

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: P182771

Luminaire Tested: **LDSQA4A18930D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182771
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: LDSQA4A18930D010TE 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: 1456.5 lumens
Efficiency: N/A
Efficacy: 50.0 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

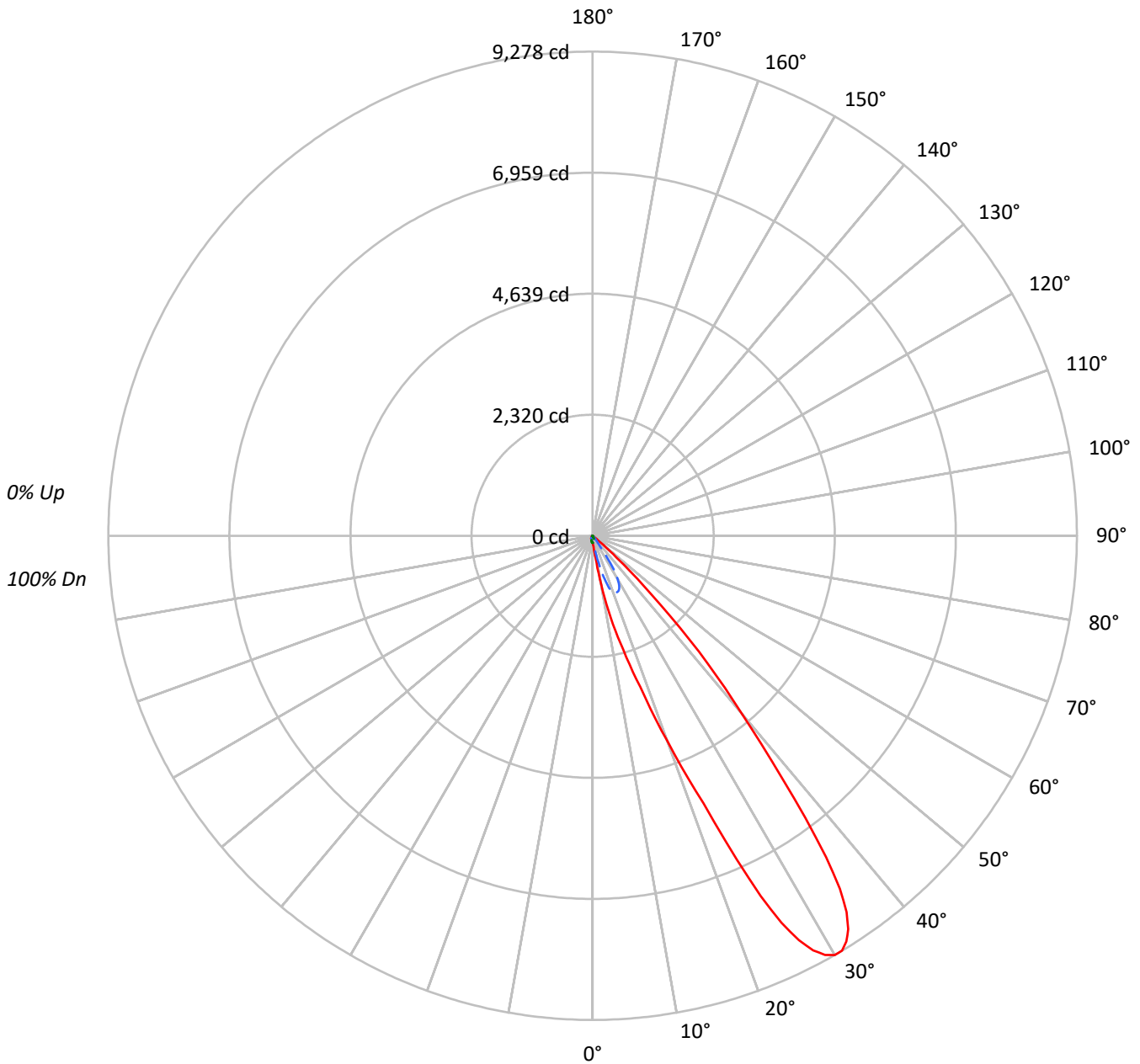
Input Watts (W): 29.12
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	13311	13311	13311
5°	21151	12661	10930
10°	92645	11214	9306
15°	226371	9077	8104
20°	431886	6753	7423
25°	813926	4842	6478
30°	1037812	3434	5694
35°	976250	2105	4872
40°	560049	1429	4186
45°	216204	1000	3548
50°	28756	738	2924
55°	4374	676	2466
60°	1259	620	2034
65°	734	734	1490
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°	17.2	1.2
10°-20°	156.1	10.7
20°-30°	497.8	34.2
30°-40°	576.8	39.6
40°-50°	187.6	12.9
50°-60°	11.9	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°	671.0	46.1
0°-40°	1247.9	85.7
0°-60°	1447.3	99.4
0°-90°	1456.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1456.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	137	137	137	137	137	
5°	218	182	130	114	112	42
15°	2257	813	90	78	81	716
25°	7615	1170	45	48	61	3422
35°	8255	279	18	28	41	4750
45°	1578	34	7	16	26	1409
55°	26	6	4	9	15	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°	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4
2.5°	167.3	169.0	169.0	166.5	166.5	164.1	162.5	161.7	160.9	158.5	157.6
5°	217.5	219.1	219.9	213.4	211.0	206.2	202.1	198.1	193.2	187.6	181.9
7.5°	419.6	385.6	391.3	342.8	333.9	312.9	295.9	269.2	249.8	230.4	215.0
10°	941.8	909.5	903.8	832.7	762.4	709.8	653.2	555.4	466.5	371.9	295.1
12.5°	1613.6	1565.9	1539.3	1399.4	1316.9	1239.3	1152.8	1000.0	829.5	683.9	531.9
15°	2257.1	2253.1	2157.7	2001.7	1844.8	1749.5	1637.9	1448.7	1246.6	1025.1	813.3
