

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: P182679

Luminaire Tested: **LDSQA4A09830D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182679
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: LDSQA4A09830D010TE 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: 1031.3 lumens
Efficiency: N/A
Efficacy: 74.5 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

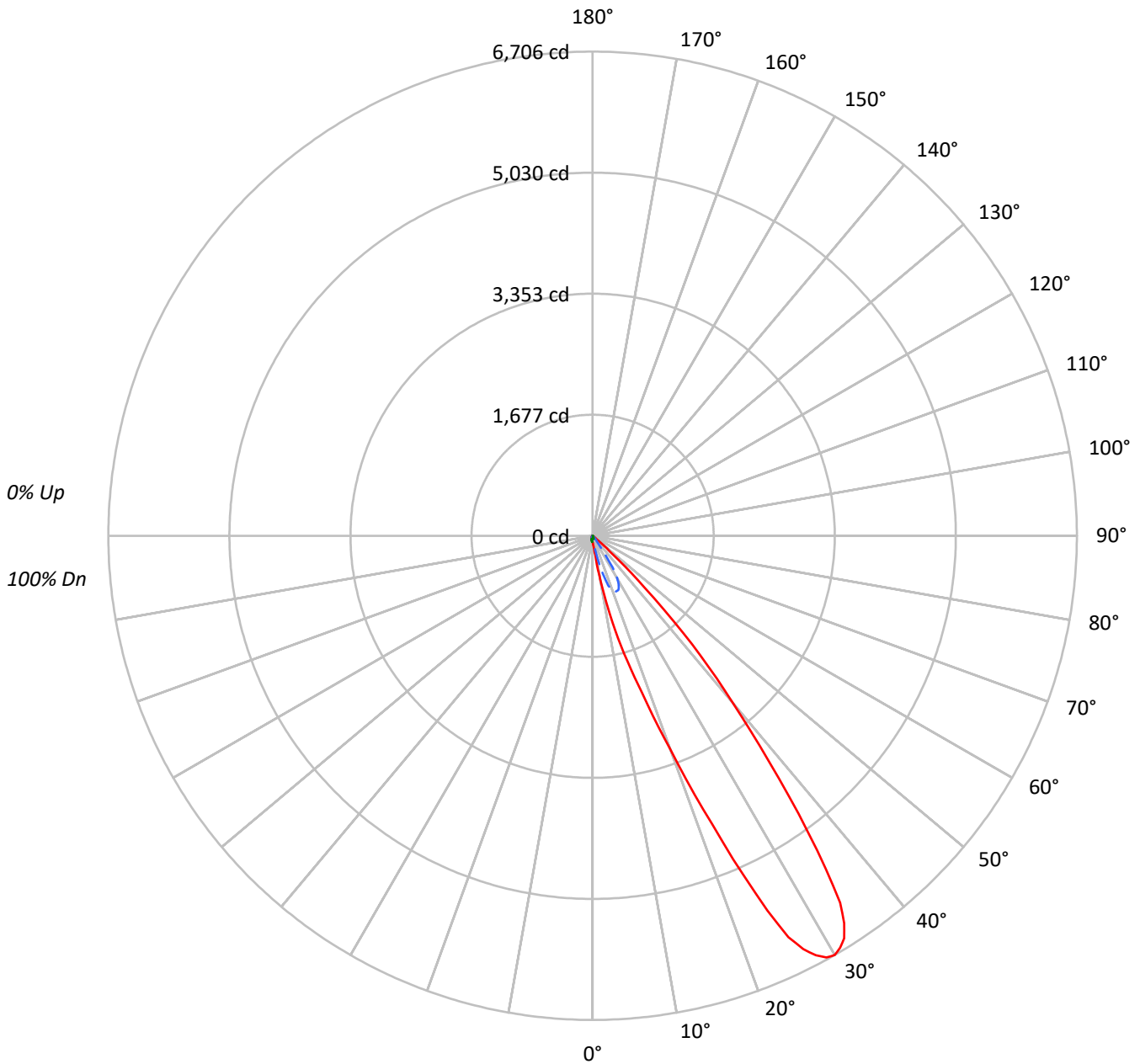
Input Watts (W): 13.84
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				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°	8612	8612	8612
5°	14344	8130	6934
10°	61166	7122	6020
15°	169314	5657	5336
20°	324752	4010	4773
25°	612321	2672	4211
30°	750192	1790	3691
35°	666259	1194	3146
40°	379714	809	2630
45°	138510	658	2192
50°	15252	482	1839
55°	2246	355	1537
60°	523	407	1240
65°	367	481	848
70°	312	595	765
75°	412	786	599
80°	0	1172	614
85°	0	1778	556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.2	1.1
10°-20°	111.7	10.8
20°-30°	367.1	35.6
30°-40°	402.5	39.0
40°-50°	125.7	12.2
50°-60°	6.9	0.7
60°-70°	2.8	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°	490.0	47.5
0°-40°	892.5	86.5
0°-60°	1025.1	99.4
0°-90°	1031.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1031.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	89	89	89	89	89	
5°	148	118	84	74	71	27
15°	1688	542	56	51	53	530
25°	5728	833	25	31	39	2554
35°	5634	164	10	18	27	3294
45°	1011	17	5	10	16	928
55°	13	3	2	6	9	21
65°	2	2	2	4	4	1
75°	1	2	2	3	2	1
