

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: P182795

Luminaire Tested: **LDSQA4A28930D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182795
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: LDSQA4A28930D010TE 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: 1994.9 lumens
Efficiency: N/A
Efficacy: 44.8 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

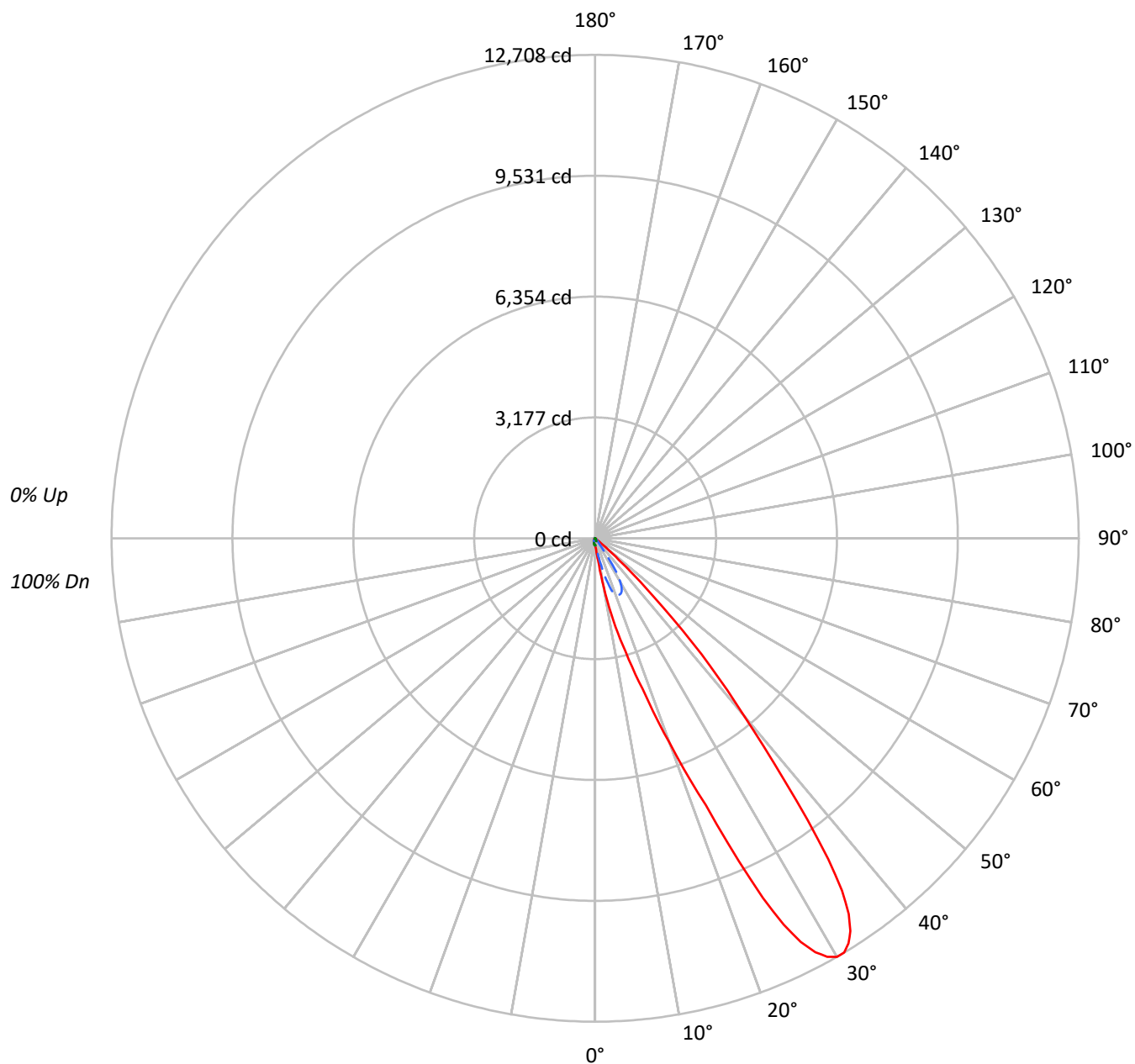
Input Watts (W): 44.49
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	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°	18232	18232	18232
5°	28969	17339	14966
10°	126897	15356	12749
15°	310055	12436	11102
20°	591546	9247	10155
25°	1114811	6627	8872
30°	1421454	4709	7808
35°	1337141	2886	6682
40°	767080	1960	5741
45°	296117	1370	4850
50°	39381	995	4009
55°	5979	929	3361
60°	1724	853	2790
65°	1009	1009	2040
70°	623	1246	1558
75°	823	1235	1235
80°	0	1841	1227
85°	0	3668	1223



