

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: P182777

Luminaire Tested: **LDSQA4A09840D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P182777  
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: LDSQA4A09840D010TE LAR15SP 4LSQAL1H 30°  
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, SELF-FLANGED, 15° SPOT, 30° Tilt  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1024.2 lumens  
Efficiency: N/A  
Efficacy: 74.0 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

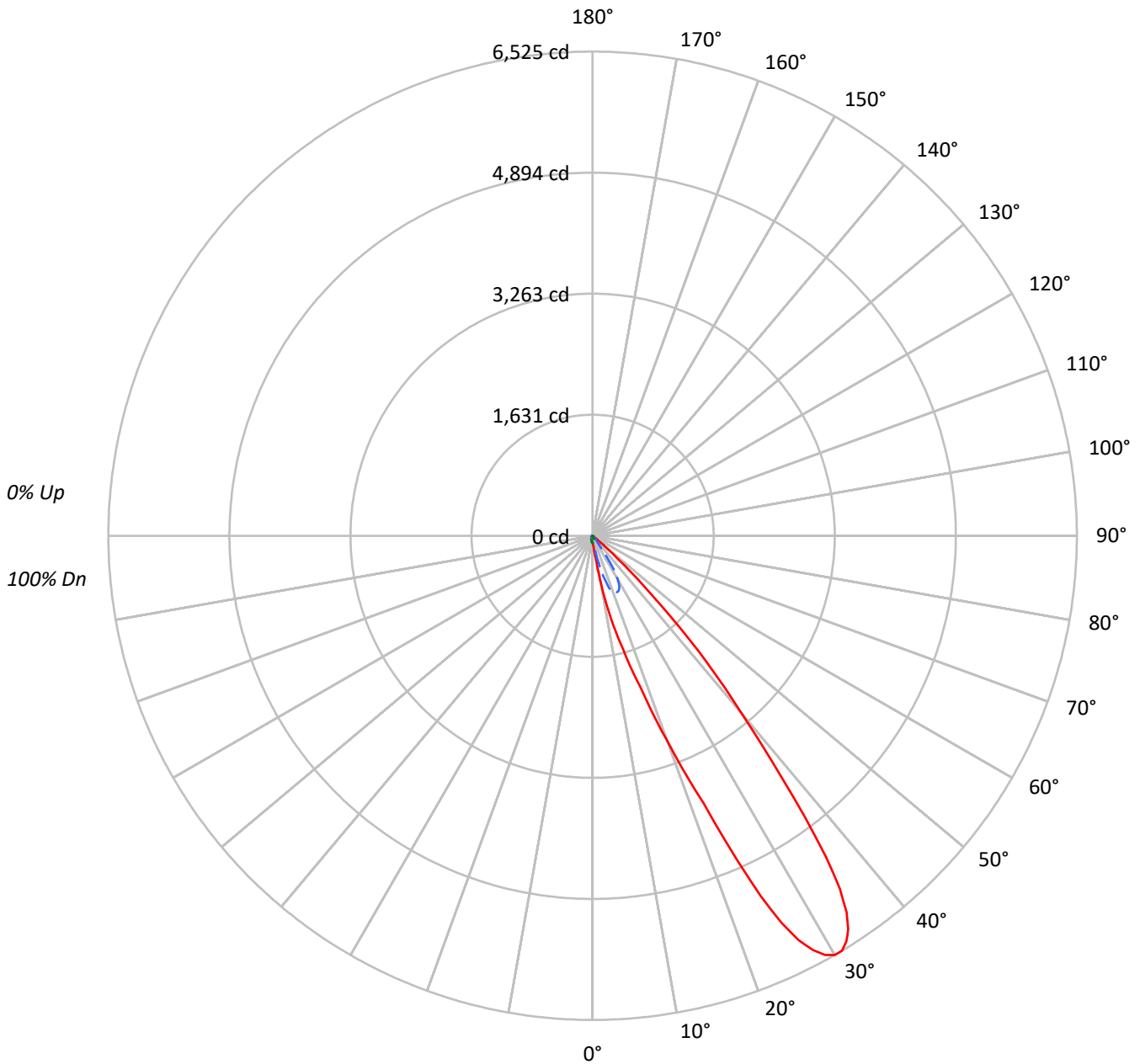
Input Watts (W): 13.84  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	85	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°	9358	9358	9358
5°	14869	8898	7682
10°	65150	7889	6542
15°	159195	6389	5707
20°	303711	4742	5216
25°	572376	3399	4554
30°	729811	2416	4005
35°	686529	1478	3430
40°	393840	1012	2947
45°	152032	699	2493
50°	20225	512	2050
55°	3074	473	1723
60°	872	446	1434
65°	527	527	1032
70°	312	651	793
75°	412	636	636
80°	0	948	614
85°	0	1890	667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	12.1	1.2
10°-20°	109.8	10.7
20°-30°	350.1	34.2
30°-40°	405.6	39.6
40°-50°	131.9	12.9
50°-60°	8.3	0.8
60°-70°	3.0	0.3
70°-80°	2.1	0.2
80°-90°	1.3	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°	471.9	46.1
0°-40°	877.5	85.7
0°-60°	1017.8	99.4
0°-90°	1024.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1024.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	97	97	97	97	97	
5°	153	128	92	80	79	30
15°	1587	572	64	55	57	503
25°	5355	823	32	34	43	2406
35°	5805	196	12	19	29	3340
45°	1110	24	5	11	18	991
55°	18	4	3	6	10	28
65°	2	2	2	4	4	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°	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
2.5°	117.7	118.8	118.8	117.1	117.1	115.4	114.3	113.7	113.1	111.4	110.9
5°	152.9	154.1	154.6	150.1	148.4	145.0	142.1	139.3	135.9	131.9	127.9
