

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: P182687

Luminaire Tested: **LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182687
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: LDSQA4A13830D010TE 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: 1527.4 lumens
Efficiency: N/A
Efficacy: 68.6 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

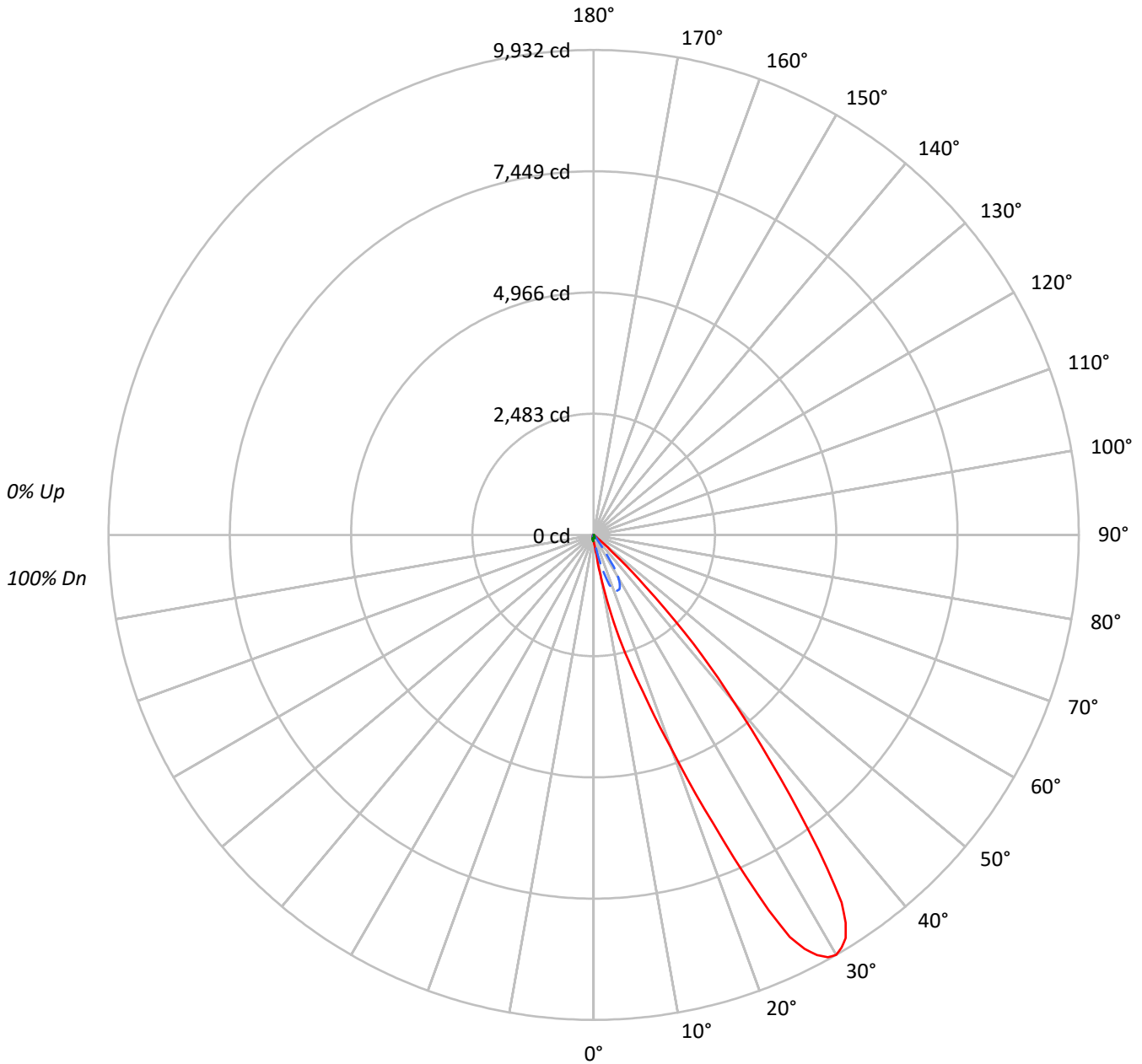
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P182687