17.5°	3034.1	3065.6	2902.3	2597.5	2349.3	2194.1	2040.5	1744.6	1492.4	1277.3	1045.3
20°	4189.3	4105.2	3819.9	3342.9	2923.3	2689.7	2451.2	2015.4	1654.1	1393.7	1158.5
22.5°	5546.7	5482.0	4948.4	4152.9	3487.6	3159.4	2831.1	2264.4	1793.9	1456.8	1180.3
25°	7614.6	7348.7	6313.1	5022.0	4005.0	3540.1	3118.9	2426.1	1857.0	1464.9	1169.8
26°	8249.3	8062.5	6867.6	5367.2	4164.2	3645.2	3190.9	2459.3	1861.8	1457.6	1149.6
27°	8699.6	8557.3	7329.3	5621.0	4279.9	3718.0	3237.8	2473.0	1850.5	1442.2	1122.1
28°	8996.3	8882.3	7677.7	5804.6	4350.2	3756.8	3260.4	2469.8	1827.9	1415.6	1083.3
29°	9184.6	9074.7	7881.4	5908.8	4375.2	3763.3	3254.8	2445.5	1791.5	1376.0	1027.5
30°	9277.6	9157.9	7950.1	5920.2	4347.8	3726.1	3211.9	2392.2	1741.4	1328.3	966.1
31°	9278.4	9145.8	7892.7	5832.9	4266.1	3646.8	3135.9	2303.2	1675.9	1271.7	883.6
32°	9170.9	9034.3	7701.1	5655.8	4138.4	3547.4	3034.1	2212.7	1607.2	1208.6	764.8
33°	8990.6	8828.9	7368.9	5410.0	3975.1	3411.6	2912.0	2111.6	1538.5	1107.6	608.8
34°	8699.6	8478.9	6904.8	5111.7	3777.8	3253.1	2772.1	2002.5	1468.9	966.9	434.9
35°	8254.9	7943.7	6368.0	4781.9	3566.8	3081.8	2614.5	1888.5	1384.0	793.1	278.9
36°	7611.4	7209.6	5809.4	4440.7	3349.3	2901.5	2454.4	1778.6	1249.8	601.5	182.7
37°	6771.4	6417.4	5275.0	4097.1	3123.8	2709.1	2308.1	1667.8	1084.9	420.4	148.8
38°	5908.8	5647.7	4752.8	3756.0	2890.2	2501.3	2130.2	1552.2	904.6	276.5	124.5
39°	5131.1	4956.5	4241.9	3418.1	2649.2	2319.4	1952.4	1405.1	712.2	196.4	105.1
40°	4428.6	4308.1	3747.9	3073.7	2408.3	2099.5	1785.0	1224.8	513.4	156.8	88.1
42.5°	3020.3	2960.5	2621.8	2211.9	1781.8	1604.7	1405.9	736.5	203.7	99.4	53.4
45°	1578.1	1552.2	1429.3	1295.1	1161.7	1115.6	903.8	330.6	114.8	58.2	34.0
47.5°	614.4	616.0	509.3	434.9	413.1	384.0	291.0	118.8	64.7	35.6	22.6
50°	190.8	205.3	189.2	178.7	136.6	114.0	94.6	59.0	34.8	21.8	14.6
51°	117.2	124.5	117.2	117.2	96.2	84.1	72.0	45.3	27.5	17.8	12.9
52°	76.0	80.0	76.0	71.1	66.3	59.8	51.7	34.0	21.8	14.6	10.5
