

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: P212717

Luminaire Tested: **LD4B15D010 EU4B10209730 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212717
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29201)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B15D010 EU4B10209730 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 97CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1012.7 lumens
Efficiency: N/A
Efficacy: 70.4 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

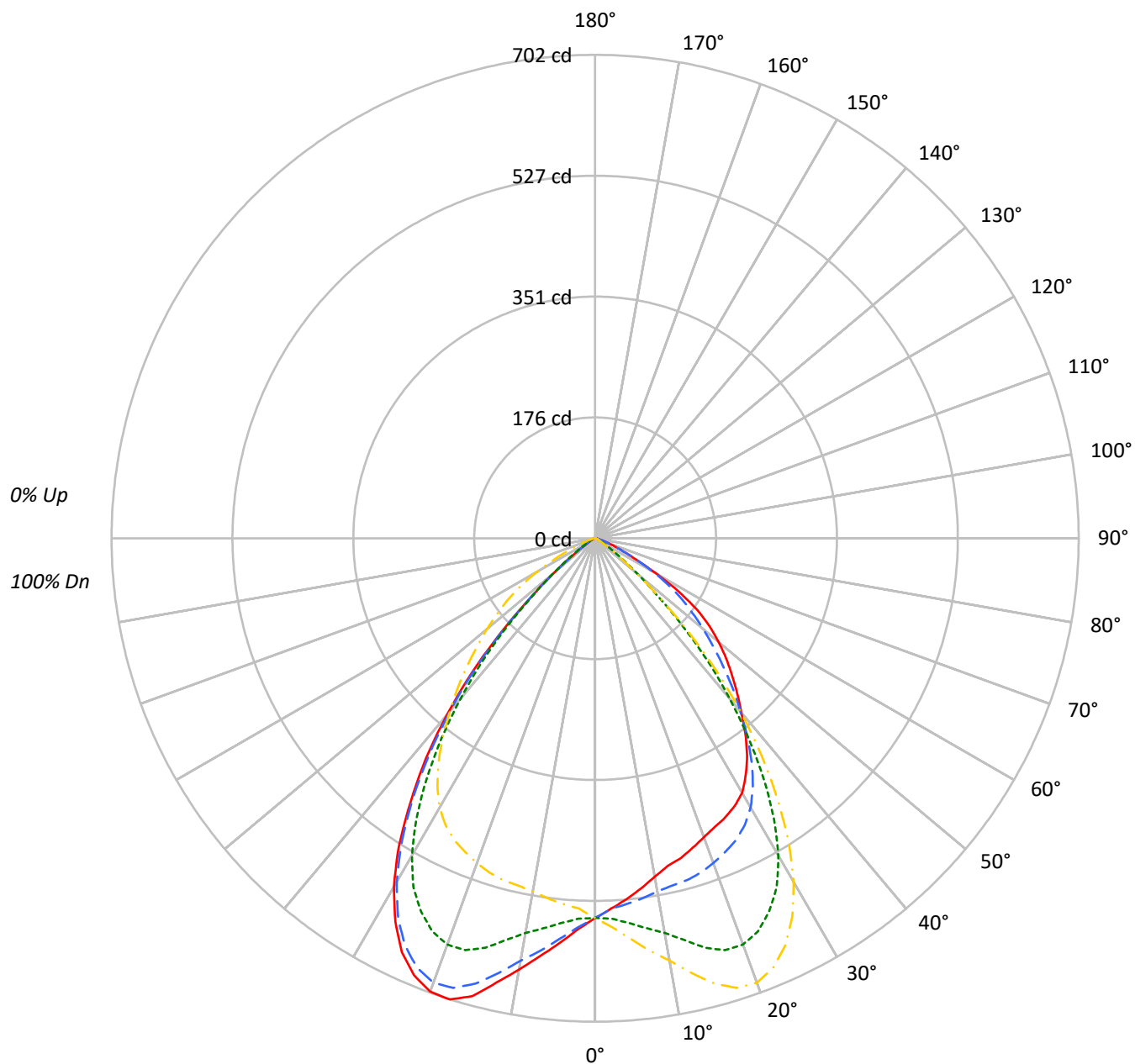
Input Watts (W): 14.39
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	110	107	104	102	103	100	99		99	97	96		95
2	105	99	94	90	103	97	93	89	94	90	87		91	88	85		88
3	98	90	84	80	96	89	83	79	86	81	78		84	80	76		81
4	92	83	76	71	90	81	75	70	79	74	69		77	72	69		75
5	86	76	69	63	84	75	68	63	73	67	62		71	66	62		69
6	80	70	62	57	79	69	62	57	67	61	56		66	60	56		64
7	75	64	57	52	74	63	57	52	62	56	51		61	55	51		59
8	71	59	52	47	69	59	52	47	57	51	47		56	51	47		55
9	66	55	48	43	65	54	48	43	53	47	43		52	47	43		52
10	63	51	44	40	62	51	44	40	50	44	40		49	43	39		48

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	68000	68000	68000	68000
5°	65103	69436	73040	69436
10°	62486	72882	79633	72882
15°	61384	78585	87881	78585
20°	60604	82406	91962	82406
25°	60863	81372	90300	81372
30°	60788	75729	83192	75729
35°	57897	64266	70289	64266
40°	53119	48901	53940	48901
45°	49034	31120	33544	31120
50°	44864	15102	14680	15102
55°	38837	6580	4688	6580
60°	25163	3232	2146	3232
65°	13192	2131	1693	2131
70°	7105	1587	1298	1587
75°	3813	1382	1048	1382
80°	2557	1065	497	1065
85°	2123	991	0	991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.7	5.3
10°-20°	168.1	16.6
20°-30°	261.4	25.8
30°-40°	264.0	26.1
40°-50°	167.2	16.5
50°-60°	70.2	6.9
60°-70°	22.2	2.2
70°-80°	5.1	0.5
80°-90°	0.7	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°	483.3	47.7
0°-40°	747.3	73.8
0°-60°	984.7	97.2