7.5°	295.1	271.2	275.2	241.0	234.8	220.0	208.1	189.3	175.7	162.0	151.2
10°	662.3	639.6	635.6	585.6	536.1	499.2	459.4	390.6	328.0	261.5	207.5
12.5°	1134.7	1101.2	1082.4	984.1	926.1	871.5	810.7	703.2	583.3	481.0	374.1
15°	1587.3	1584.4	1517.4	1407.6	1297.3	1230.3	1151.8	1018.8	876.6	720.9	571.9
17.5°	2133.6	2155.8	2041.0	1826.6	1652.1	1542.9	1434.9	1226.8	1049.5	898.2	735.1
20°	2946.0	2886.9	2686.2	2350.8	2055.7	1891.4	1723.7	1417.3	1163.2	980.1	814.7
22.5°	3900.5	3855.1	3479.8	2920.4	2452.6	2221.7	1990.9	1592.4	1261.5	1024.5	830.0
25°	5354.8	5167.8	4439.5	3531.6	2816.4	2489.5	2193.3	1706.1	1305.9	1030.1	822.6
26°	5801.1	5669.7	4829.5	3774.3	2928.4	2563.4	2243.9	1729.4	1309.3	1025.0	808.4
27°	6117.7	6017.7	5154.1	3952.8	3009.7	2614.6	2276.9	1739.1	1301.3	1014.2	789.1
28°	6326.4	6246.2	5399.1	4081.9	3059.2	2641.9	2292.8	1736.8	1285.4	995.5	761.8
29°	6458.8	6381.5	5542.4	4155.2	3076.8	2646.4	2288.8	1719.7	1259.8	967.6	722.6
30°	6524.2	6440.1	5590.7	4163.2	3057.4	2620.3	2258.7	1682.2	1224.6	934.1	679.4
31°	6524.8	6431.6	5550.4	4101.8	3000.0	2564.5	2205.2	1619.7	1178.5	894.3	621.4
32°	6449.2	6353.1	5415.6	3977.3	2910.2	2494.6	2133.6	1556.0	1130.2	849.9	537.8
33°	6322.4	6208.7	5182.0	3804.5	2795.4	2399.1	2047.8	1484.9	1081.9	778.9	428.1
34°	6117.7	5962.5	4855.6	3594.7	2656.6	2287.7	1949.4	1408.2	1033.0	679.9	305.9
35°	5805.1	5586.2	4478.2	3362.7	2508.3	2167.2	1838.6	1328.0	973.3	557.7	196.1
36°	5352.5	5070.0	4085.3	3122.8	2355.3	2040.4	1726.0	1250.7	878.9	423.0	128.5
37°	4761.8	4512.8	3709.5	2881.2	2196.7	1905.1	1623.1	1172.8	762.9	295.6	104.6
38°	4155.2	3971.6	3342.3	2641.3	2032.4	1759.0	1498.0	1091.5	636.2	194.4	87.6
39°	3608.3	3485.5	2983.0	2403.7	1863.0	1631.1	1373.0	988.1	500.9	138.1	73.9
40°	3114.3	3029.6	2635.6	2161.5	1693.6	1476.4	1255.3	861.3	361.0	110.3	62.0
42.5°	2124.0	2081.9	1843.7	1555.4	1253.0	1128.5	988.6	517.9	143.3	69.9	37.5
45°	1109.7	1091.5	1005.1	910.8	816.9	784.5	635.6	232.5	80.7	40.9	23.9