53°	51.7	54.2	51.7	48.5	44.5	41.2	36.4	25.1	17.8	12.1	8.9
54°	36.4	38.0	36.4	34.0	31.5	29.1	26.7	19.4	14.6	10.5	8.1
55°	25.9	27.5	26.7	25.1	22.6	21.8	20.2	15.4	12.1	8.9	6.5
57.5°	12.1	12.9	12.9	12.1	12.1	11.3	10.5	9.7	7.3	5.7	4.9
60°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	4.9	4.0	4.0
61°	4.9	4.9	4.9	4.9	4.9	4.9	5.7	4.9	4.0	4.0	3.2
62°	4.0	4.0	4.0	4.0	4.0	4.9	4.9	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°	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4
2.5°	152.8	148.8	147.1	145.5	144.7	143.1	140.7	138.2	137.4	134.2	131.0
5°	172.2	164.9	159.3	153.6	152.0	147.9	143.1	137.4	135.0	130.2	126.1
7.5°	194.8	180.3	169.8	160.1	156.0	151.2	142.3	135.0	130.2	122.9	118.0
10°	232.8	198.9	178.7	161.7	155.2	148.8	137.4	127.7	121.3	114.0	108.3
12.5°	368.6	257.9	194.0	162.5	153.6	143.9	130.2	118.8	110.8	102.7	97.8
15°	581.3	392.9	251.4	170.6	150.4	135.8	119.6	106.7	98.6	90.5	85.7
17.5°	776.1	528.7	328.2	190.0	152.0	128.5	106.7	93.8	84.9	77.6	74.4
20°	869.9	592.6	365.4	194.0	142.3	114.8	92.2	80.0	72.0	65.5	62.2
22.5°	878.8	588.5	342.8	165.7	118.0	97.0	77.6	66.3	59.8	55.0	51.7
25°	836.7	522.2	274.9	122.1	92.2	80.8	63.9	54.2	49.3	45.3	42.8
26°	804.4	484.3	241.7	105.9	84.1	73.6	58.2	50.1	45.3	42.0	39.6
27°	759.9	439.8	202.9	91.4	77.6	66.3	53.4	46.1	42.0	39.6	37.2
28°	706.6	396.1	168.2	80.8	70.3	59.8	49.3	42.0	38.8	36.4	34.0
29°	649.2	338.7	131.8	72.8	63.1	54.2	44.5	38.0	34.8	33.1	31.5
30°	568.3	263.5	101.1	65.5	56.6	48.5	40.4	34.8	32.3	30.7	29.1
31°	454.3	181.1	81.7	58.2	50.9	43.7	36.4	31.5	29.1	27.5	26.7
32°	325.8	111.6	71.1	51.7	45.3	39.6	31.5	28.3	25.9	25.1	24.3
33°	200.5	91.4	63.1	46.1	39.6	34.8	28.3	25.1	23.4	22.6	21.8
34°	131.8	79.2	55.8	39.6	34.8	29.9	24.3	21.8	21.0	20.2	20.2
35°	111.6	70.3	48.5	34.0	29.1	25.9	21.0	19.4	18.6	17.8	18.6
36°	96.2	61.4	40.4	29.1	25.1	21.8	18.6	17.0	16.2	16.2	17.0
37°	84.9	51.7	34.0	24.3	21.8	19.4	16.2	15.4	14.6	14.6	15.4