0°-90°	1012.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1012.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	551	551	551	551	551	
5°	526	561	590	561	526	49
15°	481	615	688	615	481	136
25°	447	598	664	598	447	206
35°	384	427	467	427	384	239
45°	281	178	192	178	281	217
55°	181	31	22	31	181	156
65°	45	7	6	7	45	50
75°	8	3	2	3	8	10
85°	2	1	0	1	2	1
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°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	538.2	533.1	537.5	538.9	538.9	538.2	539.7	538.2	536.0	544.8	538.2
5°	525.8	522.2	525.8	527.3	528.0	528.7	530.2	530.2	529.5	537.5	533.1
7.5°	512.7	510.5	513.5	515.6	518.5	517.8	520.0	520.7	522.2	531.7	527.3
10°	498.9	496.7	500.3	501.8	505.4	506.2	507.6	509.8	512.7	522.2	520.7
12.5°	487.2	486.5	488.7	491.6	495.2	496.0	497.4	501.1	505.4	515.6	516.4
15°	480.7	479.9	482.1	485.0	488.0	489.4	490.9	496.0	500.3	511.3	514.2
17.5°	471.2	471.2	473.4	476.3	479.9	481.4	483.6	488.7	494.5	505.4	509.1
20°	461.7	462.5	463.9	466.8	470.5	471.9	474.1	479.2	485.8	496.7	501.8
22.5°	453.7	455.9	456.6	458.8	462.5	464.7	465.4	471.2	477.0	486.5	493.1
25°	447.2	450.1	450.1	451.5	455.9	456.6	457.4	463.2	468.3	477.0	483.6
27.5°	438.4	441.3	441.3	443.5	446.4	447.9	447.9	453.0	458.1	464.7	469.8
30°	426.8	429.0	429.0	429.7	432.6	434.1	433.3	438.4	442.1	446.4	451.5
32.5°	407.1	410.8	409.3	411.5	412.9	414.4	412.9	417.3	420.2	424.6	426.1
35°	384.5	387.5	385.3	386.7	389.6	389.6	388.9	391.8	393.3	395.5	396.2
37.5°	358.3	360.5	359.1	359.8	361.2	362.0	360.5	363.4	363.4	364.1	362.7
40°	329.9	333.6	331.4	331.4	332.8	333.6	331.4	332.8	334.3	330.6	327.7
42.5°	305.2	308.8	306.6	306.6	306.6	307.3	304.4	305.2	305.2	300.1	295.7
45°	281.1	284.0	281.9	279.7	280.4	281.1	278.2	277.5	275.3	269.5	262.9
47.5°	257.8	260.7	257.8	256.4	256.4	256.4	252.7	250.5	247.6	239.6	231.6
50°	233.8	236.7	234.5	233.1	231.6	231.6	228.7	225.8	221.4	213.4	204.7
52.5°	209.0	211.2	209.0	207.6	206.1	206.1	202.5	200.3	195.2	187.2	177.7