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

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	106	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°	12758	12758	12758
5°	21238	12039	10269
10°	90589	10545	8922
15°	250742	8384	7903
20°	480938	5938	7072
25°	906792	3966	6232
30°	1110981	2651	5470
35°	986681	1774	4660
40°	562338	1201	3882
45°	205120	973	3247
50°	22577	708	2728
55°	3327	540	2263
60°	756	620	1841
65°	550	734	1261
70°	453	906	1105
75°	599	1198	898
80°	0	1785	893
85°	0	2668	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	16.6	1.1
10°-20°	165.5	10.8
20°-30°	543.6	35.6
30°-40°	596.1	39.0
40°-50°	186.2	12.2
50°-60°	10.2	0.7
60°-70°	4.1	0.3
70°-80°	3.1	0.2
80°-90°	2.0	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°	725.6	47.5
0°-40°	1321.8	86.5
0°-60°	1518.1	99.4
0°-90°	1527.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1527.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	132	132	132	132	132	
5°	218	175	124	110	106	41
15°	2500	803	84	75	79	785
25°	8483	1234	37	46	58	3782
35°	8343	243	15	26	39	4878
45°	1497	25	7	15	24	1375
55°	20	5	3	9	13	31
65°	2	2	3	6	6	2
75°	2	2	3	5	2	1
85°	0	2	2	2	1	0
90°	0	0	0	0	0	



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CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7
2.5°	162.4	164.0	164.8	160.8	161.6	160.0	161.6	158.5	153.0	154.5	149.8
5°	218.4	215.2	214.5	208.1	206.6	203.4	203.4	196.3	186.1	184.5	175.0
7.5°	386.3	369.8	355.6	334.3	313.8	298.0	291.7	266.5	238.9	228.6	206.6
10°	920.9	917.7	882.2	815.2	738.0	682.0	649.7	551.9	428.1	352.4	273.6
12.5°	1676.2	1660.4	1610.0	1487.0	1353.7	1270.1	1204.7	1007.6	823.9	676.5	484.9
15°	2500.1	2436.2	2362.1	2171.3	1984.5	1875.7	1782.6	1546.1	1261.5	1049.4	803.4
17.5°	3380.0	3408.3	3228.6	2899.8	2567.9	2397.6	2239.9	1876.4	1565.0	1344.3	1067.5
20°	4665.1	4605.2	4289.0	3744.2	3254.6	2970.0	2746.1	2221.8	1751.9	1476.7	1215.0
22.5°	6402.0	6211.2	5594.6	4673.0	3896.4	3501.4	3183.6	2477.2	1908.8	1544.5	1238.6
25°	8483.4	8306.8	7165.2	5566.2	4417.5	3905.8	3473.8	2639.6	1971.8	1555.6	1233.9
26°	9163.0	8900.5	7744.7	5884.0	4577.6	4008.3	3545.5	2671.2	1973.4	1546.9	1213.4
