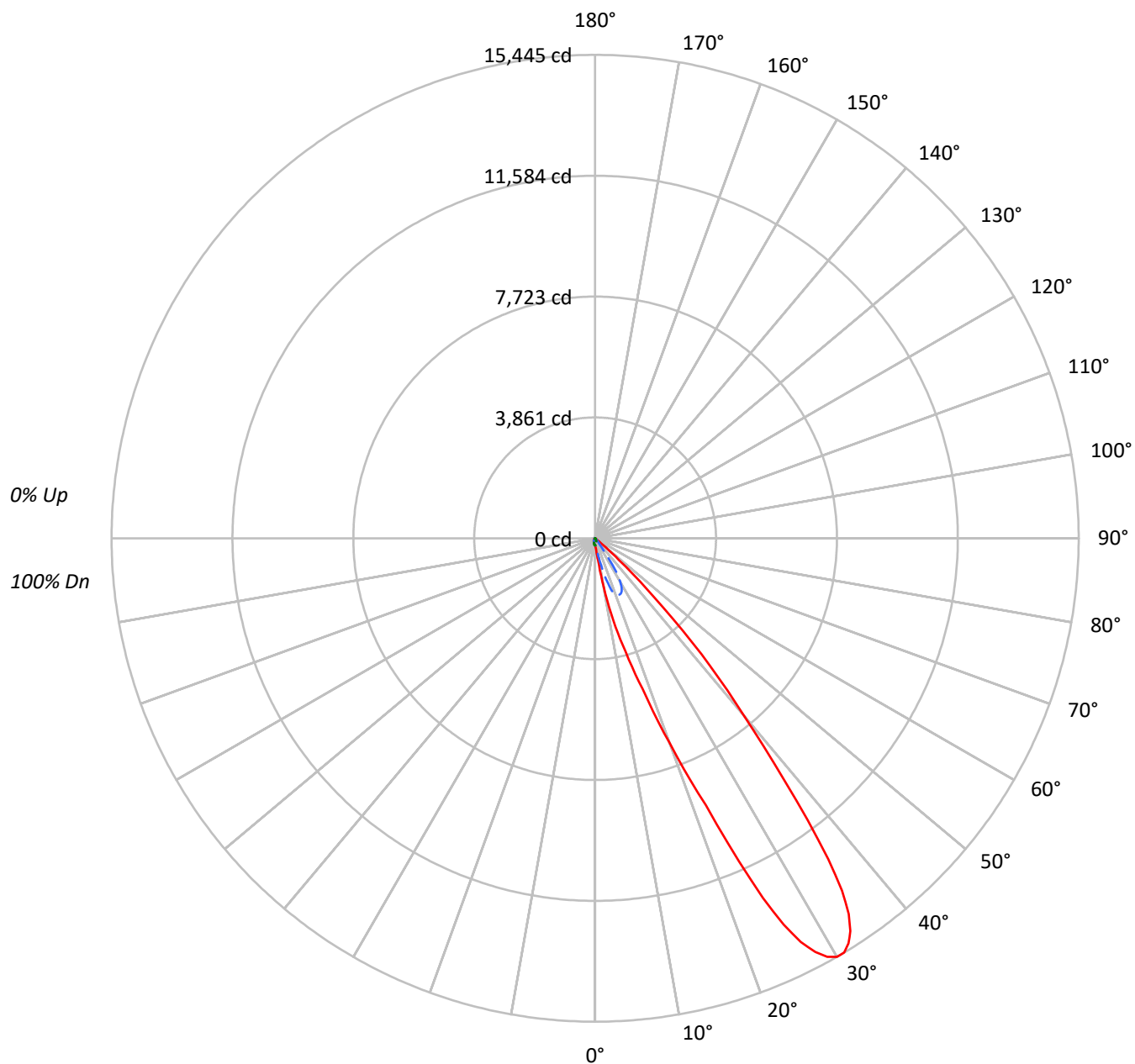
Input Watts (W): 44.49
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	109	106	104	110	107	105	102	103	101	99		99	98	96		96
2	106	100	95	91	103	98	94	90	95	91	88		92	89	86		89
3	99	91	85	81	97	90	85	80	87	83	79		85	81	78		82
4	93	84	77	72	91	82	76	72	80	75	71		78	73	70		76
5	86	76	69	64	85	75	69	64	74	68	63		72	67	63		70
6	81	70	63	58	79	69	62	58	68	62	57		66	61	57		65
7	75	64	57	52	74	63	57	52	62	56	51		61	55	51		60
8	70	59	52	47	69	58	52	47	57	51	47		56	50	46		55
9	66	54	47	42	65	54	47	42	53	46	42		52	46	42		51
10	62	50	43	38	60	50	43	38	49	42	38		48	42	38		47

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	22165	22165	22165
5°	35203	21073	18195
10°	154224	18661	15493
15°	376830	15114	13499
20°	718927	11237	12351
25°	1354898	8060	10785
30°	1727565	5716	9486
35°	1625100	3501	8113
40°	932277	2377	6981
45°	359892	1658	5905
50°	47866	1221	4868
55°	7279	1132	4087
60°	2093	1046	3391
65°	1238	1238	2476
70°	765	1530	1898
75°	1011	1497	1497
80°	0	2232	1506
85°	0	4446	1445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.6	1.2
10°-20°	259.8	10.7
20°-30°	828.6	34.2
30°-40°	960.2	39.6
40°-50°	312.2	12.9
50°-60°	19.8	0.8
60°-70°	7.2	0.3
70°-80°	5.1	0.2
80°-90°	3.0	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°	1117.0	46.1
0°-40°	2077.2	85.7
0°-60°	2409.2	99.4
0°-90°	2424.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2424.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	229	229	229	229	229	
5°	362	303	217	190	187	70
15°	3757	1354	151	129	135	1191
25°	12676	1947	75	79	101	5696
35°	13741	464	30	46	69	7906
45°	2627	56	12	27	43	2346
55°	43	11	7	15	24	67
65°	5	4	5	11	11	5
75°	3	4	4	7	4	2
85°	0	3	4	4	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°	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8
2.5°	278.6	281.3	281.3	277.2	277.2	273.2	270.5	269.1	267.8	263.8	262.4
5°	362.0	364.7	366.0	355.3	351.2	343.2	336.4	329.7	321.6	312.2	302.8
7.5°	698.4	641.9	651.3	570.6	555.8	520.8	492.5	448.1	415.8	383.5	358.0
10°	1567.8	1514.0	1504.5	1386.1	1269.0	1181.6	1087.4	924.5	776.5	619.0	491.2