85°	0	2	2	2	0	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°	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
2.5°	109.7	110.7	111.3	108.6	109.1	108.1	109.1	107.0	103.3	104.3	101.2
5°	147.5	145.3	144.8	140.5	139.5	137.4	137.4	132.6	125.6	124.6	118.2
7.5°	260.9	249.7	240.1	225.7	211.9	201.2	197.0	179.9	161.3	154.4	139.5
10°	621.8	619.7	595.7	550.5	498.3	460.5	438.7	372.7	289.1	238.0	184.7
12.5°	1131.8	1121.2	1087.1	1004.1	914.1	857.7	813.5	680.4	556.3	456.8	327.4
15°	1688.2	1645.1	1595.0	1466.2	1340.0	1266.5	1203.7	1044.0	851.8	708.6	542.5
17.5°	2282.3	2301.5	2180.1	1958.1	1734.0	1619.0	1512.5	1267.1	1056.8	907.7	720.8
20°	3150.1	3109.7	2896.2	2528.3	2197.7	2005.5	1854.3	1500.3	1183.0	997.2	820.4
22.5°	4323.0	4194.1	3777.8	3155.4	2631.0	2364.3	2149.8	1672.8	1288.9	1042.9	836.4
25°	5728.5	5609.2	4838.3	3758.6	2983.0	2637.4	2345.7	1782.4	1331.5	1050.4	833.2
26°	6187.4	6010.1	5229.6	3973.2	3091.0	2706.6	2394.1	1803.7	1332.6	1044.5	819.3
27°	6424.8	6285.9	5553.3	4147.3	3165.0	2750.3	2421.3	1809.0	1321.9	1031.2	798.0
28°	6581.3	6451.4	5758.3	4261.2	3202.8	2767.3	2429.3	1797.3	1298.0	1007.8	764.5
29°	6678.2	6541.4	5858.4	4312.8	3205.5	2759.9	2414.4	1766.5	1265.5	979.6	725.6
30°	6706.4	6558.4	5861.0	4291.6	3166.1	2720.0	2372.3	1716.4	1226.1	943.9	682.5
31°	6656.4	6503.6	5764.7	4194.7	3085.2	2642.2	2306.3	1650.4	1177.1	906.1	616.0
32°	6573.4	6370.5	5562.9	4033.9	2974.4	2548.5	2223.8	1578.5	1124.9	858.2	522.3
33°	6396.6	6151.7	5254.1	3832.1	2841.3	2441.0	2127.4	1498.7	1075.4	775.7	388.1