27°	9514.7	9308.9	8224.0	6141.8	4687.2	4073.0	3585.7	2679.1	1957.6	1527.2	1181.8
28°	9746.5	9554.1	8527.6	6310.5	4743.1	4098.2	3597.6	2661.7	1922.2	1492.5	1132.2
29°	9889.9	9687.3	8675.8	6387.0	4747.1	4087.2	3575.5	2616.0	1874.1	1450.7	1074.6
30°	9931.7	9712.5	8679.7	6355.5	4688.7	4028.0	3513.2	2541.9	1815.7	1397.9	1010.8
31°	9857.6	9631.3	8537.0	6212.0	4568.9	3912.9	3415.4	2444.1	1743.2	1341.9	912.2
32°	9734.6	9434.2	8238.2	5973.9	4404.9	3774.2	3293.2	2337.7	1665.9	1270.9	773.4
33°	9472.9	9110.2	7780.9	5675.0	4207.8	3614.9	3150.5	2219.4	1592.6	1148.7	574.8
34°	9079.4	8621.4	7220.4	5327.4	3984.7	3416.2	2986.5	2109.8	1516.1	987.1	393.4
35°	8343.1	7916.5	6601.4	4956.8	3744.2	3223.9	2806.0	1966.3	1412.1	791.6	242.8
36°	7519.2	7205.4	6001.5	4579.9	3498.2	3024.4	2619.9	1860.7	1258.3	582.6	164.8
37°	6677.1	6398.8	5435.4	4209.4	3251.4	2803.6	2430.7	1740.8	1075.4	388.7	132.5
38°	5875.3	5654.5	4897.7	3845.1	2995.2	2572.6	2232.0	1613.1	878.3	249.9	108.8
39°	5138.9	4973.4	4371.0	3492.7	2738.2	2346.3	2041.2	1452.3	670.2	178.2	90.7
40°	4446.7	4330.0	3863.3	3145.0	2482.7	2124.0	1868.6	1257.5	465.2	141.1	73.3
42.5°	3024.4	2995.2	2718.5	2263.6	1844.1	1634.4	1477.5	707.2	179.0	85.1	41.0
45°	1497.2	1517.7	1407.3	1294.6	1207.1	1143.2	931.1	294.9	99.3	46.5	25.2
47.5°	529.8	530.6	456.5	406.8	388.7	387.1	281.5	104.1	52.8	28.4	18.1
50°	149.8	161.6	152.2	155.3	121.4	103.3	84.4	50.5	26.8	18.1	11.8
51°	92.2	99.3	93.0	96.2	83.6	74.9	63.1	37.8	21.3	15.0	11.0
52°	59.1	63.1	59.9	60.7	56.0	48.9	42.6	27.6	17.3	12.6	9.5
53°	40.2	42.6	40.2	40.2	37.1	34.7	30.0	20.5	14.2	10.2	7.1
54°	27.6	28.4	28.4	28.4	26.0	24.4	21.3	15.8	11.8	9.5	6.3
55°	19.7	20.5	19.7	19.7	18.9	17.3	15.8	11.8	9.5	7.9	4.7
57.5°	8.7	8.7	8.7	9.5	8.7	8.7	7.9	7.1	6.3	4.7	3.2
60°	3.9	3.9	3.9	3.9	4.7	4.7	4.7	4.7	3.9	3.2	3.2
61°	3.2	3.2	3.2	3.2	3.2	3.9	3.9	3.9	3.2	3.2	2.4
62°	2.4	2.4	2.4	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4
63°	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	2.4	2.4	2.4
64°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
65°	2.4	1.6	1.6	1.6	1.6	2.4	2.4	2.4	2.4	2.4	2.4
66°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4