12.5°	2686.1	2606.7	2562.3	2329.5	2192.2	2063.0	1919.0	1664.7	1380.7	1138.5	885.5
15°	3757.3	3750.6	3591.8	3332.1	3071.0	2912.2	2726.5	2411.6	2075.1	1706.4	1353.8
17.5°	5050.6	5103.1	4831.2	4323.9	3910.7	3652.3	3396.7	2904.1	2484.2	2126.3	1740.0
20°	6973.6	6833.7	6358.6	5564.6	4866.2	4477.3	4080.3	3354.9	2753.4	2320.1	1928.4
22.5°	9233.1	9125.5	8237.3	6913.1	5805.5	5259.2	4712.8	3769.4	2986.2	2425.0	1964.8
25°	12675.6	12232.8	10508.9	8359.8	6666.8	5893.0	5191.9	4038.6	3091.2	2438.5	1947.3
26°	13732.0	13421.1	11432.1	8934.4	6931.9	6068.0	5311.6	4093.8	3099.2	2426.4	1913.6
27°	14481.5	14244.7	12200.5	9357.0	7124.4	6189.1	5389.7	4116.6	3080.4	2400.8	1867.9
28°	14975.4	14785.7	12780.5	9662.4	7241.4	6253.7	5427.4	4111.2	3042.7	2356.4	1803.3
29°	15289.0	15106.0	13119.6	9836.0	7283.2	6264.4	5418.0	4070.9	2982.2	2290.5	1710.4
30°	15443.7	15244.6	13234.0	9854.9	7237.4	6202.5	5346.6	3982.1	2898.7	2211.1	1608.2
31°	15445.1	15224.4	13138.5	9709.5	7101.5	6070.6	5220.1	3834.0	2789.7	2116.9	1470.9
32°	15266.1	15038.7	12819.5	9414.8	6888.9	5905.1	5050.6	3683.3	2675.3	2011.9	1273.1
33°	14966.0	14696.9	12266.4	9005.7	6617.0	5679.0	4847.4	3515.1	2560.9	1843.7	1013.3
34°	14481.5	14114.2	11494.0	8509.1	6288.7	5415.3	4614.6	3333.4	2445.2	1609.5	724.0
35°	13741.4	13223.3	10600.4	7960.1	5937.4	5130.0	4352.1	3143.7	2303.9	1320.2	464.3
36°	12670.2	12001.3	9670.5	7392.2	5575.4	4829.9	4085.7	2960.6	2080.5	1001.2	304.1
37°	11271.9	10682.5	8781.0	6820.2	5200.0	4509.6	3842.1	2776.3	1806.0	699.8	247.6
38°	9836.0	9401.4	7911.6	6252.3	4811.0	4163.7	3546.0	2583.8	1505.9	460.2	207.2
39°	8541.4	8250.8	7061.1	5689.8	4410.0	3860.9	3250.0	2338.9	1185.6	327.0	174.9
40°	7372.0	7171.5	6238.9	5116.5	4009.0	3494.9	2971.4	2038.8	854.5	261.1	146.7
42.5°	5027.7	4928.1	4364.2	3682.0	2966.0	2671.3	2340.2	1226.0	339.1	165.5	88.8
45°	2626.9	2583.8	2379.3	2155.9	1933.8	1857.1	1504.5	550.4	191.1	96.9	56.5
47.5°	1022.8	1025.5	847.8	724.0	687.7	639.2	484.5	197.8	107.7	59.2	37.7
50°	317.6	341.8	314.9	297.4	227.4	189.7	157.5	98.2	57.9	36.3	24.2
