

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: P182783

Luminaire Tested: **LDSQA4A13830D010TE LAR15SP 4LSQAL1H 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P182783
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: LDSQA4A13830D010TE LAR15SP 4LSQAL1H 30°
Description: PORTFOLIO 4" SQUARE LENSED ADJUSTABLE, 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: 1420.9 lumens
Efficiency: N/A
Efficacy: 63.8 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

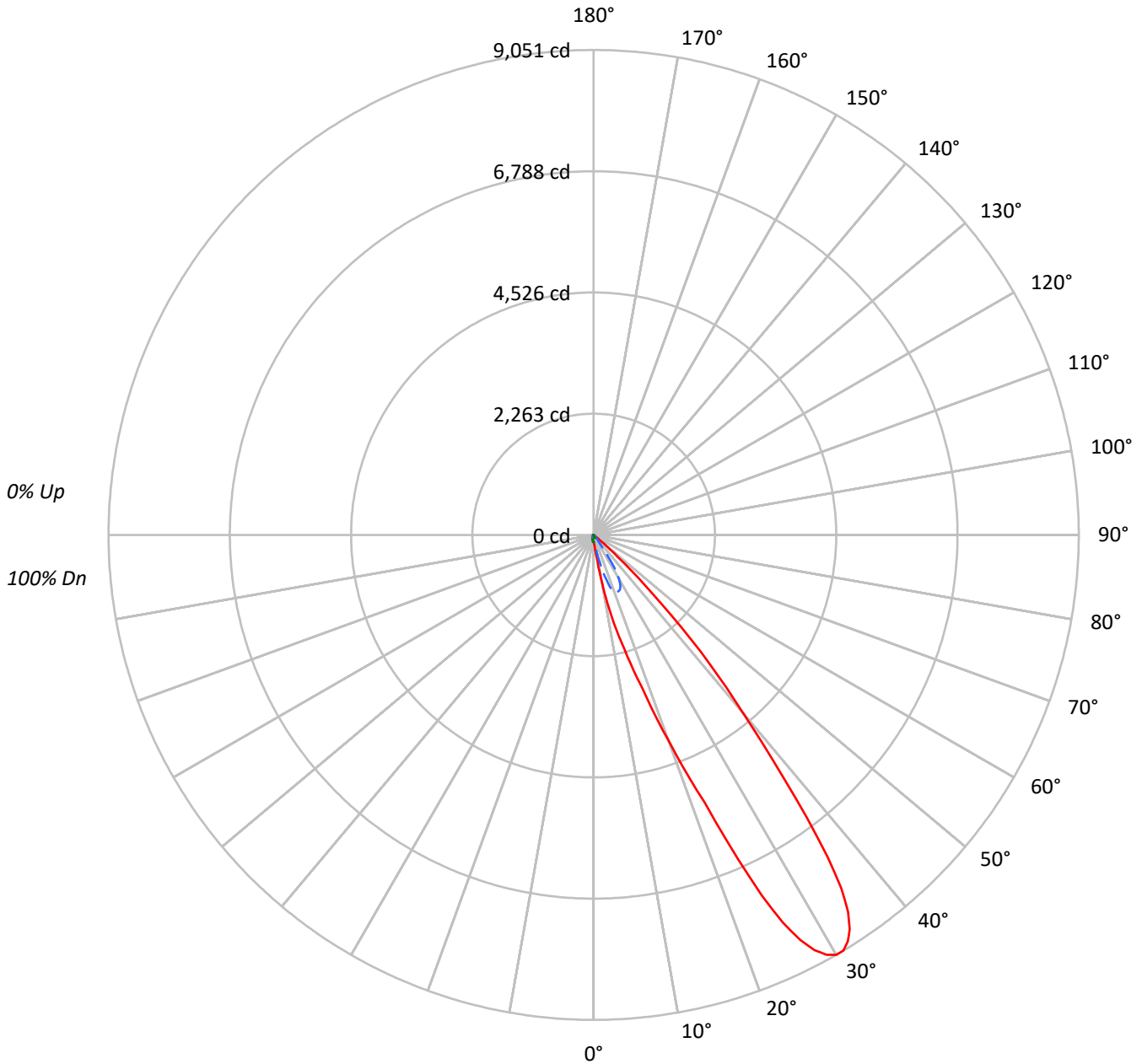
Input Watts (W): 22.27
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	71	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	57	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°	12991	12991	12991
5°	20626	12350	10658
10°	90382	10939	9080
15°	220835	8856	7913
20°	421319	6588	7237
25°	794013	4725	6317
30°	1012419	3356	5560
35°	952361	2058	4754
40°	546341	1391	4085
45°	210902	973	3452
50°	28047	708	2848
55°	4256	659	2398
60°	1221	620	1996
65°	734	734	1444
70°	453	906	1105
75°	599	898	898
80°	0	1339	893
85°	0	2668	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	16.7	1.2
10°-20°	152.3	10.7
20°-30°	485.6	34.2
30°-40°	562.7	39.6
40°-50°	183.0	12.9
50°-60°	11.6	0.8
60°-70°	4.2	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°	654.6	46.1
0°-40°	1217.3	85.7
0°-60°	1411.9	99.4
0°-90°	1420.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1420.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	134	134	134	134	134	
5°	212	177	127	111	110	41
15°	2202	793	88	76	79	698
25°	7428	1141	44	46	59	3338
35°	8053	272	17	27	40	4633
45°	1539	33	7	16	25	1375
55°	25	6	4	9	14	39
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°	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1
2.5°	163.3	164.8	164.8	162.5	162.5	160.1	158.5	157.7	156.9	154.6	153.8
5°	212.1	213.7	214.5	208.2	205.8	201.1	197.2	193.2	188.5	183.0	177.4
7.5°	409.3	376.2	381.7	334.4	325.7	305.2	288.6	262.6	243.7	224.8	209.8
10°	918.8	887.2	881.7	812.3	743.7	692.4	637.2	541.8	455.1	362.8	287.9