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	1.2
10°-20°	213.8	10.7
20°-30°	681.8	34.2
30°-40°	790.1	39.6
40°-50°	256.9	12.9
50°-60°	16.3	0.8
60°-70°	5.9	0.3
70°-80°	4.2	0.2
80°-90°	2.5	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°	919.1	46.1
0°-40°	1709.2	85.7
0°-60°	1982.3	99.4
0°-90°	1994.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1994.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	188	188	188	188	188	
5°	298	249	178	156	154	58
15°	3092	1114	124	106	111	980
25°	10430	1602	62	65	83	4686
35°	11306	382	24	38	56	6505
45°	2161	46	10	22	35	1930
55°	35	9	6	12	20	55
65°	4	3	4	9	9	4
75°	2	3	3	6	3	1
85°	0	2	3	3	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°	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2
2.5°	229.2	231.4	231.4	228.1	228.1	224.8	222.6	221.5	220.4	217.0	215.9
5°	297.9	300.1	301.2	292.3	289.0	282.4	276.8	271.3	264.6	256.9	249.1
7.5°	574.7	528.2	535.9	469.5	457.3	428.5	405.3	368.7	342.2	315.6	294.5
10°	1290.0	1245.7	1237.9	1140.5	1044.2	972.2	894.7	760.7	638.9	509.4	404.2
12.5°	2210.1	2144.8	2108.3	1916.7	1803.8	1697.5	1579.0	1369.7	1136.1	936.8	728.6
15°	3091.5	3086.0	2955.3	2741.6	2526.8	2396.2	2243.4	1984.3	1707.4	1404.0	1113.9
17.5°	4155.6	4198.8	3975.2	3557.7	3217.8	3005.2	2794.8	2389.5	2044.1	1749.5	1431.7
20°	5738.0	5622.8	5231.9	4578.6	4003.9	3683.9	3357.3	2760.5	2265.5	1909.0	1586.7
22.5°	7597.1	7508.5	6777.7	5688.1	4776.8	4327.3	3877.7	3101.5	2457.1	1995.3	1616.6
25°	10429.5	10065.2	8646.8	6878.5	5485.5	4848.8	4271.9	3323.0	2543.4	2006.4	1602.2
26°	11298.8	11043.0	9406.4	7351.3	5703.6	4992.8	4370.5	3368.4	2550.1	1996.4	1574.6
27°	11915.5	11720.6	10038.7	7699.0	5862.0	5092.4	4434.7	3387.2	2534.6	1975.4	1536.9
28°	12321.9	12165.8	10515.9	7950.3	5958.3	5145.6	4465.7	3382.8	2503.6	1938.9	1483.8
29°	12579.9	12429.3	10794.9	8093.2	5992.6	5154.4	4457.9	3349.5	2453.7	1884.6	1407.4
30°	12707.2	12543.3	10889.1	8108.7	5955.0	5103.5	4399.3	3276.5	2385.1	1819.3	1323.2
31°	12708.3	12526.7	10810.4	7989.1	5843.2	4995.0	4295.2	3154.7	2295.4	1741.8	1210.3
32°	12561.1	12373.9	10548.0	7746.6	5668.2	4858.8	4155.6	3030.6	2201.3	1655.4	1047.5
33°	12314.1	12092.7	10092.9	7410.0	5444.5	4672.8	3988.4	2892.2	2107.2	1517.0	833.8
34°	11915.5	11613.2	9457.3	7001.4	5174.4	4455.7	3796.9	2742.7	2011.9	1324.3	595.7