51°	195.1	207.2	195.1	195.1	160.1	140.0	119.8	75.4	45.8	29.6	21.5
52°	126.5	133.2	126.5	118.4	110.4	99.6	86.1	56.5	36.3	24.2	17.5
53°	86.1	90.2	86.1	80.7	74.0	68.6	60.6	41.7	29.6	20.2	14.8
54°	60.6	63.2	60.6	56.5	52.5	48.4	44.4	32.3	24.2	17.5	13.5
55°	43.1	45.8	44.4	41.7	37.7	36.3	33.6	25.6	20.2	14.8	10.8
57.5°	20.2	21.5	21.5	20.2	20.2	18.8	17.5	16.1	12.1	9.4	8.1
60°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	8.1	6.7	6.7
61°	8.1	8.1	8.1	8.1	8.1	8.1	9.4	8.1	6.7	6.7	5.4
62°	6.7	6.7	6.7	6.7	6.7	8.1	8.1	6.7	6.7	5.4	5.4
63°	5.4	5.4	5.4	5.4	6.7	6.7	6.7	6.7	5.4	5.4	5.4
64°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	4.0
65°	5.4	5.4	4.0	4.0	4.0	5.4	4.0	5.4	4.0	4.0	4.0
66°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	4.0
75°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	4.0
77.5°	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	2.7	2.7	4.0
80°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	2.7	2.7	2.7
82.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	2.7	2.7
85°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	2.7	2.7	2.7
87.5°	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	2.7	2.7
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°	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8
2.5°	254.3	247.6	244.9	242.2	240.9	238.2	234.2	230.1	228.8	223.4	218.0
5°	286.6	274.5	265.1	255.7	253.0	246.3	238.2	228.8	224.7	216.7	209.9
7.5°	324.3	300.1	282.6	266.5	259.7	251.7	236.9	224.7	216.7	204.6	196.5
10°	387.6	331.1	297.4	269.1	258.4	247.6	228.8	212.6	201.9	189.7	180.3
12.5°	613.7	429.3	323.0	270.5	255.7	239.5	216.7	197.8	184.4	170.9	162.8
15°	967.6	654.0	418.5	284.0	250.3	226.1	199.2	177.6	164.2	150.7	142.6
17.5°	1291.9	880.1	546.4	316.2	253.0	214.0	177.6	156.1	141.3	129.2	123.8
20°	1448.0	986.4	608.3	323.0	236.9	191.1	153.4	133.2	119.8	109.0	103.6
22.5°	1462.8	979.7	570.6	275.9	196.5	161.5	129.2	110.4	99.6	91.5	86.1
25°	1392.8	869.3	457.6	203.2	153.4	134.6	106.3	90.2	82.1	75.4	71.3
26°	1339.0	806.1	402.4	176.3	140.0	122.5	96.9	83.4	75.4	70.0	65.9