47.5°	432.1	433.2	358.2	305.9	290.5	270.0	204.7	83.6	45.5	25.0	15.9
50°	134.2	144.4	133.0	125.6	96.1	80.2	66.5	41.5	24.4	15.3	10.2
51°	82.4	87.6	82.4	82.4	67.7	59.1	50.6	31.8	19.3	12.5	9.1
52°	53.4	56.3	53.4	50.0	46.6	42.1	36.4	23.9	15.3	10.2	7.4
53°	36.4	38.1	36.4	34.1	31.3	29.0	25.6	17.6	12.5	8.5	6.3
54°	25.6	26.7	25.6	23.9	22.2	20.5	18.8	13.6	10.2	7.4	5.7
55°	18.2	19.3	18.8	17.6	15.9	15.3	14.2	10.8	8.5	6.3	4.5
57.5°	8.5	9.1	9.1	8.5	8.5	8.0	7.4	6.8	5.1	4.0	3.4
60°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.4	2.8	2.8
61°	3.4	3.4	3.4	3.4	3.4	3.4	4.0	3.4	2.8	2.8	2.3
62°	2.8	2.8	2.8	2.8	2.8	3.4	3.4	2.8	2.8	2.3	2.3
63°	2.3	2.3	2.3	2.3	2.8	2.8	2.8	2.8	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	1.7
65°	2.3	2.3	1.7	1.7	1.7	2.3	1.7	2.3	1.7	1.7	1.7
66°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.7
75°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.7
77.5°	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	1.1	1.1	1.7
80°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.1	1.1	1.1
82.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	1.1	1.1
85°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	1.1	1.1	1.1
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	1.1	1.1
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°	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
2.5°	107.4	104.6	103.5	102.3	101.8	100.6	98.9	97.2	96.6	94.4	92.1
5°	121.1	116.0	112.0	108.0	106.9	104.0	100.6	96.6	94.9	91.5	88.7
7.5°	137.0	126.8	119.4	112.6	109.7	106.3	100.1	94.9	91.5	86.4	83.0
10°	163.7	139.9	125.6	113.7	109.2	104.6	96.6	89.8	85.3	80.2	76.2
12.5°	259.2	181.4	136.4	114.3	108.0	101.2	91.5	83.6	77.9	72.2	68.8
15°	408.8	276.3	176.8	120.0	105.7	95.5	84.1	75.0	69.4	63.7	60.3
17.5°	545.8	371.8	230.8	133.6	106.9	90.4	75.0	65.9	59.7	54.6	52.3
20°	611.7	416.7	257.0	136.4	100.1	80.7	64.8	56.3	50.6	46.0	43.8
