

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: P182787

Luminaire Tested: **LDSQA4A13930D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182787
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: LDSQA4A13930D010TE LAR15SP 4LSQAL1H 30°
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1169.0 lumens
Efficiency: N/A
Efficacy: 52.5 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

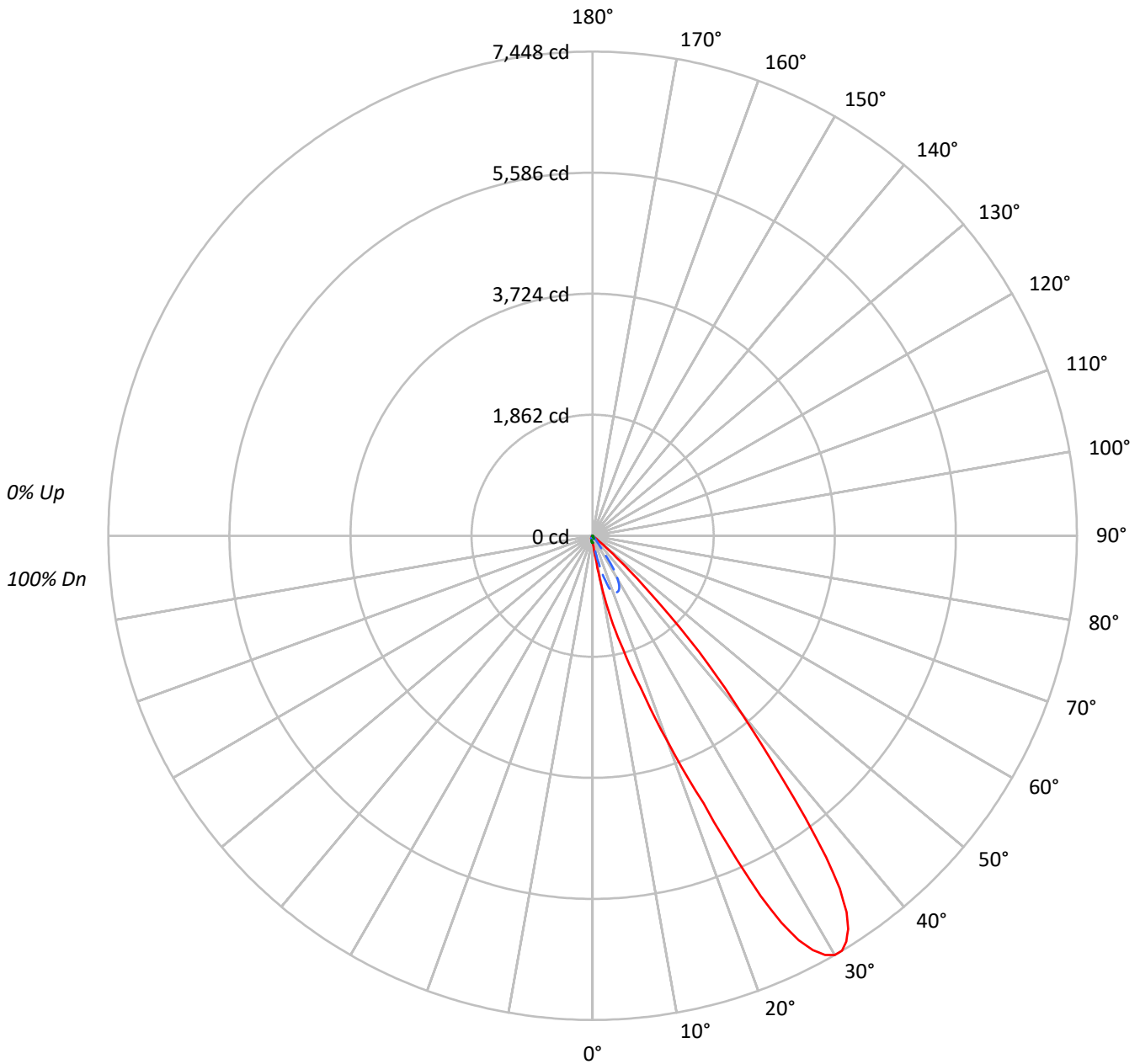
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	10685	10685	10685
5°	16979	10162	8772
10°	74368	9001	7466
15°	181701	7291	6509
20°	346659	5423	5959
25°	653324	3880	5206
30°	833026	2763	4575
35°	783611	1691	3915
40°	449534	1151	3364
45°	173541	795	2850
50°	23074	588	2351
55°	3513	540	1976
60°	1008	504	1628
65°	596	596	1192
70°	368	736	906
75°	487	711	711
80°	0	1060	725
85°	0	2112	667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.8	1.2
10°-20°	125.3	10.7
20°-30°	399.6	34.2
30°-40°	463.0	39.6
40°-50°	150.6	12.9
50°-60°	9.5	0.8
60°-70°	3.4	0.3
70°-80°	2.4	0.2
80°-90°	1.4	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°	538.6	46.1
0°-40°	1001.6	85.7
0°-60°	1161.7	99.4
0°-90°	1169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1169.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	110	110	110	110	110	
5°	175	146	104	92	90	34
15°	1812	653	73	62	65	574
25°	6112	939	36	38	49	2746
35°	6626	224	14	22	33	3812
45°	1267	27	6	13	21	1131
55°	21	5	3	7	12	32
65°	3	2	3	5	5	2
75°	1	2	2	3	2	1
85°	0	1	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°	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
2.5°	134.3	135.6	135.6	133.7	133.7	131.7	130.4	129.8	129.1	127.2	126.5
5°	174.6	175.9	176.5	171.3	169.4	165.5	162.2	159.0	155.1	150.5	146.0
7.5°	336.8	309.5	314.1	275.1	268.0	251.1	237.5	216.1	200.5	184.9	172.6
10°	756.0	730.0	725.5	668.4	611.9	569.7	524.3	445.8	374.4	298.5	236.9