27°	1265.0	732.1	337.8	152.1	129.2	110.4	88.8	76.7	70.0	65.9	61.9
28°	1176.2	659.4	279.9	134.6	117.1	99.6	82.1	70.0	64.6	60.6	56.5
29°	1080.6	563.9	219.4	121.1	105.0	90.2	74.0	63.2	57.9	55.2	52.5
30°	946.1	438.7	168.2	109.0	94.2	80.7	67.3	57.9	53.8	51.1	48.4
31°	756.3	301.4	135.9	96.9	84.8	72.7	60.6	52.5	48.4	45.8	44.4
32°	542.3	185.7	118.4	86.1	75.4	65.9	52.5	47.1	43.1	41.7	40.4
33°	333.7	152.1	105.0	76.7	65.9	57.9	47.1	41.7	39.0	37.7	36.3
34°	219.4	131.9	92.9	65.9	57.9	49.8	40.4	36.3	35.0	33.6	33.6
35°	185.7	117.1	80.7	56.5	48.4	43.1	35.0	32.3	31.0	29.6	31.0
36°	160.1	102.3	67.3	48.4	41.7	36.3	31.0	28.3	26.9	26.9	28.3
37°	141.3	86.1	56.5	40.4	36.3	32.3	26.9	25.6	24.2	24.2	25.6
38°	119.8	70.0	47.1	35.0	31.0	26.9	24.2	22.9	22.9	22.9	24.2
39°	98.2	59.2	40.4	29.6	26.9	24.2	21.5	20.2	20.2	21.5	21.5
40°	80.7	49.8	33.6	25.6	22.9	21.5	18.8	18.8	18.8	18.8	20.2
42.5°	52.5	33.6	24.2	18.8	17.5	16.1	14.8	14.8	14.8	14.8	16.1
45°	35.0	24.2	18.8	14.8	13.5	12.1	12.1	10.8	12.1	12.1	13.5
47.5°	24.2	17.5	13.5	10.8	9.4	8.1	8.1	8.1	9.4	10.8	10.8
50°	17.5	12.1	9.4	6.7	6.7	6.7	6.7	6.7	8.1	8.1	9.4
51°	14.8	10.8	8.1	6.7	6.7	5.4	5.4	5.4	6.7	8.1	9.4
52°	12.1	9.4	6.7	5.4	5.4	5.4	5.4	5.4	6.7	6.7	8.1
53°	10.8	8.1	6.7	5.4	5.4	5.4	5.4	5.4	6.7	6.7	8.1
54°	9.4	6.7	5.4	5.4	5.4	4.0	4.0	5.4	5.4	6.7	8.1
55°	8.1	6.7	5.4	5.4	4.0	4.0	4.0	4.0	5.4	6.7	6.7
57.5°	6.7	5.4	5.4	4.0	4.0	4.0	4.0	4.0	5.4	5.4	6.7
60°	5.4	5.4	5.4	4.0	4.0	4.0	4.0	4.0	5.4	5.4	6.7
61°	5.4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.4	5.4	6.7
62°	5.4	4.0	5.4	5.4	5.4	4.0	4.0	4.0	5.4	5.4	6.7
63°	5.4	5.4	5.4	5.4	5.4	4.0	4.0	4.0	5.4	5.4	5.4
64°	5.4	5.4	5.4	5.4	5.4	5.4	4.0	4.0	5.4	5.4	6.7
65°	4.0	5.4	5.4	5.4	5.4	5.4	4.0	4.0	5.4	5.4	6.7
66°	4.0	5.4	5.4	5.4	5.4	5.4	5.4	4.0	5.4	5.4	5.4



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	4.0	4.0	5.4	5.4	5.4	5.4	5.4	4.0	4.0	5.4	5.4
75°	4.0	4.0	5.4	5.4	5.4	5.4	5.4	4.0	4.0	4.0	5.4
77.5°	4.0	4.0	5.4	5.4	5.4	5.4	5.4	4.0	4.0	4.0	5.4
80°	4.0	4.0	5.4	5.4	5.4	5.4	4.0	4.0	4.0	4.0	4.0
82.5°	4.0	4.0	4.0	5.4	5.4	4.0	4.0	4.0	4.0	4.0	4.0
85°	4.0	4.0	4.0	5.4	5.4	4.0	4.0	4.0	4.0	4.0	4.0