22.5°	618.0	413.9	241.0	116.5	83.0	68.2	54.6	46.6	42.1	38.7	36.4
25°	588.4	367.3	193.3	85.8	64.8	56.9	44.9	38.1	34.7	31.8	30.1
26°	565.7	340.5	170.0	74.5	59.1	51.7	40.9	35.2	31.8	29.6	27.9
27°	534.4	309.3	142.7	64.2	54.6	46.6	37.5	32.4	29.6	27.9	26.2
28°	496.9	278.6	118.3	56.9	49.5	42.1	34.7	29.6	27.3	25.6	23.9
29°	456.5	238.2	92.7	51.2	44.3	38.1	31.3	26.7	24.4	23.3	22.2
30°	399.7	185.3	71.1	46.0	39.8	34.1	28.4	24.4	22.7	21.6	20.5
31°	319.5	127.3	57.4	40.9	35.8	30.7	25.6	22.2	20.5	19.3	18.8
32°	229.1	78.5	50.0	36.4	31.8	27.9	22.2	19.9	18.2	17.6	17.1
33°	141.0	64.2	44.3	32.4	27.9	24.4	19.9	17.6	16.5	15.9	15.3
34°	92.7	55.7	39.2	27.9	24.4	21.0	17.1	15.3	14.8	14.2	14.2
35°	78.5	49.5	34.1	23.9	20.5	18.2	14.8	13.6	13.1	12.5	13.1
36°	67.7	43.2	28.4	20.5	17.6	15.3	13.1	11.9	11.4	11.4	11.9
37°	59.7	36.4	23.9	17.1	15.3	13.6	11.4	10.8	10.2	10.2	10.8
38°	50.6	29.6	19.9	14.8	13.1	11.4	10.2	9.7	9.7	9.7	10.2
39°	41.5	25.0	17.1	12.5	11.4	10.2	9.1	8.5	8.5	9.1	9.1
40°	34.1	21.0	14.2	10.8	9.7	9.1	8.0	8.0	8.0	8.0	8.5
42.5°	22.2	14.2	10.2	8.0	7.4	6.8	6.3	6.3	6.3	6.3	6.8
45°	14.8	10.2	8.0	6.3	5.7	5.1	5.1	4.5	5.1	5.1	5.7
47.5°	10.2	7.4	5.7	4.5	4.0	3.4	3.4	3.4	4.0	4.5	4.5
50°	7.4	5.1	4.0	2.8	2.8	2.8	2.8	2.8	3.4	3.4	4.0
51°	6.3	4.5	3.4	2.8	2.8	2.3	2.3	2.3	2.8	3.4	4.0
52°	5.1	4.0	2.8	2.3	2.3	2.3	2.3	2.3	2.8	2.8	3.4
53°	4.5	3.4	2.8	2.3	2.3	2.3	2.3	2.3	2.8	2.8	3.4
54°	4.0	2.8	2.3	2.3	2.3	1.7	1.7	2.3	2.3	2.8	3.4
55°	3.4	2.8	2.3	2.3	1.7	1.7	1.7	1.7	2.3	2.8	2.8
57.5°	2.8	2.3	2.3	1.7	1.7	1.7	1.7	1.7	2.3	2.3	2.8
60°	2.3	2.3	2.3	1.7	1.7	1.7	1.7	1.7	2.3	2.3	2.8
61°	2.3	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.3	2.3	2.8
62°	2.3	1.7	2.3	2.3	2.3	1.7	1.7	1.7	2.3	2.3	2.8
63°	2.3	2.3	2.3	2.3	2.3	1.7	1.7	1.7	2.3	2.3	2.3
64°	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.7	2.3	2.3	2.8
65°	1.7	2.3	2.3	2.3	2.3	2.3	1.7	1.7	2.3	2.3	2.8
66°	1.7	2.3	2.3	2.3	2.3	2.3	2.3	1.7	2.3	2.3	2.3