12.5°	1574.1	1527.6	1501.6	1365.2	1284.7	1209.0	1124.6	975.6	809.2	667.2	518.9
15°	2201.9	2198.0	2104.9	1952.7	1799.7	1706.6	1597.8	1413.3	1216.1	1000.0	793.4
17.5°	2959.8	2990.6	2831.3	2533.9	2291.8	2140.4	1990.6	1701.9	1455.8	1246.1	1019.7
20°	4086.8	4004.8	3726.4	3261.1	2851.8	2623.8	2391.2	1966.1	1613.6	1359.6	1130.1
22.5°	5410.9	5347.8	4827.3	4051.3	3402.2	3082.0	2761.9	2209.0	1750.0	1421.1	1151.4
25°	7428.3	7168.8	6158.6	4899.1	3907.0	3453.5	3042.6	2366.7	1811.5	1429.0	1141.2
26°	8047.4	7865.2	6699.6	5235.8	4062.3	3556.0	3112.8	2399.1	1816.3	1421.9	1121.5
27°	8486.7	8347.9	7149.9	5483.5	4175.1	3627.0	3158.5	2412.5	1805.2	1407.0	1094.6
28°	8776.1	8664.9	7489.8	5662.5	4243.7	3664.9	3180.6	2409.3	1783.1	1380.9	1056.8
29°	8959.9	8852.6	7688.6	5764.2	4268.2	3671.2	3175.1	2385.7	1747.6	1342.3	1002.4
30°	9050.6	8933.8	7755.6	5775.3	4241.4	3634.9	3133.3	2333.6	1698.8	1295.8	942.4
31°	9051.3	8922.0	7699.6	5690.1	4161.7	3557.6	3059.2	2246.9	1634.9	1240.5	862.0
32°	8946.4	8813.2	7512.7	5517.4	4037.1	3460.6	2959.8	2158.5	1567.8	1179.0	746.1
33°	8770.6	8612.8	7188.5	5277.6	3877.8	3328.1	2840.7	2060.0	1500.8	1080.5	593.9
34°	8486.7	8271.4	6735.9	4986.6	3685.4	3173.5	2704.3	1953.5	1433.0	943.2	424.3
35°	8052.9	7749.3	6212.2	4664.9	3479.5	3006.3	2550.5	1842.3	1350.2	773.7	272.1
36°	7425.1	7033.2	5667.2	4332.1	3267.4	2830.5	2394.3	1735.0	1219.3	586.8	178.2
37°	6605.7	6260.3	5145.9	3996.9	3047.3	2642.8	2251.6	1627.0	1058.4	410.1	145.1
38°	5764.2	5509.5	4636.5	3664.1	2819.4	2440.1	2078.1	1514.2	882.5	269.7	121.5
39°	5005.6	4835.2	4138.0	3334.4	2584.4	2262.6	1904.6	1370.7	694.8	191.6	102.5
40°	4320.2	4202.7	3656.2	2998.4	2349.4	2048.1	1741.3	1194.8	500.8	153.0	86.0
42.5°	2946.4	2888.0	2557.6	2157.7	1738.2	1565.5	1371.5	718.5	198.7	97.0	52.1
45°	1539.4	1514.2	1394.3	1263.4	1133.3	1088.3	881.7	322.6	112.0	56.8	33.1
47.5°	599.4	601.0	496.8	424.3	403.0	374.6	283.9	115.9	63.1	34.7	22.1
50°	186.1	200.3	184.5	174.3	133.3	111.2	92.3	57.6	33.9	21.3	14.2
51°	114.4	121.5	114.4	114.4	93.8	82.0	70.2	44.2	26.8	17.4	12.6