38°	72.0	42.0	28.3	21.0	18.6	16.2	14.6	13.7	13.7	13.7	14.6
39°	59.0	35.6	24.3	17.8	16.2	14.6	12.9	12.1	12.1	12.9	12.9
40°	48.5	29.9	20.2	15.4	13.7	12.9	11.3	11.3	11.3	11.3	12.1
42.5°	31.5	20.2	14.6	11.3	10.5	9.7	8.9	8.9	8.9	8.9	9.7
45°	21.0	14.6	11.3	8.9	8.1	7.3	7.3	6.5	7.3	7.3	8.1
47.5°	14.6	10.5	8.1	6.5	5.7	4.9	4.9	4.9	5.7	6.5	6.5
50°	10.5	7.3	5.7	4.0	4.0	4.0	4.0	4.0	4.9	4.9	5.7
51°	8.9	6.5	4.9	4.0	4.0	3.2	3.2	3.2	4.0	4.9	5.7
52°	7.3	5.7	4.0	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.9
53°	6.5	4.9	4.0	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.9
54°	5.7	4.0	3.2	3.2	3.2	2.4	2.4	3.2	3.2	4.0	4.9
55°	4.9	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: LDSQA4A18930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4
2.5°	129.3	129.3	128.5	126.9	128.5	126.9	125.3	124.5	123.7	122.9	121.3
5°	122.9	122.1	120.5	119.6	119.6	118.0	116.4	114.8	114.0	113.2	111.6
7.5°	114.8	114.0	111.6	110.8	110.8	109.1	106.7	105.9	105.1	104.3	102.7
10°	105.1	104.3	101.9	101.1	101.1	99.4	97.8	96.2	95.4	94.6	93.0
12.5°	93.8	93.0	91.4	90.5	90.5	88.9	87.3	86.5	86.5	85.7	84.9
15°	82.5	81.7	80.0	80.0	80.0	78.4	77.6	76.8	77.6	77.6	76.8
17.5°	71.1	70.3	68.7	68.7	68.7	68.7	67.9	67.9	68.7	69.5	69.5
20°	59.8	59.0	59.0	58.2	59.0	59.8	59.0	59.8	61.4	62.2	63.1
22.5°	49.3	49.3	49.3	49.3	50.1	50.9	50.9	52.5	54.2	55.0	56.6
25°	41.2	41.2	42.0	42.0	42.8	43.7	44.5	45.3	47.7	49.3	50.1
26°	38.0	38.8	38.8	39.6	40.4	41.2	42.0	42.8	45.3	46.9	47.7
27°	35.6	35.6	36.4	37.2	38.0	38.8	39.6	41.2	42.8	44.5	46.1
28°	33.1	33.1	34.0	34.8	35.6	36.4	37.2	38.8	40.4	42.8	43.7
29°	30.7	31.5	31.5	32.3	33.1	34.0	35.6	36.4	38.8	40.4	42.0
30°	28.3	29.1	29.9	29.9	30.7	31.5	33.1	34.8	36.4	38.8	39.6
31°	26.7	27.5	27.5	28.3	29.1	29.9	31.5	33.1	34.8	36.4	38.0
32°	24.3	25.9	25.9	25.9	26.7	28.3	29.9	30.7	33.1	34.8	35.6
33°	22.6	23.4	24.3	24.3	25.1	26.7	28.3	29.1	31.5	33.1	34.0
34°	21.0	21.8	22.6	22.6	23.4	25.1	26.7	27.5	29.9	30.7	32.3