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CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

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	0.0	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	2.4
82.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	2.4
85°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	2.4
87.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	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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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7
2.5°	146.6	145.9	141.9	138.0	138.8	137.2	135.6	133.2	131.7	127.7	127.7
5°	167.1	163.2	154.5	146.6	145.9	142.7	138.0	133.2	129.3	123.8	122.2
7.5°	190.8	179.8	165.6	153.0	150.6	145.9	137.2	130.9	123.8	116.7	114.3
10°	224.7	198.7	174.2	155.3	150.6	143.5	132.5	123.8	115.9	107.2	104.1
12.5°	345.3	245.2	185.3	155.3	146.6	138.0	124.6	114.3	104.9	95.4	92.2
15°	575.5	391.8	234.9	155.3	139.6	129.3	112.7	102.5	92.2	83.6	80.4
17.5°	794.7	557.4	327.2	175.0	140.3	119.1	98.6	87.5	78.8	70.2	67.8
20°	921.7	649.7	387.9	194.7	138.8	107.2	84.4	72.5	63.9	57.6	55.2
22.5°	938.2	653.6	374.5	174.2	116.7	89.1	70.2	59.1	52.0	46.5	44.9
25°	894.1	577.1	299.6	123.8	86.7	72.5	55.2	47.3	41.8	37.1	36.3
26°	860.2	531.4	261.0	102.5	76.5	64.7	49.7	42.6	37.8	33.9	33.1
27°	812.1	482.5	223.1	85.1	67.8	58.3	44.2	38.6	34.7	30.7	30.7
28°	757.7	429.7	179.8	71.7	60.7	52.0	40.2	34.7	30.7	28.4	28.4
29°	692.2	353.2	131.7	62.3	53.6	45.7	35.5	30.7	27.6	26.0	26.0
30°	595.3	256.2	90.7	54.4	46.5	40.2	31.5	27.6	25.2	23.7	23.7
31°	465.2	157.7	71.0	47.3	41.0	35.5	28.4	24.4	22.9	21.3	22.1
32°	316.9	98.6	60.7	41.0	36.3	30.7	25.2	22.1	20.5	19.7	19.7
33°	180.5	82.0	52.8	35.5	30.7	26.8	22.1	19.7	18.9	18.1	18.1
34°	119.8	70.2	45.7	30.0	25.2	22.9	18.9	17.3	16.6	16.6	16.6
35°	100.9	60.7	37.1	25.2	22.1	19.7	16.6	15.8	15.0	15.0	15.8
36°	85.1	50.5	30.0	21.3	18.9	17.3	15.0	14.2	13.4	13.4	14.2
37°	71.7	40.2	25.2	18.1	15.8	15.0	13.4	12.6	12.6	12.6	13.4
38°	58.3	32.3	21.3	15.8	14.2	12.6	11.8	11.0	11.0	11.8	12.6
39°	45.7	26.0	17.3	13.4	11.8	11.0	10.2	10.2	10.2	10.2	11.0
40°	36.3	22.1	15.0	11.8	10.2	10.2	9.5	8.7	9.5	9.5	11.0
42.5°	22.9	15.8	11.0	8.7	7.9	7.9	7.1	7.1	7.1	7.9	8.7
45°	16.6	12.6	8.7	7.1	6.3	5.5	5.5	5.5	6.3	7.1	7.9
47.5°	12.6	8.7	6.3	4.7	3.9	3.9	3.9	3.9	4.7	5.5	6.3
50°	8.7	5.5	3.9	3.2	3.2	3.2	3.2	3.2	3.9	4.7	5.5
51°	7.1	4.7	3.9	3.2	3.2	2.4	2.4	3.2	3.9	3.9	4.7
52°	5.5	3.9	3.2	2.4	2.4	2.4	2.4	3.2	3.2	3.9	4.7
53°	4.7	3.9	3.2	2.4	2.4	2.4	2.4	2.4	3.2	3.9	4.7
54°	3.9	3.2	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.9	4.7
55°	3.2	3.2	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	3.9
57.5°	3.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.9
60°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.9
61°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.9
62°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.9
63°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	3.9
64°	2.4	2.4	2.4	2.4	3.2	3.2	2.4	2.4	3.2	3.2	3.9
65°	2.4	2.4	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2	3.9
66°	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2	3.9



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CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
72.5°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	3.2	3.2	3.2
75°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
77.5°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2
80°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	3.2	3.2
82.5°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	3.2
85°	2.4	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	3.2	3.2	3.2	3.2	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