52°	74.1	78.1	74.1	69.4	64.7	58.4	50.5	33.1	21.3	14.2	10.3
53°	50.5	52.8	50.5	47.3	43.4	40.2	35.5	24.4	17.4	11.8	8.7
54°	35.5	37.1	35.5	33.1	30.8	28.4	26.0	18.9	14.2	10.3	7.9
55°	25.2	26.8	26.0	24.4	22.1	21.3	19.7	15.0	11.8	8.7	6.3
57.5°	11.8	12.6	12.6	11.8	11.8	11.0	10.3	9.5	7.1	5.5	4.7
60°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	4.7	3.9	3.9
61°	4.7	4.7	4.7	4.7	4.7	4.7	5.5	4.7	3.9	3.9	3.2
62°	3.9	3.9	3.9	3.9	3.9	4.7	4.7	3.9	3.9	3.2	3.2
63°	3.2	3.2	3.2	3.2	3.9	3.9	3.9	3.9	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°	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1
2.5°	149.1	145.1	143.5	142.0	141.2	139.6	137.2	134.9	134.1	130.9	127.8
5°	168.0	160.9	155.4	149.8	148.3	144.3	139.6	134.1	131.7	127.0	123.0
7.5°	190.1	175.9	165.6	156.2	152.2	147.5	138.8	131.7	127.0	119.9	115.1
10°	227.1	194.0	174.3	157.7	151.4	145.1	134.1	124.6	118.3	111.2	105.7
12.5°	359.6	251.6	189.3	158.5	149.8	140.4	127.0	115.9	108.0	100.2	95.4
15°	567.0	383.3	245.3	166.4	146.7	132.5	116.7	104.1	96.2	88.3	83.6
17.5°	757.1	515.8	320.2	185.3	148.3	125.4	104.1	91.5	82.8	75.7	72.6
20°	848.6	578.1	356.5	189.3	138.8	112.0	89.9	78.1	70.2	63.9	60.7
22.5°	857.3	574.1	334.4	161.7	115.1	94.6	75.7	64.7	58.4	53.6	50.5
25°	816.3	509.5	268.1	119.1	89.9	78.9	62.3	52.8	48.1	44.2	41.8
26°	784.7	472.4	235.8	103.3	82.0	71.8	56.8	48.9	44.2	41.0	38.6
27°	741.3	429.0	198.0	89.1	75.7	64.7	52.1	45.0	41.0	38.6	36.3
28°	689.3	386.4	164.0	78.9	68.6	58.4	48.1	41.0	37.9	35.5	33.1
29°	633.3	330.4	128.5	71.0	61.5	52.8	43.4	37.1	33.9	32.3	30.8
30°	554.4	257.1	98.6	63.9	55.2	47.3	39.4	33.9	31.5	30.0	28.4
31°	443.2	176.7	79.7	56.8	49.7	42.6	35.5	30.8	28.4	26.8	26.0
32°	317.8	108.8	69.4	50.5	44.2	38.6	30.8	27.6	25.2	24.4	23.7
33°	195.6	89.1	61.5	45.0	38.6	33.9	27.6	24.4	22.9	22.1	21.3
34°	128.5	77.3	54.4	38.6	33.9	29.2	23.7	21.3	20.5	19.7	19.7
35°	108.8	68.6	47.3	33.1	28.4	25.2	20.5	18.9	18.1	17.4	18.1
36°	93.8	59.9	39.4	28.4	24.4	21.3	18.1	16.6	15.8	15.8	16.6
37°	82.8	50.5	33.1	23.7	21.3	18.9	15.8	15.0	14.2	14.2	15.0
38°	70.2	41.0	27.6	20.5	18.1	15.8	14.2	13.4	13.4	13.4	14.2