35°	19.4	20.2	21.0	21.0	21.8	23.4	25.1	25.9	27.5	29.1	30.7
36°	17.8	18.6	19.4	20.2	21.0	22.6	23.4	25.1	25.9	27.5	29.1
37°	16.2	17.0	18.6	18.6	20.2	21.0	22.6	23.4	25.1	25.9	27.5
38°	14.6	16.2	17.0	17.8	18.6	20.2	21.0	21.8	23.4	25.1	25.9
39°	13.7	15.4	16.2	17.0	17.8	18.6	19.4	21.0	21.8	23.4	24.3
40°	12.9	13.7	15.4	15.4	17.0	17.8	18.6	19.4	21.0	21.8	23.4
42.5°	10.5	12.1	12.9	13.7	14.6	15.4	16.2	17.0	17.8	19.4	20.2
45°	8.9	10.5	11.3	11.3	12.1	12.9	13.7	14.6	16.2	17.0	17.8
47.5°	7.3	8.9	9.7	10.5	10.5	11.3	12.1	12.9	13.7	14.6	15.4
50°	6.5	7.3	8.1	8.9	9.7	9.7	10.5	11.3	12.1	12.9	12.9
51°	6.5	7.3	8.1	8.1	8.9	9.7	10.5	10.5	11.3	12.1	12.1
52°	5.7	6.5	7.3	8.1	8.9	8.9	9.7	10.5	10.5	11.3	12.1
53°	5.7	6.5	7.3	7.3	8.1	8.9	8.9	9.7	10.5	10.5	11.3
54°	4.9	6.5	7.3	7.3	8.1	8.1	8.9	9.7	9.7	9.7	10.5
55°	4.9	5.7	6.5	7.3	7.3	8.1	8.1	8.9	8.9	9.7	9.7
57.5°	4.9	5.7	6.5	6.5	7.3	7.3	8.1	8.1	8.1	8.1	8.9
60°	4.0	4.9	5.7	6.5	6.5	7.3	7.3	7.3	7.3	7.3	8.1
61°	4.0	4.9	5.7	5.7	6.5	6.5	7.3	7.3	7.3	7.3	7.3
62°	4.0	4.9	5.7	5.7	6.5	6.5	6.5	7.3	7.3	7.3	7.3
63°	4.0	4.9	5.7	5.7	6.5	6.5	6.5	6.5	6.5	6.5	7.3
64°	4.0	4.9	5.7	5.7	6.5	6.5	6.5	6.5	6.5	6.5	6.5
65°	4.0	4.9	5.7	5.7	5.7	6.5	6.5	6.5	6.5	6.5	6.5
66°	4.0	4.9	5.7	5.7	5.7	5.7	6.5	6.5	6.5	6.5	5.7



TEST NUMBER: P182771

CATALOG NUMBER: LDSQA4A18930D010TE 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	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.0
75°	3.2	4.0	4.0	4.0	4.9	4.9	4.9	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: P182771

CATALOG NUMBER: LDSQA4A18930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	137.4	137.4	137.4	137.4	137.4	137.4	137.4	137.4
2.5°	122.9	123.7	122.9	122.9	121.3	122.1	120.5	122.9
5°	112.4	113.2	112.4	112.4	110.8	110.8	109.9	112.4
7.5°	103.5	104.3	102.7	102.7	101.1	101.9	101.1	102.7
10°	94.6	94.6	94.6	93.8	93.0	93.8	93.0	94.6
12.5°	85.7	86.5	86.5	86.5	85.7	85.7	84.9	87.3