35°	11306.5	10880.2	8722.1	6549.6	4885.3	4221.0	3581.0	2586.6	1895.7	1086.2	382.0
36°	10425.1	9874.8	7957.0	6082.3	4587.5	3974.1	3361.7	2436.0	1711.9	823.8	250.2
37°	9274.6	8789.6	7225.0	5611.7	4278.6	3710.5	3161.3	2284.3	1486.0	575.8	203.7
38°	8093.2	7735.5	6509.7	5144.5	3958.6	3425.9	2917.7	2126.0	1239.1	378.7	170.5
39°	7027.9	6788.8	5809.9	4681.6	3628.6	3176.8	2674.1	1924.5	975.5	269.1	143.9
40°	6065.7	5900.7	5133.4	4209.9	3298.6	2875.6	2444.9	1677.5	703.1	214.8	120.7
42.5°	4136.8	4054.9	3590.9	3029.5	2440.5	2198.0	1925.6	1008.7	279.0	136.2	73.1
45°	2161.4	2126.0	1957.7	1773.9	1591.2	1528.1	1237.9	452.9	157.2	79.7	46.5
47.5°	841.5	843.8	697.6	595.7	565.8	526.0	398.6	162.8	88.6	48.7	31.0
50°	261.3	281.3	259.1	244.7	187.1	156.1	129.6	80.8	47.6	29.9	19.9
51°	160.6	170.5	160.6	160.6	131.8	115.2	98.5	62.0	37.6	24.4	17.7
52°	104.1	109.6	104.1	97.4	90.8	81.9	70.9	46.5	29.9	19.9	14.4
53°	70.9	74.2	70.9	66.4	60.9	56.5	49.8	34.3	24.4	16.6	12.2
54°	49.8	52.0	49.8	46.5	43.2	39.9	36.5	26.6	19.9	14.4	11.1
55°	35.4	37.6	36.5	34.3	31.0	29.9	27.7	21.0	16.6	12.2	8.9
57.5°	16.6	17.7	17.7	16.6	16.6	15.5	14.4	13.3	10.0	7.8	6.6
60°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	6.6	5.5	5.5
61°	6.6	6.6	6.6	6.6	6.6	6.6	7.8	6.6	5.5	5.5	4.4
62°	5.5	5.5	5.5	5.5	5.5	6.6	6.6	5.5	5.5	4.4	4.4
63°	4.4	4.4	4.4	4.4	5.5	5.5	5.5	5.5	4.4	4.4	4.4
64°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.3
65°	4.4	4.4	3.3	3.3	3.3	4.4	3.3	4.4	3.3	3.3	3.3
66°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
72.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3
75°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3
77.5°	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	2.2	2.2	3.3
80°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	2.2	2.2	2.2
82.5°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	2.2	2.2
85°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	2.2	2.2	2.2
87.5°	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	2.2	2.2
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°	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2
2.5°	209.3	203.7	201.5	199.3	198.2	196.0	192.7	189.3	188.2	183.8	179.4
5°	235.9	225.9	218.1	210.4	208.2	202.6	196.0	188.2	184.9	178.3	172.7
7.5°	266.9	246.9	232.5	219.2	213.7	207.1	194.9	184.9	178.3	168.3	161.7