87.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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: P182791

CATALOG NUMBER: LDSQA4A28830D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8
2.5°	215.3	215.3	214.0	211.3	214.0	211.3	208.6	207.2	205.9	204.6	201.9
5°	204.6	203.2	200.5	199.2	199.2	196.5	193.8	191.1	189.7	188.4	185.7
7.5°	191.1	189.7	185.7	184.4	184.4	181.7	177.6	176.3	174.9	173.6	170.9
10°	174.9	173.6	169.6	168.2	168.2	165.5	162.8	160.1	158.8	157.5	154.8
12.5°	156.1	154.8	152.1	150.7	150.7	148.0	145.3	144.0	144.0	142.6	141.3
15°	137.3	135.9	133.2	133.2	133.2	130.5	129.2	127.8	129.2	129.2	127.8
17.5°	118.4	117.1	114.4	114.4	114.4	114.4	113.0	113.0	114.4	115.7	115.7
20°	99.6	98.2	98.2	96.9	98.2	99.6	98.2	99.6	102.3	103.6	105.0
22.5°	82.1	82.1	82.1	82.1	83.4	84.8	84.8	87.5	90.2	91.5	94.2
25°	68.6	68.6	70.0	70.0	71.3	72.7	74.0	75.4	79.4	82.1	83.4
26°	63.2	64.6	64.6	65.9	67.3	68.6	70.0	71.3	75.4	78.1	79.4
27°	59.2	59.2	60.6	61.9	63.2	64.6	65.9	68.6	71.3	74.0	76.7
28°	55.2	55.2	56.5	57.9	59.2	60.6	61.9	64.6	67.3	71.3	72.7
29°	51.1	52.5	52.5	53.8	55.2	56.5	59.2	60.6	64.6	67.3	70.0
30°	47.1	48.4	49.8	49.8	51.1	52.5	55.2	57.9	60.6	64.6	65.9
31°	44.4	45.8	45.8	47.1	48.4	49.8	52.5	55.2	57.9	60.6	63.2
32°	40.4	43.1	43.1	43.1	44.4	47.1	49.8	51.1	55.2	57.9	59.2
33°	37.7	39.0	40.4	40.4	41.7	44.4	47.1	48.4	52.5	55.2	56.5
34°	35.0	36.3	37.7	37.7	39.0	41.7	44.4	45.8	49.8	51.1	53.8
35°	32.3	33.6	35.0	35.0	36.3	39.0	41.7	43.1	45.8	48.4	51.1
36°	29.6	31.0	32.3	33.6	35.0	37.7	39.0	41.7	43.1	45.8	48.4
37°	26.9	28.3	31.0	31.0	33.6	35.0	37.7	39.0	41.7	43.1	45.8
38°	24.2	26.9	28.3	29.6	31.0	33.6	35.0	36.3	39.0	41.7	43.1
39°	22.9	25.6	26.9	28.3	29.6	31.0	32.3	35.0	36.3	39.0	40.4
40°	21.5	22.9	25.6	25.6	28.3	29.6	31.0	32.3	35.0	36.3	39.0
42.5°	17.5	20.2	21.5	22.9	24.2	25.6	26.9	28.3	29.6	32.3	33.6
45°	14.8	17.5	18.8	18.8	20.2	21.5	22.9	24.2	26.9	28.3	29.6
47.5°	12.1	14.8	16.1	17.5	17.5	18.8	20.2	21.5	22.9	24.2	25.6
50°	10.8	12.1	13.5	14.8	16.1	16.1	17.5	18.8	20.2	21.5	21.5