TEST NUMBER: P182687

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7
2.5°	126.1	123.8	122.2	121.4	122.2	120.6	118.3	119.1	118.3	117.5	117.5
5°	119.8	115.9	114.3	113.5	113.5	112.7	109.6	110.4	109.6	108.8	108.8
7.5°	111.2	108.0	105.6	104.9	104.9	104.1	100.9	102.5	100.9	100.1	100.9
10°	100.9	97.8	97.0	95.4	95.4	94.6	92.2	93.0	92.2	92.2	92.2
12.5°	89.9	86.7	85.9	85.1	85.9	85.1	82.8	84.4	83.6	83.6	84.4
15°	78.1	75.7	75.7	74.9	75.7	74.9	74.1	74.9	74.9	74.9	76.5
17.5°	66.2	64.7	64.7	63.9	64.7	64.7	63.9	66.2	66.2	67.8	69.4
20°	54.4	52.8	53.6	53.6	55.2	55.2	55.2	57.6	58.3	59.9	62.3
22.5°	44.9	44.2	44.9	44.9	46.5	47.3	47.3	49.7	52.0	53.6	56.0
25°	36.3	36.3	37.8	37.8	38.6	40.2	41.0	44.2	45.7	47.3	49.7
26°	33.9	33.9	34.7	35.5	36.3	37.8	38.6	41.8	43.4	44.9	47.3
27°	30.7	30.7	32.3	33.1	33.9	35.5	37.1	39.4	41.0	43.4	44.9
28°	28.4	28.4	30.0	30.7	31.5	33.9	34.7	37.1	38.6	41.0	43.4
29°	26.0	26.8	28.4	28.4	30.0	31.5	32.3	35.5	37.1	38.6	41.0
30°	24.4	25.2	26.0	26.8	27.6	29.2	30.7	33.1	34.7	36.3	38.6
31°	22.9	23.7	24.4	25.2	26.0	27.6	29.2	31.5	33.1	34.7	37.1
32°	21.3	21.3	22.9	23.7	24.4	26.0	27.6	30.0	31.5	33.1	35.5
33°	19.7	20.5	21.3	22.1	22.9	24.4	26.0	27.6	29.2	31.5	33.9
34°	18.1	18.9	20.5	21.3	22.1	23.7	24.4	26.0	27.6	30.0	31.5
35°	16.6	18.1	18.9	19.7	20.5	22.1	22.9	25.2	26.0	28.4	30.0
36°	15.8	16.6	18.1	18.9	19.7	20.5	21.3	23.7	25.2	26.8	28.4
37°	14.2	15.8	16.6	17.3	18.1	19.7	20.5	22.1	23.7	25.2	26.8
38°	13.4	14.2	15.8	16.6	17.3	18.1	18.9	21.3	22.1	23.7	25.2
39°	12.6	13.4	15.0	15.8	15.8	17.3	18.1	19.7	20.5	22.1	24.4
40°	11.8	12.6	14.2	14.2	15.0	16.6	17.3	18.9	19.7	21.3	22.9
42.5°	10.2	11.0	11.8	12.6	13.4	14.2	15.0	16.6	17.3	18.1	19.7
45°	8.7	9.5	11.0	11.0	11.8	12.6	13.4	14.2	15.0	16.6	17.3
47.5°	7.1	8.7	9.5	10.2	10.2	11.0	11.8	12.6	13.4	14.2	15.0
50°	6.3	7.1	7.9	8.7	8.7	9.5	10.2	11.0	11.0	11.8	13.4
51°	6.3	7.1	7.9	7.9	8.7	9.5	9.5	10.2	11.0	11.0	11.8
52°	5.5	6.3	7.1	7.9	7.9	8.7	9.5	9.5	10.2	11.0	11.8
53°	5.5	6.3	7.1	7.1	7.9	8.7	8.7	9.5	9.5	10.2	11.0
54°	5.5	6.3	7.1	7.1	7.9	7.9	8.7	8.7	9.5	9.5	10.2
55°	4.7	5.5	6.3	7.1	7.1	7.9	7.9	8.7	8.7	9.5	9.5
57.5°	4.7	5.5	6.3	6.3	6.3	7.1	7.1	7.9	7.9	7.9	8.7
60°	4.7	5.5	5.5	6.3	6.3	7.1	7.1	7.1	7.1	7.9	7.9
61°	4.7	4.7	5.5	6.3	6.3	6.3	7.1	7.1	7.1	7.1	7.9
62°	4.7	4.7	5.5	5.5	6.3	6.3	6.3	7.1	7.1	7.1	7.1
63°	3.9	4.7	5.5	5.5	6.3	6.3	6.3	6.3	6.3	7.1	7.1
64°	3.9	4.7	5.5	5.5	5.5	6.3	6.3	6.3	6.3	6.3	6.3
65°	3.9	4.7	5.5	5.5	5.5	6.3	6.3	6.3	6.3	6.3	6.3
66°	3.9	4.7	5.5	5.5	5.5	6.3	6.3	6.3	6.3	6.3	6.3



TEST NUMBER: P182687

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.9	3.9	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
75°	3.9	3.9	3.9	4.7	4.7	4.7	4.7	4.7	4.7	3.9	3.9
77.5°	3.2	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.2
80°	3.2	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4
85°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.4	2.4	1.6
87.5°	2.4	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	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: P182687