10°	318.9	272.4	244.7	221.5	212.6	203.7	188.2	175.0	166.1	156.1	148.4
12.5°	504.9	353.2	265.7	222.6	210.4	197.1	178.3	162.8	151.7	140.6	134.0
15°	796.1	538.1	344.4	233.6	206.0	186.0	163.9	146.2	135.1	124.0	117.4
17.5°	1063.0	724.2	449.6	260.2	208.2	176.1	146.2	128.4	116.3	106.3	101.9
20°	1191.4	811.6	500.5	265.7	194.9	157.2	126.2	109.6	98.5	89.7	85.3
22.5°	1203.6	806.1	469.5	227.0	161.7	132.9	106.3	90.8	81.9	75.3	70.9
25°	1146.0	715.3	376.5	167.2	126.2	110.7	87.5	74.2	67.5	62.0	58.7
26°	1101.8	663.3	331.1	145.1	115.2	100.8	79.7	68.7	62.0	57.6	54.3
27°	1040.8	602.4	277.9	125.1	106.3	90.8	73.1	63.1	57.6	54.3	50.9
28°	967.8	542.6	230.3	110.7	96.3	81.9	67.5	57.6	53.1	49.8	46.5
29°	889.2	464.0	180.5	99.7	86.4	74.2	60.9	52.0	47.6	45.4	43.2
30°	778.4	361.0	138.4	89.7	77.5	66.4	55.4	47.6	44.3	42.1	39.9
31°	622.3	248.0	111.8	79.7	69.8	59.8	49.8	43.2	39.9	37.6	36.5
32°	446.2	152.8	97.4	70.9	62.0	54.3	43.2	38.8	35.4	34.3	33.2
33°	274.6	125.1	86.4	63.1	54.3	47.6	38.8	34.3	32.1	31.0	29.9
34°	180.5	108.5	76.4	54.3	47.6	41.0	33.2	29.9	28.8	27.7	27.7
35°	152.8	96.3	66.4	46.5	39.9	35.4	28.8	26.6	25.5	24.4	25.5
36°	131.8	84.2	55.4	39.9	34.3	29.9	25.5	23.3	22.1	22.1	23.3
37°	116.3	70.9	46.5	33.2	29.9	26.6	22.1	21.0	19.9	19.9	21.0
38°	98.5	57.6	38.8	28.8	25.5	22.1	19.9	18.8	18.8	18.8	19.9
39°	80.8	48.7	33.2	24.4	22.1	19.9	17.7	16.6	16.6	17.7	17.7
40°	66.4	41.0	27.7	21.0	18.8	17.7	15.5	15.5	15.5	15.5	16.6
42.5°	43.2	27.7	19.9	15.5	14.4	13.3	12.2	12.2	12.2	12.2	13.3
45°	28.8	19.9	15.5	12.2	11.1	10.0	10.0	8.9	10.0	10.0	11.1
47.5°	19.9	14.4	11.1	8.9	7.8	6.6	6.6	6.6	7.8	8.9	8.9
50°	14.4	10.0	7.8	5.5	5.5	5.5	5.5	5.5	6.6	6.6	7.8
51°	12.2	8.9	6.6	5.5	5.5	4.4	4.4	4.4	5.5	6.6	7.8
52°	10.0	7.8	5.5	4.4	4.4	4.4	4.4	4.4	5.5	5.5	6.6
53°	8.9	6.6	5.5	4.4	4.4	4.4	4.4	4.4	5.5	5.5	6.6
54°	7.8	5.5	4.4	4.4	4.4	3.3	3.3	4.4	4.4	5.5	6.6
55°	6.6	5.5	4.4	4.4	3.3	3.3	3.3	3.3	4.4	5.5	5.5
57.5°	5.5	4.4	4.4	3.3	3.3	3.3	3.3	3.3	4.4	4.4	5.5
60°	4.4	4.4	4.4	3.3	3.3	3.3	3.3	3.3	4.4	4.4	5.5
61°	4.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	4.4	4.4	5.5
62°	4.4	3.3	4.4	4.4	4.4	3.3	3.3	3.3	4.4	4.4	5.5
63°	4.4	4.4	4.4	4.4	4.4	3.3	3.3	3.3	4.4	4.4	4.4
64°	4.4	4.4	4.4	4.4	4.4	4.4	3.3	3.3	4.4	4.4	5.5
65°	3.3	4.4	4.4	4.4	4.4	4.4	3.3	3.3	4.4	4.4	5.5
66°	3.3	4.4	4.4	4.4	4.4	4.4	4.4	3.3	4.4	4.4	4.4