51°	10.8	12.1	13.5	13.5	14.8	16.1	17.5	17.5	18.8	20.2	20.2
52°	9.4	10.8	12.1	13.5	14.8	14.8	16.1	17.5	17.5	18.8	20.2
53°	9.4	10.8	12.1	12.1	13.5	14.8	14.8	16.1	17.5	17.5	18.8
54°	8.1	10.8	12.1	12.1	13.5	13.5	14.8	16.1	16.1	16.1	17.5
55°	8.1	9.4	10.8	12.1	12.1	13.5	13.5	14.8	14.8	16.1	16.1
57.5°	8.1	9.4	10.8	10.8	12.1	12.1	13.5	13.5	13.5	13.5	14.8
60°	6.7	8.1	9.4	10.8	10.8	12.1	12.1	12.1	12.1	12.1	13.5
61°	6.7	8.1	9.4	9.4	10.8	10.8	12.1	12.1	12.1	12.1	12.1
62°	6.7	8.1	9.4	9.4	10.8	10.8	10.8	12.1	12.1	12.1	12.1
63°	6.7	8.1	9.4	9.4	10.8	10.8	10.8	10.8	10.8	10.8	12.1
64°	6.7	8.1	9.4	9.4	10.8	10.8	10.8	10.8	10.8	10.8	10.8
65°	6.7	8.1	9.4	9.4	9.4	10.8	10.8	10.8	10.8	10.8	10.8
66°	6.7	8.1	9.4	9.4	9.4	9.4	10.8	10.8	10.8	10.8	9.4



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CATALOG NUMBER: LDSQA4A28830D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	5.4	6.7	6.7	8.1	8.1	8.1	8.1	8.1	8.1	8.1	6.7
75°	5.4	6.7	6.7	6.7	8.1	8.1	8.1	6.7	6.7	6.7	6.7
77.5°	5.4	5.4	6.7	6.7	6.7	6.7	6.7	6.7	6.7	5.4	5.4
80°	5.4	5.4	5.4	6.7	6.7	6.7	6.7	5.4	5.4	5.4	4.0
82.5°	4.0	5.4	5.4	5.4	5.4	5.4	5.4	5.4	4.0	4.0	4.0
85°	4.0	5.4	5.4	5.4	5.4	5.4	5.4	4.0	4.0	4.0	2.7
87.5°	4.0	4.0	4.0	5.4	5.4	5.4	4.0	4.0	2.7	2.7	2.7
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: P182791

CATALOG NUMBER: LDSQA4A28830D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	228.8	228.8	228.8	228.8	228.8	228.8	228.8	228.8
2.5°	204.6	205.9	204.6	204.6	201.9	203.2	200.5	204.6
5°	187.1	188.4	187.1	187.1	184.4	184.4	183.0	187.1
7.5°	172.3	173.6	170.9	170.9	168.2	169.6	168.2	170.9
10°	157.5	157.5	157.5	156.1	154.8	156.1	154.8	157.5
12.5°	142.6	144.0	144.0	144.0	142.6	142.6	141.3	145.3
15°	130.5	131.9	133.2	133.2	131.9	133.2	131.9	134.6
17.5°	119.8	122.5	122.5	123.8	123.8	125.2	125.2	127.8
20°	109.0	113.0	113.0	114.4	114.4	117.1	117.1	119.8
22.5°	98.2	102.3	103.6	103.6	105.0	107.7	107.7	110.4
25°	88.8	92.9	94.2	94.2	95.5	98.2	98.2	100.9
26°	84.8	88.8	90.2	91.5	92.9	95.5	95.5	98.2
27°	80.7	84.8	86.1	87.5	88.8	91.5	91.5	94.2
28°	78.1	82.1	83.4	84.8	86.1	88.8	88.8	90.2
29°	74.0	78.1	79.4	80.7	82.1	84.8	84.8	87.5