34°	6130.9	5821.6	4875.6	3597.3	2690.7	2306.8	2016.7	1424.7	1023.8	666.5	265.7
35°	5633.7	5345.7	4457.7	3347.1	2528.3	2176.9	1894.8	1327.8	953.5	534.5	164.0
36°	5077.4	4865.5	4052.5	3092.6	2362.2	2042.2	1769.1	1256.4	849.7	393.4	111.3
37°	4508.8	4320.8	3670.3	2842.4	2195.6	1893.2	1641.3	1175.5	726.2	262.5	89.4
38°	3967.3	3818.3	3307.2	2596.4	2022.5	1737.2	1507.2	1089.3	593.1	168.8	73.5
39°	3470.1	3358.3	2951.5	2358.5	1849.0	1584.4	1378.3	980.7	452.5	120.3	61.2
40°	3002.6	2923.9	2608.7	2123.7	1676.5	1434.2	1261.8	849.2	314.1	95.3	49.5
42.5°	2042.2	2022.5	1835.7	1528.5	1245.2	1103.6	997.7	477.5	120.9	57.5	27.7
45°	1011.0	1024.8	950.3	874.2	815.1	772.0	628.7	199.1	67.1	31.4	17.0
47.5°	357.8	358.3	308.3	274.7	262.5	261.4	190.1	70.3	35.7	19.2	12.2
50°	101.2	109.1	102.8	104.9	82.0	69.7	57.0	34.1	18.1	12.2	8.0
51°	62.3	67.1	62.8	65.0	56.4	50.6	42.6	25.6	14.4	10.1	7.5
52°	39.9	42.6	40.5	41.0	37.8	33.0	28.7	18.6	11.7	8.5	6.4
53°	27.2	28.7	27.2	27.2	25.0	23.4	20.2	13.8	9.6	6.9	4.8
54°	18.6	19.2	19.2	19.2	17.6	16.5	14.4	10.6	8.0	6.4	4.3
55°	13.3	13.8	13.3	13.3	12.8	11.7	10.6	8.0	6.4	5.3	3.2
57.5°	5.9	5.9	5.9	6.4	5.9	5.9	5.3	4.8	4.3	3.2	2.1
60°	2.7	2.7	2.7	2.7	3.2	3.2	3.2	3.2	2.7	2.1	2.1
61°	2.1	2.1	2.1	2.1	2.1	2.7	2.7	2.7	2.1	2.1	1.6
62°	1.6	1.6	1.6	1.6	2.1	2.1	2.1	2.1	2.1	1.6	1.6
63°	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.1	1.6	1.6	1.6
64°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
65°	1.6	1.1	1.1	1.1	1.1	1.6	1.6	1.6	1.6	1.6	1.6
66°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.6	1.6