12.5°	1295.2	1256.9	1235.5	1123.3	1057.1	994.8	925.3	802.7	665.8	549.0	427.0
15°	1811.7	1808.5	1731.9	1606.7	1480.8	1404.2	1314.7	1162.8	1000.6	822.8	652.8
17.5°	2435.3	2460.7	2329.6	2084.9	1885.7	1761.1	1637.8	1400.3	1197.9	1025.3	839.0
20°	3362.6	3295.1	3066.1	2683.2	2346.4	2158.9	1967.5	1617.7	1327.7	1118.7	929.9
22.5°	4452.2	4400.2	3972.0	3333.4	2799.4	2535.9	2272.5	1817.6	1439.9	1169.3	947.4
25°	6112.1	5898.6	5067.3	4031.0	3214.7	2841.6	2503.5	1947.4	1490.5	1175.8	939.0
26°	6621.4	6471.5	5512.5	4308.1	3342.5	2925.9	2561.2	1974.0	1494.4	1170.0	922.7
27°	6982.9	6868.7	5883.0	4511.9	3435.3	2984.3	2598.9	1985.0	1485.3	1157.7	900.7
28°	7221.0	7129.5	6162.7	4659.2	3491.8	3015.5	2617.0	1982.4	1467.2	1136.2	869.5
29°	7372.2	7284.0	6326.2	4742.9	3511.9	3020.7	2612.5	1962.9	1438.0	1104.4	824.8
30°	7446.9	7350.8	6381.4	4751.9	3489.8	2990.8	2578.1	1920.1	1397.7	1066.2	775.4
31°	7447.5	7341.1	6335.3	4681.9	3424.3	2927.2	2517.1	1848.7	1345.2	1020.7	709.3
32°	7361.2	7251.5	6181.5	4539.8	3321.8	2847.4	2435.3	1776.1	1290.0	970.1	613.9
33°	7216.5	7086.7	5914.8	4342.5	3190.7	2738.4	2337.4	1694.9	1234.9	889.0	488.6
34°	6982.9	6805.7	5542.3	4103.0	3032.3	2611.2	2225.1	1607.3	1179.1	776.1	349.1
35°	6626.0	6376.2	5111.4	3838.3	2863.0	2473.6	2098.6	1515.8	1110.9	636.6	223.9
36°	6109.5	5787.0	4663.0	3564.4	2688.4	2328.9	1970.1	1427.6	1003.2	482.8	146.7
37°	5435.2	5151.0	4234.1	3288.7	2507.4	2174.5	1852.6	1338.7	870.8	337.4	119.4
38°	4742.9	4533.3	3814.9	3014.8	2319.8	2007.7	1709.9	1245.9	726.1	221.9	99.9
39°	4118.6	3978.4	3404.8	2743.6	2126.5	1861.7	1567.1	1127.8	571.7	157.7	84.4
40°	3554.7	3458.0	3008.3	2467.1	1933.1	1685.2	1432.8	983.1	412.1	125.9	70.7
42.5°	2424.3	2376.3	2104.4	1775.4	1430.2	1288.1	1128.4	591.2	163.5	79.8	42.8
45°	1266.7	1245.9	1147.3	1039.5	932.5	895.5	725.5	265.4	92.1	46.7	27.3
47.5°	493.2	494.5	408.8	349.1	331.6	308.2	233.6	95.4	51.9	28.6	18.2