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	3.3	3.3	4.4	4.4	4.4	4.4	4.4	3.3	3.3	4.4	4.4
75°	3.3	3.3	4.4	4.4	4.4	4.4	4.4	3.3	3.3	3.3	4.4
77.5°	3.3	3.3	4.4	4.4	4.4	4.4	4.4	3.3	3.3	3.3	4.4
80°	3.3	3.3	4.4	4.4	4.4	4.4	3.3	3.3	3.3	3.3	3.3
82.5°	3.3	3.3	3.3	4.4	4.4	3.3	3.3	3.3	3.3	3.3	3.3
85°	3.3	3.3	3.3	4.4	4.4	3.3	3.3	3.3	3.3	3.3	3.3
87.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
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: P182795

CATALOG NUMBER: LDSQA4A28930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2
2.5°	177.2	177.2	176.1	173.8	176.1	173.8	171.6	170.5	169.4	168.3	166.1
5°	168.3	167.2	165.0	163.9	163.9	161.7	159.4	157.2	156.1	155.0	152.8
7.5°	157.2	156.1	152.8	151.7	151.7	149.5	146.2	145.1	143.9	142.8	140.6
10°	143.9	142.8	139.5	138.4	138.4	136.2	134.0	131.8	130.7	129.6	127.3
12.5°	128.4	127.3	125.1	124.0	124.0	121.8	119.6	118.5	118.5	117.4	116.3
15°	112.9	111.8	109.6	109.6	109.6	107.4	106.3	105.2	106.3	106.3	105.2
17.5°	97.4	96.3	94.1	94.1	94.1	94.1	93.0	93.0	94.1	95.2	95.2
20°	81.9	80.8	80.8	79.7	80.8	81.9	80.8	81.9	84.2	85.3	86.4
22.5°	67.5	67.5	67.5	67.5	68.7	69.8	69.8	72.0	74.2	75.3	77.5
25°	56.5	56.5	57.6	57.6	58.7	59.8	60.9	62.0	65.3	67.5	68.7
26°	52.0	53.1	53.1	54.3	55.4	56.5	57.6	58.7	62.0	64.2	65.3
27°	48.7	48.7	49.8	50.9	52.0	53.1	54.3	56.5	58.7	60.9	63.1
28°	45.4	45.4	46.5	47.6	48.7	49.8	50.9	53.1	55.4	58.7	59.8
29°	42.1	43.2	43.2	44.3	45.4	46.5	48.7	49.8	53.1	55.4	57.6
30°	38.8	39.9	41.0	41.0	42.1	43.2	45.4	47.6	49.8	53.1	54.3