39°	57.6	34.7	23.7	17.4	15.8	14.2	12.6	11.8	11.8	12.6	12.6
40°	47.3	29.2	19.7	15.0	13.4	12.6	11.0	11.0	11.0	11.0	11.8
42.5°	30.8	19.7	14.2	11.0	10.3	9.5	8.7	8.7	8.7	8.7	9.5
45°	20.5	14.2	11.0	8.7	7.9	7.1	7.1	6.3	7.1	7.1	7.9
47.5°	14.2	10.3	7.9	6.3	5.5	4.7	4.7	4.7	5.5	6.3	6.3
50°	10.3	7.1	5.5	3.9	3.9	3.9	3.9	3.9	4.7	4.7	5.5
51°	8.7	6.3	4.7	3.9	3.9	3.2	3.2	3.2	3.9	4.7	5.5
52°	7.1	5.5	3.9	3.2	3.2	3.2	3.2	3.2	3.9	3.9	4.7
53°	6.3	4.7	3.9	3.2	3.2	3.2	3.2	3.2	3.9	3.9	4.7
54°	5.5	3.9	3.2	3.2	3.2	2.4	2.4	3.2	3.2	3.9	4.7
55°	4.7	3.9	3.2	3.2	2.4	2.4	2.4	2.4	3.2	3.9	3.9
57.5°	3.9	3.2	3.2	2.4	2.4	2.4	2.4	2.4	3.2	3.2	3.9
60°	3.2	3.2	3.2	2.4	2.4	2.4	2.4	2.4	3.2	3.2	3.9
61°	3.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	3.9
62°	3.2	2.4	3.2	3.2	3.2	2.4	2.4	2.4	3.2	3.2	3.9
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	3.9
65°	2.4	3.2	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	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: LDSQA4A13830D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1
2.5°	126.2	126.2	125.4	123.8	125.4	123.8	122.2	121.5	120.7	119.9	118.3
5°	119.9	119.1	117.5	116.7	116.7	115.1	113.6	112.0	111.2	110.4	108.8
7.5°	112.0	111.2	108.8	108.0	108.0	106.5	104.1	103.3	102.5	101.7	100.2
10°	102.5	101.7	99.4	98.6	98.6	97.0	95.4	93.8	93.1	92.3	90.7
12.5°	91.5	90.7	89.1	88.3	88.3	86.8	85.2	84.4	84.4	83.6	82.8
15°	80.4	79.7	78.1	78.1	78.1	76.5	75.7	74.9	75.7	75.7	74.9
17.5°	69.4	68.6	67.0	67.0	67.0	67.0	66.2	66.2	67.0	67.8	67.8
20°	58.4	57.6	57.6	56.8	57.6	58.4	57.6	58.4	59.9	60.7	61.5
22.5°	48.1	48.1	48.1	48.1	48.9	49.7	49.7	51.3	52.8	53.6	55.2
25°	40.2	40.2	41.0	41.0	41.8	42.6	43.4	44.2	46.5	48.1	48.9
26°	37.1	37.9	37.9	38.6	39.4	40.2	41.0	41.8	44.2	45.7	46.5
27°	34.7	34.7	35.5	36.3	37.1	37.9	38.6	40.2	41.8	43.4	45.0
28°	32.3	32.3	33.1	33.9	34.7	35.5	36.3	37.9	39.4	41.8	42.6
29°	30.0	30.8	30.8	31.5	32.3	33.1	34.7	35.5	37.9	39.4	41.0
30°	27.6	28.4	29.2	29.2	30.0	30.8	32.3	33.9	35.5	37.9	38.6
31°	26.0	26.8	26.8	27.6	28.4	29.2	30.8	32.3	33.9	35.5	37.1