50°	153.1	164.8	151.8	143.4	109.7	91.5	75.9	47.4	27.9	17.5	11.7
51°	94.1	99.9	94.1	94.1	77.2	67.5	57.8	36.3	22.1	14.3	10.4
52°	61.0	64.2	61.0	57.1	53.2	48.0	41.5	27.3	17.5	11.7	8.4
53°	41.5	43.5	41.5	38.9	35.7	33.1	29.2	20.1	14.3	9.7	7.1
54°	29.2	30.5	29.2	27.3	25.3	23.4	21.4	15.6	11.7	8.4	6.5
55°	20.8	22.1	21.4	20.1	18.2	17.5	16.2	12.3	9.7	7.1	5.2
57.5°	9.7	10.4	10.4	9.7	9.7	9.1	8.4	7.8	5.8	4.5	3.9
60°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	3.9	3.2	3.2
61°	3.9	3.9	3.9	3.9	3.9	3.9	4.5	3.9	3.2	3.2	2.6
62°	3.2	3.2	3.2	3.2	3.2	3.9	3.9	3.2	3.2	2.6	2.6
63°	2.6	2.6	2.6	2.6	3.2	3.2	3.2	3.2	2.6	2.6	2.6
64°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.9
65°	2.6	2.6	1.9	1.9	1.9	2.6	1.9	2.6	1.9	1.9	1.9
66°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9
75°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9
77.5°	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	1.3	1.3	1.9
80°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.3
82.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	1.3	1.3
85°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.3	1.3	1.3
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	1.3	1.3
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°	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
2.5°	122.6	119.4	118.1	116.8	116.2	114.9	112.9	111.0	110.3	107.7	105.1
5°	138.2	132.4	127.8	123.3	122.0	118.7	114.9	110.3	108.4	104.5	101.2
7.5°	156.4	144.7	136.3	128.5	125.2	121.3	114.2	108.4	104.5	98.6	94.7
10°	186.9	159.6	143.4	129.8	124.6	119.4	110.3	102.5	97.3	91.5	87.0
12.5°	295.9	207.0	155.7	130.4	123.3	115.5	104.5	95.4	88.9	82.4	78.5
15°	466.6	315.4	201.8	136.9	120.7	109.0	96.0	85.7	79.2	72.7	68.8
17.5°	623.0	424.4	263.5	152.5	122.0	103.2	85.7	75.3	68.1	62.3	59.7
20°	698.2	475.6	293.3	155.7	114.2	92.1	74.0	64.2	57.8	52.6	50.0
22.5°	705.4	472.4	275.1	133.0	94.7	77.9	62.3	53.2	48.0	44.1	41.5