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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	1.6
75°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.6
77.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.1	1.6
80°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.1	1.6
82.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.1	1.6
85°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.1	1.6
87.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.1	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°	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
2.5°	99.0	98.5	95.8	93.2	93.7	92.6	91.6	90.0	88.9	86.2	86.2
5°	112.9	110.2	104.3	99.0	98.5	96.4	93.2	90.0	87.3	83.6	82.5
7.5°	128.8	121.4	111.8	103.3	101.7	98.5	92.6	88.4	83.6	78.8	77.2
10°	151.7	134.2	117.7	104.9	101.7	96.9	89.4	83.6	78.3	72.4	70.3
12.5°	233.2	165.6	125.1	104.9	99.0	93.2	84.1	77.2	70.8	64.4	62.3
15°	388.6	264.6	158.7	104.9	94.2	87.3	76.1	69.2	62.3	56.4	54.3
17.5°	536.6	376.4	220.9	118.2	94.8	80.4	66.5	59.1	53.2	47.4	45.8
20°	622.4	438.7	261.9	131.5	93.7	72.4	57.0	49.0	43.1	38.9	37.3
22.5°	633.5	441.3	252.9	117.7	78.8	60.2	47.4	39.9	35.1	31.4	30.3
25°	603.7	389.7	202.3	83.6	58.6	49.0	37.3	31.9	28.2	25.0	24.5
26°	580.8	358.8	176.2	69.2	51.6	43.7	33.5	28.7	25.6	22.9	22.4
27°	548.4	325.8	150.7	57.5	45.8	39.4	29.8	26.1	23.4	20.8	20.8
28°	511.6	290.1	121.4	48.4	41.0	35.1	27.2	23.4	20.8	19.2	19.2
29°	467.4	238.5	88.9	42.1	36.2	30.9	24.0	20.8	18.6	17.6	17.6
30°	402.0	173.0	61.2	36.7	31.4	27.2	21.3	18.6	17.0	16.0	16.0
31°	314.1	106.5	47.9	31.9	27.7	24.0	19.2	16.5	15.4	14.4	14.9
32°	214.0	66.5	41.0	27.7	24.5	20.8	17.0	14.9	13.8	13.3	13.3
33°	121.9	55.4	35.7	24.0	20.8	18.1	14.9	13.3	12.8	12.2	12.2
34°	80.9	47.4	30.9	20.2	17.0	15.4	12.8	11.7	11.2	11.2	11.2
35°	68.1	41.0	25.0	17.0	14.9	13.3	11.2	10.6	10.1	10.1	10.6
36°	57.5	34.1	20.2	14.4	12.8	11.7	10.1	9.6	9.1	9.1	9.6
37°	48.4	27.2	17.0	12.2	10.6	10.1	9.1	8.5	8.5	8.5	9.1
38°	39.4	21.8	14.4	10.6	9.6	8.5	8.0	7.5	7.5	8.0	8.5
39°	30.9	17.6	11.7	9.1	8.0	7.5	6.9	6.9	6.9	6.9	7.5
40°	24.5	14.9	10.1	8.0	6.9	6.9	6.4	5.9	6.4	6.4	7.5
42.5°	15.4	10.6	7.5	5.9	5.3	5.3	4.8	4.8	4.8	5.3	5.9
45°	11.2	8.5	5.9	4.8	4.3	3.7	3.7	3.7	4.3	4.8	5.3
47.5°	8.5	5.9	4.3	3.2	2.7	2.7	2.7	2.7	3.2	3.7	4.3
50°	5.9	3.7	2.7	2.1	2.1	2.1	2.1	2.1	2.7	3.2	3.7
51°	4.8	3.2	2.7	2.1	2.1	1.6	1.6	2.1	2.7	2.7	3.2
52°	3.7	2.7	2.1	1.6	1.6	1.6	1.6	2.1	2.1	2.7	3.2
53°	3.2	2.7	2.1	1.6	1.6	1.6	1.6	1.6	2.1	2.7	3.2
54°	2.7	2.1	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.7	3.2
55°	2.1	2.1	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.1	2.7
57.5°	2.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.7
60°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.7
61°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.7
62°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.7
63°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.1	2.1	2.7
64°	1.6	1.6	1.6	1.6	2.1	2.1	1.6	1.6	2.1	2.1	2.7
65°	1.6	1.6	2.1	2.1	2.1	2.1	1.6	1.6	2.1	2.1	2.7
66°	1.6	2.1	2.1	2.1	2.1	2.1	1.6	1.6	2.1	2.1	2.7