32°	23.7	25.2	25.2	25.2	26.0	27.6	29.2	30.0	32.3	33.9	34.7
33°	22.1	22.9	23.7	23.7	24.4	26.0	27.6	28.4	30.8	32.3	33.1
34°	20.5	21.3	22.1	22.1	22.9	24.4	26.0	26.8	29.2	30.0	31.5
35°	18.9	19.7	20.5	20.5	21.3	22.9	24.4	25.2	26.8	28.4	30.0
36°	17.4	18.1	18.9	19.7	20.5	22.1	22.9	24.4	25.2	26.8	28.4
37°	15.8	16.6	18.1	18.1	19.7	20.5	22.1	22.9	24.4	25.2	26.8
38°	14.2	15.8	16.6	17.4	18.1	19.7	20.5	21.3	22.9	24.4	25.2
39°	13.4	15.0	15.8	16.6	17.4	18.1	18.9	20.5	21.3	22.9	23.7
40°	12.6	13.4	15.0	15.0	16.6	17.4	18.1	18.9	20.5	21.3	22.9
42.5°	10.3	11.8	12.6	13.4	14.2	15.0	15.8	16.6	17.4	18.9	19.7
45°	8.7	10.3	11.0	11.0	11.8	12.6	13.4	14.2	15.8	16.6	17.4
47.5°	7.1	8.7	9.5	10.3	10.3	11.0	11.8	12.6	13.4	14.2	15.0
50°	6.3	7.1	7.9	8.7	9.5	9.5	10.3	11.0	11.8	12.6	12.6
51°	6.3	7.1	7.9	7.9	8.7	9.5	10.3	10.3	11.0	11.8	11.8
52°	5.5	6.3	7.1	7.9	8.7	8.7	9.5	10.3	10.3	11.0	11.8
53°	5.5	6.3	7.1	7.1	7.9	8.7	8.7	9.5	10.3	10.3	11.0
54°	4.7	6.3	7.1	7.1	7.9	7.9	8.7	9.5	9.5	9.5	10.3
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	7.1	7.1	7.9	7.9	7.9	7.9	8.7
60°	3.9	4.7	5.5	6.3	6.3	7.1	7.1	7.1	7.1	7.1	7.9
61°	3.9	4.7	5.5	5.5	6.3	6.3	7.1	7.1	7.1	7.1	7.1
62°	3.9	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	6.3	7.1
64°	3.9	4.7	5.5	5.5	6.3	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	5.5	6.3	6.3	6.3	6.3	5.5



TEST NUMBER: P182783

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
72.5°	3.2	3.9	3.9	4.7	4.7	4.7	4.7	4.7	4.7	4.7	3.9
75°	3.2	3.9	3.9	3.9	4.7	4.7	4.7	3.9	3.9	3.9	3.9
77.5°	3.2	3.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.2	3.2
80°	3.2	3.2	3.2	3.9	3.9	3.9	3.9	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: P182783

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQAL1H 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	134.1	134.1	134.1	134.1	134.1	134.1	134.1	134.1
2.5°	119.9	120.7	119.9	119.9	118.3	119.1	117.5	119.9
5°	109.6	110.4	109.6	109.6	108.0	108.0	107.3	109.6
7.5°	100.9	101.7	100.2	100.2	98.6	99.4	98.6	100.2
10°	92.3	92.3	92.3	91.5	90.7	91.5	90.7	92.3