25°	671.6	419.2	220.6	98.0	74.0	64.9	51.3	43.5	39.6	36.3	34.4
26°	645.7	388.7	194.0	85.0	67.5	59.1	46.7	40.2	36.3	33.7	31.8
27°	610.0	353.0	162.9	73.3	62.3	53.2	42.8	37.0	33.7	31.8	29.8
28°	567.1	318.0	135.0	64.9	56.5	48.0	39.6	33.7	31.1	29.2	27.3
29°	521.1	271.9	105.8	58.4	50.6	43.5	35.7	30.5	27.9	26.6	25.3
30°	456.2	211.5	81.1	52.6	45.4	38.9	32.4	27.9	26.0	24.7	23.4
31°	364.7	145.4	65.5	46.7	40.9	35.0	29.2	25.3	23.4	22.1	21.4
32°	261.5	89.5	57.1	41.5	36.3	31.8	25.3	22.7	20.8	20.1	19.5
33°	160.9	73.3	50.6	37.0	31.8	27.9	22.7	20.1	18.8	18.2	17.5
34°	105.8	63.6	44.8	31.8	27.9	24.0	19.5	17.5	16.9	16.2	16.2
35°	89.5	56.5	38.9	27.3	23.4	20.8	16.9	15.6	14.9	14.3	14.9
36°	77.2	49.3	32.4	23.4	20.1	17.5	14.9	13.6	13.0	13.0	13.6
37°	68.1	41.5	27.3	19.5	17.5	15.6	13.0	12.3	11.7	11.7	12.3
38°	57.8	33.7	22.7	16.9	14.9	13.0	11.7	11.0	11.0	11.0	11.7
39°	47.4	28.6	19.5	14.3	13.0	11.7	10.4	9.7	9.7	10.4	10.4
40°	38.9	24.0	16.2	12.3	11.0	10.4	9.1	9.1	9.1	9.1	9.7
42.5°	25.3	16.2	11.7	9.1	8.4	7.8	7.1	7.1	7.1	7.1	7.8
45°	16.9	11.7	9.1	7.1	6.5	5.8	5.8	5.2	5.8	5.8	6.5
47.5°	11.7	8.4	6.5	5.2	4.5	3.9	3.9	3.9	4.5	5.2	5.2
50°	8.4	5.8	4.5	3.2	3.2	3.2	3.2	3.2	3.9	3.9	4.5
51°	7.1	5.2	3.9	3.2	3.2	2.6	2.6	2.6	3.2	3.9	4.5
52°	5.8	4.5	3.2	2.6	2.6	2.6	2.6	2.6	3.2	3.2	3.9
53°	5.2	3.9	3.2	2.6	2.6	2.6	2.6	2.6	3.2	3.2	3.9
54°	4.5	3.2	2.6	2.6	2.6	1.9	1.9	2.6	2.6	3.2	3.9
55°	3.9	3.2	2.6	2.6	1.9	1.9	1.9	1.9	2.6	3.2	3.2
57.5°	3.2	2.6	2.6	1.9	1.9	1.9	1.9	1.9	2.6	2.6	3.2
60°	2.6	2.6	2.6	1.9	1.9	1.9	1.9	1.9	2.6	2.6	3.2
61°	2.6	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.6	2.6	3.2
62°	2.6	1.9	2.6	2.6	2.6	1.9	1.9	1.9	2.6	2.6	3.2
63°	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	2.6	2.6	2.6
64°	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6	3.2
65°	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6	3.2
66°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	2.6	2.6	2.6