31°	36.5	37.6	37.6	38.8	39.9	41.0	43.2	45.4	47.6	49.8	52.0
32°	33.2	35.4	35.4	35.4	36.5	38.8	41.0	42.1	45.4	47.6	48.7
33°	31.0	32.1	33.2	33.2	34.3	36.5	38.8	39.9	43.2	45.4	46.5
34°	28.8	29.9	31.0	31.0	32.1	34.3	36.5	37.6	41.0	42.1	44.3
35°	26.6	27.7	28.8	28.8	29.9	32.1	34.3	35.4	37.6	39.9	42.1
36°	24.4	25.5	26.6	27.7	28.8	31.0	32.1	34.3	35.4	37.6	39.9
37°	22.1	23.3	25.5	25.5	27.7	28.8	31.0	32.1	34.3	35.4	37.6
38°	19.9	22.1	23.3	24.4	25.5	27.7	28.8	29.9	32.1	34.3	35.4
39°	18.8	21.0	22.1	23.3	24.4	25.5	26.6	28.8	29.9	32.1	33.2
40°	17.7	18.8	21.0	21.0	23.3	24.4	25.5	26.6	28.8	29.9	32.1
42.5°	14.4	16.6	17.7	18.8	19.9	21.0	22.1	23.3	24.4	26.6	27.7
45°	12.2	14.4	15.5	15.5	16.6	17.7	18.8	19.9	22.1	23.3	24.4
47.5°	10.0	12.2	13.3	14.4	14.4	15.5	16.6	17.7	18.8	19.9	21.0
50°	8.9	10.0	11.1	12.2	13.3	13.3	14.4	15.5	16.6	17.7	17.7
51°	8.9	10.0	11.1	11.1	12.2	13.3	14.4	14.4	15.5	16.6	16.6
52°	7.8	8.9	10.0	11.1	12.2	12.2	13.3	14.4	14.4	15.5	16.6
53°	7.8	8.9	10.0	10.0	11.1	12.2	12.2	13.3	14.4	14.4	15.5
54°	6.6	8.9	10.0	10.0	11.1	11.1	12.2	13.3	13.3	13.3	14.4
55°	6.6	7.8	8.9	10.0	10.0	11.1	11.1	12.2	12.2	13.3	13.3
57.5°	6.6	7.8	8.9	8.9	10.0	10.0	11.1	11.1	11.1	11.1	12.2
60°	5.5	6.6	7.8	8.9	8.9	10.0	10.0	10.0	10.0	10.0	11.1
61°	5.5	6.6	7.8	7.8	8.9	8.9	10.0	10.0	10.0	10.0	10.0
62°	5.5	6.6	7.8	7.8	8.9	8.9	8.9	10.0	10.0	10.0	10.0
63°	5.5	6.6	7.8	7.8	8.9	8.9	8.9	8.9	8.9	8.9	10.0
64°	5.5	6.6	7.8	7.8	8.9	8.9	8.9	8.9	8.9	8.9	8.9
65°	5.5	6.6	7.8	7.8	7.8	8.9	8.9	8.9	8.9	8.9	8.9
66°	5.5	6.6	7.8	7.8	7.8	7.8	8.9	8.9	8.9	8.9	7.8