12.5°	83.6	84.4	84.4	84.4	83.6	83.6	82.8	85.2
15°	76.5	77.3	78.1	78.1	77.3	78.1	77.3	78.9
17.5°	70.2	71.8	71.8	72.6	72.6	73.3	73.3	74.9
20°	63.9	66.2	66.2	67.0	67.0	68.6	68.6	70.2
22.5°	57.6	59.9	60.7	60.7	61.5	63.1	63.1	64.7
25°	52.1	54.4	55.2	55.2	56.0	57.6	57.6	59.1
26°	49.7	52.1	52.8	53.6	54.4	56.0	56.0	57.6
27°	47.3	49.7	50.5	51.3	52.1	53.6	53.6	55.2
28°	45.7	48.1	48.9	49.7	50.5	52.1	52.1	52.8
29°	43.4	45.7	46.5	47.3	48.1	49.7	49.7	51.3
30°	41.8	43.4	44.2	45.0	45.7	48.1	48.1	49.7
31°	39.4	41.8	42.6	43.4	44.2	45.7	45.7	48.1
32°	37.9	39.4	40.2	41.0	42.6	43.4	44.2	45.7
33°	35.5	37.9	38.6	39.4	40.2	41.8	42.6	44.2
34°	33.9	35.5	37.1	37.9	38.6	40.2	41.0	42.6
35°	32.3	33.9	34.7	35.5	37.1	38.6	38.6	40.2
36°	30.8	32.3	33.1	33.9	35.5	37.1	37.1	38.6
37°	29.2	30.8	31.5	32.3	33.9	35.5	35.5	37.1
38°	27.6	29.2	30.0	30.8	32.3	33.9	34.7	36.3
39°	26.0	28.4	29.2	30.0	30.8	32.3	33.1	33.9
40°	25.2	26.8	27.6	28.4	29.2	30.8	31.5	32.3
42.5°	21.3	23.7	24.4	25.2	26.0	26.8	27.6	28.4
45°	18.9	20.5	20.5	21.3	22.1	23.7	23.7	25.2
47.5°	16.6	17.4	18.1	18.1	18.9	20.5	20.5	21.3
50°	14.2	15.0	15.8	15.8	16.6	17.4	18.1	18.9
51°	13.4	14.2	14.2	15.0	15.8	16.6	17.4	18.1
52°	12.6	13.4	13.4	14.2	15.0	15.8	15.8	16.6
53°	11.8	12.6	12.6	13.4	13.4	15.0	15.0	15.8
54°	11.0	11.8	11.8	12.6	12.6	14.2	14.2	15.0
55°	10.3	11.0	11.8	11.8	11.8	12.6	13.4	14.2
57.5°	9.5	10.3	10.3	10.3	11.0	11.0	11.8	11.8
60°	7.9	8.7	8.7	8.7	9.5	9.5	9.5	10.3
61°	7.9	7.9	8.7	8.7	7.9	7.9	7.9	8.7
62°	7.1	7.9	7.9	7.1	7.1	7.1	7.1	7.9
63°	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
64°	6.3	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	5.5	6.3
66°	5.5	6.3	6.3	5.5	5.5	5.5	5.5	5.5



TEST NUMBER: P182783

CATALOG NUMBER: LDSQA4A13830D010TE LAR15SP 4LSQAL1H 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	3.2	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°	3.9	4.7	4.7	4.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5
70°	3.9	3.9	4.7	4.7	4.7	5.5	5.5	4.7	4.7	4.7	4.7





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



(END OF REPORT)