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	1.9	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6
75°	1.9	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	2.6
77.5°	1.9	1.9	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	2.6
80°	1.9	1.9	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.9	1.9
82.5°	1.9	1.9	1.9	2.6	2.6	1.9	1.9	1.9	1.9	1.9	1.9
85°	1.9	1.9	1.9	2.6	2.6	1.9	1.9	1.9	1.9	1.9	1.9
87.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
2.5°	103.8	103.8	103.2	101.9	103.2	101.9	100.6	99.9	99.3	98.6	97.3
5°	98.6	98.0	96.7	96.0	96.0	94.7	93.4	92.1	91.5	90.8	89.5
7.5°	92.1	91.5	89.5	88.9	88.9	87.6	85.7	85.0	84.4	83.7	82.4
10°	84.4	83.7	81.8	81.1	81.1	79.8	78.5	77.2	76.6	75.9	74.6
12.5°	75.3	74.6	73.3	72.7	72.7	71.4	70.1	69.4	69.4	68.8	68.1
15°	66.2	65.5	64.2	64.2	64.2	62.9	62.3	61.6	62.3	62.3	61.6
17.5°	57.1	56.5	55.2	55.2	55.2	55.2	54.5	54.5	55.2	55.8	55.8
20°	48.0	47.4	47.4	46.7	47.4	48.0	47.4	48.0	49.3	50.0	50.6
22.5°	39.6	39.6	39.6	39.6	40.2	40.9	40.9	42.2	43.5	44.1	45.4
25°	33.1	33.1	33.7	33.7	34.4	35.0	35.7	36.3	38.3	39.6	40.2
26°	30.5	31.1	31.1	31.8	32.4	33.1	33.7	34.4	36.3	37.6	38.3
27°	28.6	28.6	29.2	29.8	30.5	31.1	31.8	33.1	34.4	35.7	37.0
28°	26.6	26.6	27.3	27.9	28.6	29.2	29.8	31.1	32.4	34.4	35.0
29°	24.7	25.3	25.3	26.0	26.6	27.3	28.6	29.2	31.1	32.4	33.7
30°	22.7	23.4	24.0	24.0	24.7	25.3	26.6	27.9	29.2	31.1	31.8
31°	21.4	22.1	22.1	22.7	23.4	24.0	25.3	26.6	27.9	29.2	30.5
32°	19.5	20.8	20.8	20.8	21.4	22.7	24.0	24.7	26.6	27.9	28.6
33°	18.2	18.8	19.5	19.5	20.1	21.4	22.7	23.4	25.3	26.6	27.3
34°	16.9	17.5	18.2	18.2	18.8	20.1	21.4	22.1	24.0	24.7	26.0
35°	15.6	16.2	16.9	16.9	17.5	18.8	20.1	20.8	22.1	23.4	24.7
36°	14.3	14.9	15.6	16.2	16.9	18.2	18.8	20.1	20.8	22.1	23.4
37°	13.0	13.6	14.9	14.9	16.2	16.9	18.2	18.8	20.1	20.8	22.1
38°	11.7	13.0	13.6	14.3	14.9	16.2	16.9	17.5	18.8	20.1	20.8
39°	11.0	12.3	13.0	13.6	14.3	14.9	15.6	16.9	17.5	18.8	19.5
40°	10.4	11.0	12.3	12.3	13.6	14.3	14.9	15.6	16.9	17.5	18.8
42.5°	8.4	9.7	10.4	11.0	11.7	12.3	13.0	13.6	14.3	15.6	16.2
45°	7.1	8.4	9.1	9.1	9.7	10.4	11.0	11.7	13.0	13.6	14.3
47.5°	5.8	7.1	7.8	8.4	8.4	9.1	9.7	10.4	11.0	11.7	12.3
50°	5.2	5.8	6.5	7.1	7.8	7.8	8.4	9.1	9.7	10.4	10.4
51°	5.2	5.8	6.5	6.5	7.1	7.8	8.4	8.4	9.1	9.7	9.7
52°	4.5	5.2	5.8	6.5	7.1	7.1	7.8	8.4	8.4	9.1	9.7
53°	4.5	5.2	5.8	5.8	6.5	7.1	7.1	7.8	8.4	8.4	9.1
54°	3.9	5.2	5.8	5.8	6.5	6.5	7.1	7.8	7.8	7.8	8.4
55°	3.9	4.5	5.2	5.8	5.8	6.5	6.5	7.1	7.1	7.8	7.8
57.5°	3.9	4.5	5.2	5.2	5.8	5.8	6.5	6.5	6.5	6.5	7.1
60°	3.2	3.9	4.5	5.2	5.2	5.8	5.8	5.8	5.8	5.8	6.5
61°	3.2	3.9	4.5	4.5	5.2	5.2	5.8	5.8	5.8	5.8	5.8
62°	3.2	3.9	4.5	4.5	5.2	5.2	5.2	5.8	5.8	5.8	5.8
63°	3.2	3.9	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2	5.8
64°	3.2	3.9	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2	5.2
65°	3.2	3.9	4.5	4.5	4.5	5.2	5.2	5.2	5.2	5.2	5.2
66°	3.2	3.9	4.5	4.5	4.5	4.5	5.2	5.2	5.2	5.2	4.5