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.6	2.1	2.1	2.1
75°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.6	1.6	2.1	2.1
80°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.6	1.6	2.1	2.1
82.5°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.6	1.6	1.6	2.1
85°	1.6	1.6	2.1	2.1	2.1	2.1	2.1	1.6	1.6	1.6	1.6
87.5°	1.6	1.6	2.1	2.1	2.1	2.1	1.6	1.6	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



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CATALOG NUMBER: LDSQA4A09830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
2.5°	85.2	83.6	82.5	82.0	82.5	81.5	79.9	80.4	79.9	79.3	79.3
5°	80.9	78.3	77.2	76.7	76.7	76.1	74.0	74.5	74.0	73.5	73.5
7.5°	75.1	72.9	71.3	70.8	70.8	70.3	68.1	69.2	68.1	67.6	68.1
10°	68.1	66.0	65.5	64.4	64.4	63.9	62.3	62.8	62.3	62.3	62.3
12.5°	60.7	58.6	58.0	57.5	58.0	57.5	55.9	57.0	56.4	56.4	57.0
15°	52.7	51.1	51.1	50.6	51.1	50.6	50.0	50.6	50.6	50.6	51.6
17.5°	44.7	43.7	43.7	43.1	43.7	43.7	43.1	44.7	44.7	45.8	46.8
20°	36.7	35.7	36.2	36.2	37.3	37.3	37.3	38.9	39.4	40.5	42.1
22.5°	30.3	29.8	30.3	30.3	31.4	31.9	31.9	33.5	35.1	36.2	37.8
25°	24.5	24.5	25.6	25.6	26.1	27.2	27.7	29.8	30.9	31.9	33.5
26°	22.9	22.9	23.4	24.0	24.5	25.6	26.1	28.2	29.3	30.3	31.9
27°	20.8	20.8	21.8	22.4	22.9	24.0	25.0	26.6	27.7	29.3	30.3
28°	19.2	19.2	20.2	20.8	21.3	22.9	23.4	25.0	26.1	27.7	29.3
29°	17.6	18.1	19.2	19.2	20.2	21.3	21.8	24.0	25.0	26.1	27.7
30°	16.5	17.0	17.6	18.1	18.6	19.7	20.8	22.4	23.4	24.5	26.1
31°	15.4	16.0	16.5	17.0	17.6	18.6	19.7	21.3	22.4	23.4	25.0
32°	14.4	14.4	15.4	16.0	16.5	17.6	18.6	20.2	21.3	22.4	24.0
33°	13.3	13.8	14.4	14.9	15.4	16.5	17.6	18.6	19.7	21.3	22.9
34°	12.2	12.8	13.8	14.4	14.9	16.0	16.5	17.6	18.6	20.2	21.3
35°	11.2	12.2	12.8	13.3	13.8	14.9	15.4	17.0	17.6	19.2	20.2
36°	10.6	11.2	12.2	12.8	13.3	13.8	14.4	16.0	17.0	18.1	19.2
37°	9.6	10.6	11.2	11.7	12.2	13.3	13.8	14.9	16.0	17.0	18.1
38°	9.1	9.6	10.6	11.2	11.7	12.2	12.8	14.4	14.9	16.0	17.0
39°	8.5	9.1	10.1	10.6	10.6	11.7	12.2	13.3	13.8	14.9	16.5
40°	8.0	8.5	9.6	9.6	10.1	11.2	11.7	12.8	13.3	14.4	15.4
42.5°	6.9	7.5	8.0	8.5	9.1	9.6	10.1	11.2	11.7	12.2	13.3
45°	5.9	6.4	7.5	7.5	8.0	8.5	9.1	9.6	10.1	11.2	11.7
47.5°	4.8	5.9	6.4	6.9	6.9	7.5	8.0	8.5	9.1	9.6	10.1
50°	4.3	4.8	5.3	5.9	5.9	6.4	6.9	7.5	7.5	8.0	9.1
51°	4.3	4.8	5.3	5.3	5.9	6.4	6.4	6.9	7.5	7.5	8.0
52°	3.7	4.3	4.8	5.3	5.3	5.9	6.4	6.4	6.9	7.5	8.0
53°	3.7	4.3	4.8	4.8	5.3	5.9	5.9	6.4	6.4	6.9	7.5
54°	3.7	4.3	4.8	4.8	5.3	5.3	5.9	5.9	6.4	6.4	6.9
55°	3.2	3.7	4.3	4.8	4.8	5.3	5.3	5.9	5.9	6.4	6.4
57.5°	3.2	3.7	4.3	4.3	4.3	4.8	4.8	5.3	5.3	5.3	5.9
60°	3.2	3.7	3.7	4.3	4.3	4.8	4.8	4.8	4.8	5.3	5.3
61°	3.2	3.2	3.7	4.3	4.3	4.3	4.8	4.8	4.8	4.8	5.3
62°	3.2	3.2	3.7	3.7	4.3	4.3	4.3	4.8	4.8	4.8	4.8
63°	2.7	3.2	3.7	3.7	4.3	4.3	4.3	4.3	4.3	4.8	4.8
64°	2.7	3.2	3.7	3.7	3.7	4.3	4.3	4.3	4.3	4.3	4.3
65°	2.7	3.2	3.7	3.7	3.7	4.3	4.3	4.3	4.3	4.3	4.3
66°	2.7	3.2	3.7	3.7	3.7	4.3	4.3	4.3	4.3	4.3	4.3



TEST NUMBER: P182679

CATALOG NUMBER: LDSQA4A09830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	2.7	2.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
75°	2.7	2.7	2.7	3.2	3.2	3.2	3.2	3.2	3.2	2.7	2.7
77.5°	2.1	2.1	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.1
80°	2.1	2.1	2.7	2.7	2.7	2.7	2.7	2.7	2.1	2.1	2.1
82.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.6	1.6
85°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.6	1.6	1.1
87.5°	1.6	2.1	2.1	2.1	2.1	2.1	1.6	1.6	1.6	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