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	131.7	131.7	131.7	131.7	131.7	131.7	131.7	131.7
2.5°	118.3	115.9	115.1	115.1	115.9	115.1	115.9	115.1
5°	108.8	106.4	106.4	105.6	106.4	105.6	106.4	105.6
7.5°	100.9	98.6	98.6	98.6	98.6	98.6	99.3	98.6
10°	93.0	90.7	90.7	89.9	90.7	90.7	91.5	90.7
12.5°	85.1	83.6	83.6	82.8	84.4	83.6	85.1	84.4
15°	78.1	76.5	76.5	77.3	78.1	78.1	78.8	78.8
17.5°	71.0	71.0	71.0	71.7	72.5	73.3	74.1	73.3
20°	64.7	64.7	65.4	66.2	67.0	67.8	68.6	68.6
22.5°	58.3	58.3	59.1	60.7	62.3	63.1	63.9	63.9
25°	52.0	52.8	53.6	54.4	56.8	57.6	58.3	58.3
26°	49.7	50.5	52.0	52.8	54.4	55.2	56.8	56.8
27°	48.1	48.9	49.7	50.5	52.8	53.6	55.2	54.4
28°	45.7	46.5	47.3	48.9	50.5	52.0	52.8	52.8
29°	43.4	44.9	45.7	46.5	48.9	49.7	50.5	50.5
30°	41.8	42.6	43.4	44.9	46.5	48.1	48.9	48.9
31°	39.4	41.0	41.8	42.6	44.9	45.7	47.3	47.3
32°	37.8	38.6	39.4	41.0	42.6	44.2	44.9	44.9
33°	35.5	37.1	37.8	38.6	41.0	42.6	43.4	42.6
34°	33.9	35.5	35.5	37.1	38.6	40.2	41.0	41.0
35°	32.3	33.1	33.9	35.5	37.1	38.6	39.4	39.4
36°	30.7	31.5	32.3	33.9	35.5	37.1	37.8	37.8
37°	29.2	30.0	30.7	31.5	33.9	35.5	36.3	36.3
38°	27.6	28.4	29.2	30.7	32.3	33.1	34.7	34.7
39°	26.0	26.8	27.6	29.2	30.7	31.5	33.1	32.3
40°	24.4	26.0	26.0	27.6	29.2	30.0	31.5	30.7
42.5°	21.3	22.1	22.9	23.7	25.2	26.8	27.6	27.6
45°	18.9	19.7	20.5	21.3	22.1	22.9	24.4	23.7
47.5°	15.8	16.6	17.3	18.1	18.9	19.7	20.5	20.5
50°	14.2	14.2	15.0	15.0	16.6	17.3	18.1	18.1
51°	12.6	13.4	14.2	14.2	15.8	15.8	16.6	16.6
52°	12.6	12.6	13.4	13.4	14.2	15.0	15.8	15.8
53°	11.8	11.8	12.6	12.6	13.4	14.2	15.0	15.0
54°	11.0	11.0	11.8	11.8	12.6	13.4	14.2	14.2
55°	10.2	10.2	11.0	11.0	11.8	12.6	13.4	13.4
57.5°	8.7	9.5	9.5	10.2	10.2	11.0	11.0	11.8
60°	7.9	8.7	8.7	8.7	9.5	9.5	9.5	9.5
61°	7.9	7.9	7.9	8.7	8.7	7.9	8.7	7.9
62°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
63°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
64°	7.1	6.3	6.3	6.3	6.3	6.3	6.3	6.3
65°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	5.5
66°	6.3	6.3	5.5	6.3	5.5	5.5	5.5	5.5



TEST NUMBER: P182687

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQA1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
72.5°	3.9	3.9	3.9	3.9	3.9	3.2	3.2	3.2
75°	3.9	3.9	3.9	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	1.6	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	3.2	3.2	3.2	3.2	3.2	3.2	2.4	3.2	3.2	3.9
70°	2.4	3.2	3.2	3.2	3.2	3.2	3.2	2.4	3.2	3.2	3.2





67.5°	3.9	4.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
70°	3.9	4.7	4.7	4.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5





67.5°	5.5	5.5	5.5	5.5	5.5	4.7	4.7	4.7
70°	4.7	4.7	4.7	4.7	4.7	3.9	3.9	3.9



(END OF REPORT)