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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	1.7	1.7	2.3	2.3	2.3	2.3	2.3	1.7	1.7	2.3	2.3
75°	1.7	1.7	2.3	2.3	2.3	2.3	2.3	1.7	1.7	1.7	2.3
77.5°	1.7	1.7	2.3	2.3	2.3	2.3	2.3	1.7	1.7	1.7	2.3
80°	1.7	1.7	2.3	2.3	2.3	2.3	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	1.7	1.7	2.3	2.3	1.7	1.7	1.7	1.7	1.7	1.7
85°	1.7	1.7	1.7	2.3	2.3	1.7	1.7	1.7	1.7	1.7	1.7
87.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
2.5°	91.0	91.0	90.4	89.3	90.4	89.3	88.1	87.6	87.0	86.4	85.3
5°	86.4	85.8	84.7	84.1	84.1	83.0	81.9	80.7	80.2	79.6	78.5
7.5°	80.7	80.2	78.5	77.9	77.9	76.7	75.0	74.5	73.9	73.3	72.2
10°	73.9	73.3	71.6	71.1	71.1	69.9	68.8	67.7	67.1	66.5	65.4
12.5°	65.9	65.4	64.2	63.7	63.7	62.5	61.4	60.8	60.8	60.3	59.7
15°	58.0	57.4	56.3	56.3	56.3	55.1	54.6	54.0	54.6	54.6	54.0
17.5°	50.0	49.5	48.3	48.3	48.3	48.3	47.8	47.8	48.3	48.9	48.9
20°	42.1	41.5	41.5	40.9	41.5	42.1	41.5	42.1	43.2	43.8	44.3
22.5°	34.7	34.7	34.7	34.7	35.2	35.8	35.8	37.0	38.1	38.7	39.8
25°	29.0	29.0	29.6	29.6	30.1	30.7	31.3	31.8	33.5	34.7	35.2
26°	26.7	27.3	27.3	27.9	28.4	29.0	29.6	30.1	31.8	33.0	33.5
27°	25.0	25.0	25.6	26.2	26.7	27.3	27.9	29.0	30.1	31.3	32.4
28°	23.3	23.3	23.9	24.4	25.0	25.6	26.2	27.3	28.4	30.1	30.7
29°	21.6	22.2	22.2	22.7	23.3	23.9	25.0	25.6	27.3	28.4	29.6
30°	19.9	20.5	21.0	21.0	21.6	22.2	23.3	24.4	25.6	27.3	27.9
31°	18.8	19.3	19.3	19.9	20.5	21.0	22.2	23.3	24.4	25.6	26.7
32°	17.1	18.2	18.2	18.2	18.8	19.9	21.0	21.6	23.3	24.4	25.0
33°	15.9	16.5	17.1	17.1	17.6	18.8	19.9	20.5	22.2	23.3	23.9
34°	14.8	15.3	15.9	15.9	16.5	17.6	18.8	19.3	21.0	21.6	22.7
35°	13.6	14.2	14.8	14.8	15.3	16.5	17.6	18.2	19.3	20.5	21.6
36°	12.5	13.1	13.6	14.2	14.8	15.9	16.5	17.6	18.2	19.3	20.5
37°	11.4	11.9	13.1	13.1	14.2	14.8	15.9	16.5	17.6	18.2	19.3
38°	10.2	11.4	11.9	12.5	13.1	14.2	14.8	15.3	16.5	17.6	18.2
39°	9.7	10.8	11.4	11.9	12.5	13.1	13.6	14.8	15.3	16.5	17.1
40°	9.1	9.7	10.8	10.8	11.9	12.5	13.1	13.6	14.8	15.3	16.5
42.5°	7.4	8.5	9.1	9.7	10.2	10.8	11.4	11.9	12.5	13.6	14.2
45°	6.3	7.4	8.0	8.0	8.5	9.1	9.7	10.2	11.4	11.9	12.5
47.5°	5.1	6.3	6.8	7.4	7.4	8.0	8.5	9.1	9.7	10.2	10.8
50°	4.5	5.1	5.7	6.3	6.8	6.8	7.4	8.0	8.5	9.1	9.1
51°	4.5	5.1	5.7	5.7	6.3	6.8	7.4	7.4	8.0	8.5	8.5
52°	4.0	4.5	5.1	5.7	6.3	6.3	6.8	7.4	7.4	8.0	8.5
53°	4.0	4.5	5.1	5.1	5.7	6.3	6.3	6.8	7.4	7.4	8.0
54°	3.4	4.5	5.1	5.1	5.7	5.7	6.3	6.8	6.8	6.8	7.4
55°	3.4	4.0	4.5	5.1	5.1	5.7	5.7	6.3	6.3	6.8	6.8
57.5°	3.4	4.0	4.5	4.5	5.1	5.1	5.7	5.7	5.7	5.7	6.3
60°	2.8	3.4	4.0	4.5	4.5	5.1	5.1	5.1	5.1	5.1	5.7
61°	2.8	3.4	4.0	4.0	4.5	4.5	5.1	5.1	5.1	5.1	5.1
62°	2.8	3.4	4.0	4.0	4.5	4.5	4.5	5.1	5.1	5.1	5.1
63°	2.8	3.4	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5	5.1
64°	2.8	3.4	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5
65°	2.8	3.4	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.5	4.5
66°	2.8	3.4	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	4.0