TEST NUMBER: P182787

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	2.6	3.2	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.2
75°	2.6	3.2	3.2	3.2	3.9	3.9	3.9	3.2	3.2	3.2	3.2
77.5°	2.6	2.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.6	2.6
80°	2.6	2.6	2.6	3.2	3.2	3.2	3.2	2.6	2.6	2.6	1.9
82.5°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9
85°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.3
87.5°	1.9	1.9	1.9	2.6	2.6	2.6	1.9	1.9	1.3	1.3	1.3
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: P182787

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	110.3	110.3	110.3	110.3	110.3	110.3	110.3	110.3
2.5°	98.6	99.3	98.6	98.6	97.3	98.0	96.7	98.6
5°	90.2	90.8	90.2	90.2	88.9	88.9	88.3	90.2
7.5°	83.1	83.7	82.4	82.4	81.1	81.8	81.1	82.4
10°	75.9	75.9	75.9	75.3	74.6	75.3	74.6	75.9
12.5°	68.8	69.4	69.4	69.4	68.8	68.8	68.1	70.1
15°	62.9	63.6	64.2	64.2	63.6	64.2	63.6	64.9
17.5°	57.8	59.1	59.1	59.7	59.7	60.3	60.3	61.6
20°	52.6	54.5	54.5	55.2	55.2	56.5	56.5	57.8
22.5°	47.4	49.3	50.0	50.0	50.6	51.9	51.9	53.2
25°	42.8	44.8	45.4	45.4	46.1	47.4	47.4	48.7
26°	40.9	42.8	43.5	44.1	44.8	46.1	46.1	47.4
27°	38.9	40.9	41.5	42.2	42.8	44.1	44.1	45.4
28°	37.6	39.6	40.2	40.9	41.5	42.8	42.8	43.5
29°	35.7	37.6	38.3	38.9	39.6	40.9	40.9	42.2
30°	34.4	35.7	36.3	37.0	37.6	39.6	39.6	40.9
31°	32.4	34.4	35.0	35.7	36.3	37.6	37.6	39.6
32°	31.1	32.4	33.1	33.7	35.0	35.7	36.3	37.6
33°	29.2	31.1	31.8	32.4	33.1	34.4	35.0	36.3
34°	27.9	29.2	30.5	31.1	31.8	33.1	33.7	35.0
35°	26.6	27.9	28.6	29.2	30.5	31.8	31.8	33.1
36°	25.3	26.6	27.3	27.9	29.2	30.5	30.5	31.8
37°	24.0	25.3	26.0	26.6	27.9	29.2	29.2	30.5
38°	22.7	24.0	24.7	25.3	26.6	27.9	28.6	29.8
39°	21.4	23.4	24.0	24.7	25.3	26.6	27.3	27.9
40°	20.8	22.1	22.7	23.4	24.0	25.3	26.0	26.6
42.5°	17.5	19.5	20.1	20.8	21.4	22.1	22.7	23.4
45°	15.6	16.9	16.9	17.5	18.2	19.5	19.5	20.8
47.5°	13.6	14.3	14.9	14.9	15.6	16.9	16.9	17.5
50°	11.7	12.3	13.0	13.0	13.6	14.3	14.9	15.6
51°	11.0	11.7	11.7	12.3	13.0	13.6	14.3	14.9
52°	10.4	11.0	11.0	11.7	12.3	13.0	13.0	13.6
53°	9.7	10.4	10.4	11.0	11.0	12.3	12.3	13.0
54°	9.1	9.7	9.7	10.4	10.4	11.7	11.7	12.3
55°	8.4	9.1	9.7	9.7	9.7	10.4	11.0	11.7
57.5°	7.8	8.4	8.4	8.4	9.1	9.1	9.7	9.7
60°	6.5	7.1	7.1	7.1	7.8	7.8	7.8	8.4
61°	6.5	6.5	7.1	7.1	6.5	6.5	6.5	7.1
62°	5.8	6.5	6.5	5.8	5.8	5.8	5.8	6.5
63°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
64°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
65°	5.2	5.2	5.2	5.2	5.2	5.2	4.5	5.2
66°	4.5	5.2	5.2	4.5	4.5	4.5	4.5	4.5



TEST NUMBER: P182787

CATALOG NUMBER: LDSQA4A13930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	3.2	3.2	3.2	3.2	3.2	2.6	2.6	2.6
75°	3.2	2.6	2.6	2.6	2.6	2.6	2.6	1.9
77.5°	2.6	2.6	2.6	2.6	1.9	1.9	1.9	1.9
80°	1.9	1.9	1.9	1.9	1.9	1.9	1.3	1.3
82.5°	1.9	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	1.3	1.3	0.6	0.6	0.6	0.6
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9
70°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.9	1.9





67.5°	1.9	1.9	2.6	2.6	2.6	2.6	1.9	1.9	1.9	2.6	2.6
70°	1.9	2.6	2.6	2.6	2.6	2.6	2.6	1.9	1.9	2.6	2.6





67.5°	3.2	3.9	3.9	3.9	4.5	4.5	4.5	4.5	4.5	4.5	4.5
70°	3.2	3.2	3.9	3.9	3.9	4.5	4.5	3.9	3.9	3.9	3.9





67.5°	4.5	4.5	4.5	4.5	3.9	3.9	3.9	3.9
70°	3.9	3.9	3.9	3.9	3.2	3.2	3.2	3.2



(END OF REPORT)