TEST NUMBER: P182679

CATALOG NUMBER: LDSQA4A09830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	88.9	88.9	88.9	88.9	88.9	88.9	88.9	88.9
2.5°	79.9	78.3	77.7	77.7	78.3	77.7	78.3	77.7
5°	73.5	71.9	71.9	71.3	71.9	71.3	71.9	71.3
7.5°	68.1	66.5	66.5	66.5	66.5	66.5	67.1	66.5
10°	62.8	61.2	61.2	60.7	61.2	61.2	61.8	61.2
12.5°	57.5	56.4	56.4	55.9	57.0	56.4	57.5	57.0
15°	52.7	51.6	51.6	52.2	52.7	52.7	53.2	53.2
17.5°	47.9	47.9	47.9	48.4	49.0	49.5	50.0	49.5
20°	43.7	43.7	44.2	44.7	45.3	45.8	46.3	46.3
22.5°	39.4	39.4	39.9	41.0	42.1	42.6	43.1	43.1
25°	35.1	35.7	36.2	36.7	38.3	38.9	39.4	39.4
26°	33.5	34.1	35.1	35.7	36.7	37.3	38.3	38.3
27°	32.5	33.0	33.5	34.1	35.7	36.2	37.3	36.7
28°	30.9	31.4	31.9	33.0	34.1	35.1	35.7	35.7
29°	29.3	30.3	30.9	31.4	33.0	33.5	34.1	34.1
30°	28.2	28.7	29.3	30.3	31.4	32.5	33.0	33.0
31°	26.6	27.7	28.2	28.7	30.3	30.9	31.9	31.9
32°	25.6	26.1	26.6	27.7	28.7	29.8	30.3	30.3
33°	24.0	25.0	25.6	26.1	27.7	28.7	29.3	28.7
34°	22.9	24.0	24.0	25.0	26.1	27.2	27.7	27.7
35°	21.8	22.4	22.9	24.0	25.0	26.1	26.6	26.6
36°	20.8	21.3	21.8	22.9	24.0	25.0	25.6	25.6
37°	19.7	20.2	20.8	21.3	22.9	24.0	24.5	24.5
38°	18.6	19.2	19.7	20.8	21.8	22.4	23.4	23.4
39°	17.6	18.1	18.6	19.7	20.8	21.3	22.4	21.8
40°	16.5	17.6	17.6	18.6	19.7	20.2	21.3	20.8
42.5°	14.4	14.9	15.4	16.0	17.0	18.1	18.6	18.6
45°	12.8	13.3	13.8	14.4	14.9	15.4	16.5	16.0
47.5°	10.6	11.2	11.7	12.2	12.8	13.3	13.8	13.8
50°	9.6	9.6	10.1	10.1	11.2	11.7	12.2	12.2
51°	8.5	9.1	9.6	9.6	10.6	10.6	11.2	11.2
52°	8.5	8.5	9.1	9.1	9.6	10.1	10.6	10.6
53°	8.0	8.0	8.5	8.5	9.1	9.6	10.1	10.1
54°	7.5	7.5	8.0	8.0	8.5	9.1	9.6	9.6
55°	6.9	6.9	7.5	7.5	8.0	8.5	9.1	9.1
57.5°	5.9	6.4	6.4	6.9	6.9	7.5	7.5	8.0
60°	5.3	5.9	5.9	5.9	6.4	6.4	6.4	6.4
61°	5.3	5.3	5.3	5.9	5.9	5.3	5.9	5.3
62°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
63°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
64°	4.8	4.3	4.3	4.3	4.3	4.3	4.3	4.3
65°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	3.7
66°	4.3	4.3	3.7	4.3	3.7	3.7	3.7	3.7



TEST NUMBER: P182679

CATALOG NUMBER: LDSQA4A09830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	2.7	2.7	2.7	2.7	2.7	2.1	2.1	2.1
75°	2.7	2.7	2.7	2.1	2.1	2.1	2.1	1.6
77.5°	2.1	2.1	2.1	2.1	1.6	1.6	1.6	1.6
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.1	1.1
82.5°	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5
87.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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	1.6	1.6
70°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.6	1.6





67.5°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.6	2.1	2.1	2.7
70°	1.6	2.1	2.1	2.1	2.1	2.1	2.1	1.6	2.1	2.1	2.1





67.5°	2.7	3.2	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
70°	2.7	3.2	3.2	3.2	3.7	3.7	3.7	3.7	3.7	3.7	3.7





67.5°	3.7	3.7	3.7	3.7	3.7	3.2	3.2	3.2
70°	3.2	3.2	3.2	3.2	3.2	2.7	2.7	2.7



(END OF REPORT)