30°	71.3	74.0	75.4	76.7	78.1	82.1	82.1	84.8
31°	67.3	71.3	72.7	74.0	75.4	78.1	78.1	82.1
32°	64.6	67.3	68.6	70.0	72.7	74.0	75.4	78.1
33°	60.6	64.6	65.9	67.3	68.6	71.3	72.7	75.4
34°	57.9	60.6	63.2	64.6	65.9	68.6	70.0	72.7
35°	55.2	57.9	59.2	60.6	63.2	65.9	65.9	68.6
36°	52.5	55.2	56.5	57.9	60.6	63.2	63.2	65.9
37°	49.8	52.5	53.8	55.2	57.9	60.6	60.6	63.2
38°	47.1	49.8	51.1	52.5	55.2	57.9	59.2	61.9
39°	44.4	48.4	49.8	51.1	52.5	55.2	56.5	57.9
40°	43.1	45.8	47.1	48.4	49.8	52.5	53.8	55.2
42.5°	36.3	40.4	41.7	43.1	44.4	45.8	47.1	48.4
45°	32.3	35.0	35.0	36.3	37.7	40.4	40.4	43.1
47.5°	28.3	29.6	31.0	31.0	32.3	35.0	35.0	36.3
50°	24.2	25.6	26.9	26.9	28.3	29.6	31.0	32.3
51°	22.9	24.2	24.2	25.6	26.9	28.3	29.6	31.0
52°	21.5	22.9	22.9	24.2	25.6	26.9	26.9	28.3
53°	20.2	21.5	21.5	22.9	22.9	25.6	25.6	26.9
54°	18.8	20.2	20.2	21.5	21.5	24.2	24.2	25.6
55°	17.5	18.8	20.2	20.2	20.2	21.5	22.9	24.2
57.5°	16.1	17.5	17.5	17.5	18.8	18.8	20.2	20.2
60°	13.5	14.8	14.8	14.8	16.1	16.1	16.1	17.5
61°	13.5	13.5	14.8	14.8	13.5	13.5	13.5	14.8
62°	12.1	13.5	13.5	12.1	12.1	12.1	12.1	13.5
63°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
64°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
65°	10.8	10.8	10.8	10.8	10.8	10.8	9.4	10.8
66°	9.4	10.8	10.8	9.4	9.4	9.4	9.4	9.4



TEST NUMBER: P182791

CATALOG NUMBER: LDSQA4A28830D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	6.7	6.7	6.7	6.7	6.7	5.4	5.4	5.4
75°	6.7	5.4	5.4	5.4	5.4	5.4	5.4	4.0
77.5°	5.4	5.4	5.4	5.4	4.0	4.0	4.0	4.0
80°	4.0	4.0	4.0	4.0	4.0	4.0	2.7	2.7
82.5°	4.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7
85°	2.7	2.7	2.7	2.7	1.3	1.3	1.3	1.3
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	4.0	4.0
70°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	4.0	4.0





67.5°	4.0	4.0	5.4	5.4	5.4	5.4	4.0	4.0	4.0	5.4	5.4
70°	4.0	5.4	5.4	5.4	5.4	5.4	5.4	4.0	4.0	5.4	5.4





67.5°	6.7	8.1	8.1	8.1	9.4	9.4	9.4	9.4	9.4	9.4	9.4
70°	6.7	6.7	8.1	8.1	8.1	9.4	9.4	8.1	8.1	8.1	8.1





67.5°	9.4	9.4	9.4	9.4	8.1	8.1	8.1	8.1
70°	8.1	8.1	8.1	8.1	6.7	6.7	6.7	6.7



(END OF REPORT)