TEST NUMBER: P182777

CATALOG NUMBER: LDSQA4A09840D010TE LAR15SP 4LSQAL1H 30°

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	2.3	2.8	2.8	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.8
75°	2.3	2.8	2.8	2.8	3.4	3.4	3.4	2.8	2.8	2.8	2.8
77.5°	2.3	2.3	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.3	2.3
80°	2.3	2.3	2.3	2.8	2.8	2.8	2.8	2.3	2.3	2.3	1.7
82.5°	1.7	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.7	1.7
85°	1.7	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.7	1.7	1.1
87.5°	1.7	1.7	1.7	2.3	2.3	2.3	1.7	1.7	1.1	1.1	1.1
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: P182777

CATALOG NUMBER: LDSQA4A09840D010TE LAR15SP 4LSQAL1H 30°

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
2.5°	86.4	87.0	86.4	86.4	85.3	85.8	84.7	86.4
5°	79.0	79.6	79.0	79.0	77.9	77.9	77.3	79.0
7.5°	72.8	73.3	72.2	72.2	71.1	71.6	71.1	72.2
10°	66.5	66.5	66.5	65.9	65.4	65.9	65.4	66.5
12.5°	60.3	60.8	60.8	60.8	60.3	60.3	59.7	61.4
15°	55.1	55.7	56.3	56.3	55.7	56.3	55.7	56.9
17.5°	50.6	51.7	51.7	52.3	52.3	52.9	52.9	54.0
20°	46.0	47.8	47.8	48.3	48.3	49.5	49.5	50.6
22.5°	41.5	43.2	43.8	43.8	44.3	45.5	45.5	46.6
25°	37.5	39.2	39.8	39.8	40.4	41.5	41.5	42.6
26°	35.8	37.5	38.1	38.7	39.2	40.4	40.4	41.5
27°	34.1	35.8	36.4	37.0	37.5	38.7	38.7	39.8
28°	33.0	34.7	35.2	35.8	36.4	37.5	37.5	38.1
29°	31.3	33.0	33.5	34.1	34.7	35.8	35.8	37.0
30°	30.1	31.3	31.8	32.4	33.0	34.7	34.7	35.8
31°	28.4	30.1	30.7	31.3	31.8	33.0	33.0	34.7
32°	27.3	28.4	29.0	29.6	30.7	31.3	31.8	33.0
33°	25.6	27.3	27.9	28.4	29.0	30.1	30.7	31.8
34°	24.4	25.6	26.7	27.3	27.9	29.0	29.6	30.7
35°	23.3	24.4	25.0	25.6	26.7	27.9	27.9	29.0
36°	22.2	23.3	23.9	24.4	25.6	26.7	26.7	27.9
37°	21.0	22.2	22.7	23.3	24.4	25.6	25.6	26.7
38°	19.9	21.0	21.6	22.2	23.3	24.4	25.0	26.2
39°	18.8	20.5	21.0	21.6	22.2	23.3	23.9	24.4
40°	18.2	19.3	19.9	20.5	21.0	22.2	22.7	23.3
42.5°	15.3	17.1	17.6	18.2	18.8	19.3	19.9	20.5
45°	13.6	14.8	14.8	15.3	15.9	17.1	17.1	18.2
47.5°	11.9	12.5	13.1	13.1	13.6	14.8	14.8	15.3
50°	10.2	10.8	11.4	11.4	11.9	12.5	13.1	13.6
51°	9.7	10.2	10.2	10.8	11.4	11.9	12.5	13.1
52°	9.1	9.7	9.7	10.2	10.8	11.4	11.4	11.9
53°	8.5	9.1	9.1	9.7	9.7	10.8	10.8	11.4
54°	8.0	8.5	8.5	9.1	9.1	10.2	10.2	10.8
55°	7.4	8.0	8.5	8.5	8.5	9.1	9.7	10.2
57.5°	6.8	7.4	7.4	7.4	8.0	8.0	8.5	8.5
60°	5.7	6.3	6.3	6.3	6.8	6.8	6.8	7.4
61°	5.7	5.7	6.3	6.3	5.7	5.7	5.7	6.3
62°	5.1	5.7	5.7	5.1	5.1	5.1	5.1	5.7
63°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
64°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
65°	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.5
66°	4.0	4.5	4.5	4.0	4.0	4.0	4.0	4.0



TEST NUMBER: P182777

CATALOG NUMBER: LDSQA4A09840D010TE LAR15SP 4LSQAL1H 30°

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	2.8	2.8	2.8	2.8	2.8	2.3	2.3	2.3
75°	2.8	2.3	2.3	2.3	2.3	2.3	2.3	1.7
77.5°	2.3	2.3	2.3	2.3	1.7	1.7	1.7	1.7
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.1	1.1
82.5°	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	1.1	1.1	1.1	1.1	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°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.7	1.7
70°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.7	1.7





67.5°	1.7	1.7	2.3	2.3	2.3	2.3	1.7	1.7	1.7	2.3	2.3
70°	1.7	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.7	2.3	2.3





67.5°	2.8	3.4	3.4	3.4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
70°	2.8	2.8	3.4	3.4	3.4	4.0	4.0	3.4	3.4	3.4	3.4	3.4







67.5°	4.0	4.0	4.0	4.0	3.4	3.4	3.4	3.4
70°	3.4	3.4	3.4	3.4	2.8	2.8	2.8	2.8



(END OF REPORT)