TEST NUMBER: P182795

CATALOG NUMBER: LDSQA4A28930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	4.4	5.5	5.5	6.6	6.6	6.6	6.6	6.6	6.6	6.6	5.5
75°	4.4	5.5	5.5	5.5	6.6	6.6	6.6	5.5	5.5	5.5	5.5
77.5°	4.4	4.4	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.4	4.4
80°	4.4	4.4	4.4	5.5	5.5	5.5	5.5	4.4	4.4	4.4	3.3
82.5°	3.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.3	3.3	3.3
85°	3.3	4.4	4.4	4.4	4.4	4.4	4.4	3.3	3.3	3.3	2.2
87.5°	3.3	3.3	3.3	4.4	4.4	4.4	3.3	3.3	2.2	2.2	2.2
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: P182795

CATALOG NUMBER: LDSQA4A28930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	188.2	188.2	188.2	188.2	188.2	188.2	188.2	188.2
2.5°	168.3	169.4	168.3	168.3	166.1	167.2	165.0	168.3
5°	153.9	155.0	153.9	153.9	151.7	151.7	150.6	153.9
7.5°	141.7	142.8	140.6	140.6	138.4	139.5	138.4	140.6
10°	129.6	129.6	129.6	128.4	127.3	128.4	127.3	129.6
12.5°	117.4	118.5	118.5	118.5	117.4	117.4	116.3	119.6
15°	107.4	108.5	109.6	109.6	108.5	109.6	108.5	110.7
17.5°	98.5	100.8	100.8	101.9	101.9	103.0	103.0	105.2
20°	89.7	93.0	93.0	94.1	94.1	96.3	96.3	98.5
22.5°	80.8	84.2	85.3	85.3	86.4	88.6	88.6	90.8
25°	73.1	76.4	77.5	77.5	78.6	80.8	80.8	83.0
26°	69.8	73.1	74.2	75.3	76.4	78.6	78.6	80.8
27°	66.4	69.8	70.9	72.0	73.1	75.3	75.3	77.5
28°	64.2	67.5	68.7	69.8	70.9	73.1	73.1	74.2
29°	60.9	64.2	65.3	66.4	67.5	69.8	69.8	72.0
30°	58.7	60.9	62.0	63.1	64.2	67.5	67.5	69.8
31°	55.4	58.7	59.8	60.9	62.0	64.2	64.2	67.5
32°	53.1	55.4	56.5	57.6	59.8	60.9	62.0	64.2
33°	49.8	53.1	54.3	55.4	56.5	58.7	59.8	62.0
34°	47.6	49.8	52.0	53.1	54.3	56.5	57.6	59.8
35°	45.4	47.6	48.7	49.8	52.0	54.3	54.3	56.5
36°	43.2	45.4	46.5	47.6	49.8	52.0	52.0	54.3
37°	41.0	43.2	44.3	45.4	47.6	49.8	49.8	52.0
38°	38.8	41.0	42.1	43.2	45.4	47.6	48.7	50.9
39°	36.5	39.9	41.0	42.1	43.2	45.4	46.5	47.6
40°	35.4	37.6	38.8	39.9	41.0	43.2	44.3	45.4
42.5°	29.9	33.2	34.3	35.4	36.5	37.6	38.8	39.9
45°	26.6	28.8	28.8	29.9	31.0	33.2	33.2	35.4
47.5°	23.3	24.4	25.5	25.5	26.6	28.8	28.8	29.9
50°	19.9	21.0	22.1	22.1	23.3	24.4	25.5	26.6
51°	18.8	19.9	19.9	21.0	22.1	23.3	24.4	25.5
52°	17.7	18.8	18.8	19.9	21.0	22.1	22.1	23.3
53°	16.6	17.7	17.7	18.8	18.8	21.0	21.0	22.1
54°	15.5	16.6	16.6	17.7	17.7	19.9	19.9	21.0
55°	14.4	15.5	16.6	16.6	16.6	17.7	18.8	19.9
57.5°	13.3	14.4	14.4	14.4	15.5	15.5	16.6	16.6
60°	11.1	12.2	12.2	12.2	13.3	13.3	13.3	14.4
61°	11.1	11.1	12.2	12.2	11.1	11.1	11.1	12.2
62°	10.0	11.1	11.1	10.0	10.0	10.0	10.0	11.1
63°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
64°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
65°	8.9	8.9	8.9	8.9	8.9	8.9	7.8	8.9
66°	7.8	8.9	8.9	7.8	7.8	7.8	7.8	7.8



TEST NUMBER: P182795

CATALOG NUMBER: LDSQA4A28930D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	5.5	5.5	5.5	5.5	5.5	4.4	4.4	4.4
75°	5.5	4.4	4.4	4.4	4.4	4.4	4.4	3.3
77.5°	4.4	4.4	4.4	4.4	3.3	3.3	3.3	3.3
80°	3.3	3.3	3.3	3.3	3.3	3.3	2.2	2.2
82.5°	3.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2
85°	2.2	2.2	2.2	2.2	1.1	1.1	1.1	1.1
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3
70°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3





67.5°	3.3	3.3	4.4	4.4	4.4	4.4	3.3	3.3	3.3	4.4	4.4
70°	3.3	4.4	4.4	4.4	4.4	4.4	4.4	3.3	3.3	4.4	4.4





67.5°	5.5	6.6	6.6	6.6	7.8	7.8	7.8	7.8	7.8	7.8	7.8
70°	5.5	5.5	6.6	6.6	6.6	7.8	7.8	6.6	6.6	6.6	6.6





67.5°	7.8	7.8	7.8	7.8	6.6	6.6	6.6	6.6
70°	6.6	6.6	6.6	6.6	5.5	5.5	5.5	5.5



(END OF REPORT)