15°	78.4	79.2	80.0	80.0	79.2	80.0	79.2	80.8
17.5°	72.0	73.6	73.6	74.4	74.4	75.2	75.2	76.8
20°	65.5	67.9	67.9	68.7	68.7	70.3	70.3	72.0
22.5°	59.0	61.4	62.2	62.2	63.1	64.7	64.7	66.3
25°	53.4	55.8	56.6	56.6	57.4	59.0	59.0	60.6
26°	50.9	53.4	54.2	55.0	55.8	57.4	57.4	59.0
27°	48.5	50.9	51.7	52.5	53.4	55.0	55.0	56.6
28°	46.9	49.3	50.1	50.9	51.7	53.4	53.4	54.2
29°	44.5	46.9	47.7	48.5	49.3	50.9	50.9	52.5
30°	42.8	44.5	45.3	46.1	46.9	49.3	49.3	50.9
31°	40.4	42.8	43.7	44.5	45.3	46.9	46.9	49.3
32°	38.8	40.4	41.2	42.0	43.7	44.5	45.3	46.9
33°	36.4	38.8	39.6	40.4	41.2	42.8	43.7	45.3
34°	34.8	36.4	38.0	38.8	39.6	41.2	42.0	43.7
35°	33.1	34.8	35.6	36.4	38.0	39.6	39.6	41.2
36°	31.5	33.1	34.0	34.8	36.4	38.0	38.0	39.6
37°	29.9	31.5	32.3	33.1	34.8	36.4	36.4	38.0
38°	28.3	29.9	30.7	31.5	33.1	34.8	35.6	37.2
39°	26.7	29.1	29.9	30.7	31.5	33.1	34.0	34.8
40°	25.9	27.5	28.3	29.1	29.9	31.5	32.3	33.1
42.5°	21.8	24.3	25.1	25.9	26.7	27.5	28.3	29.1
45°	19.4	21.0	21.0	21.8	22.6	24.3	24.3	25.9
47.5°	17.0	17.8	18.6	18.6	19.4	21.0	21.0	21.8
50°	14.6	15.4	16.2	16.2	17.0	17.8	18.6	19.4
51°	13.7	14.6	14.6	15.4	16.2	17.0	17.8	18.6
52°	12.9	13.7	13.7	14.6	15.4	16.2	16.2	17.0
53°	12.1	12.9	12.9	13.7	13.7	15.4	15.4	16.2
54°	11.3	12.1	12.1	12.9	12.9	14.6	14.6	15.4
55°	10.5	11.3	12.1	12.1	12.1	12.9	13.7	14.6
57.5°	9.7	10.5	10.5	10.5	11.3	11.3	12.1	12.1
60°	8.1	8.9	8.9	8.9	9.7	9.7	9.7	10.5
61°	8.1	8.1	8.9	8.9	8.1	8.1	8.1	8.9
62°	7.3	8.1	8.1	7.3	7.3	7.3	7.3	8.1
63°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
64°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
65°	6.5	6.5	6.5	6.5	6.5	6.5	5.7	6.5
66°	5.7	6.5	6.5	5.7	5.7	5.7	5.7	5.7



TEST NUMBER: P182771

CATALOG NUMBER: LDSQA4A18930D010TE 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	4.9	4.9	4.9	5.7	5.7	5.7	5.7	5.7	5.7	5.7
70°	4.0	4.0	4.9	4.9	4.9	5.7	5.7	4.9	4.9	4.9	4.9





67.5°	5.7	5.7	5.7	5.7	4.9	4.9	4.9	4.9
70°	4.9	4.9	4.9	4.9	4.0	4.0	4.0	4.0



(END OF REPORT)