55°	180.6	182.1	179.9	178.4	177.7	177.7	174.8	172.6	168.2	161.7	152.9
57.5°	142.7	145.7	142.0	143.5	143.5	142.7	140.6	139.8	138.4	132.6	126.0
60°	102.0	102.0	101.2	104.1	103.4	104.9	103.4	104.1	104.9	100.5	96.1
62.5°	67.0	69.2	67.7	69.2	70.6	70.6	69.9	71.4	72.8	70.6	68.5
65°	45.2	45.2	45.2	45.9	45.9	46.6	45.9	46.6	47.3	46.6	45.2
67.5°	29.9	30.6	29.9	30.6	29.9	30.6	30.6	30.6	31.3	30.6	29.9
70°	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	20.4	19.7	18.9
72.5°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
75°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
77.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
80°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.9	3.6	2.9	2.9
82.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.7	1.5	0.7	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	541.9	539.7	550.6	541.1	546.2	545.5	546.2	550.6	550.6	552.8	552.1
5°	538.9	536.8	549.1	541.9	547.7	547.7	549.9	556.4	556.4	560.8	561.5
7.5°	534.6	535.3	548.4	544.0	550.6	551.3	555.0	563.0	565.2	571.0	573.9
10°	529.5	532.4	546.2	544.8	553.5	554.2	561.5	571.0	573.9	581.9	587.0
12.5°	527.3	532.4	548.4	549.9	558.6	562.2	570.3	582.6	587.7	597.2	604.5
15°	526.6	533.8	551.3	556.4	566.6	571.7	582.6	597.2	603.0	615.4	624.2
17.5°	522.9	532.4	551.3	559.3	570.3	575.4	589.2	605.9	613.2	627.1	637.3
20°	516.4	526.6	545.5	555.7	567.3	574.6	588.5	605.9	613.2	627.8	639.4
22.5°	507.6	517.8	536.0	547.7	557.9	565.9	580.5	597.2	603.8	617.6	629.3
25°	496.7	506.9	522.2	533.8	543.3	550.6	563.0	580.5	584.8	597.9	610.3
27.5°	481.4	490.9	502.5	513.5	522.2	528.0	538.9	554.2	557.9	571.0	581.2
30°	461.0	466.8	477.0	484.3	490.9	496.7	504.7	518.5	520.0	531.7	541.1
32.5°	433.3	436.3	443.5	447.2	453.0	455.2	461.7	473.4	471.9	482.9	490.9
35°	399.8	401.3	401.3	405.7	407.1	407.8	412.9	419.5	417.3	426.8	432.6
37.5°	363.4	362.7	358.3	358.3	359.1	356.9	359.1	362.0	359.1	366.3	371.4
40°	326.3	321.9	313.9	309.5	307.3	306.6	302.2	305.9	298.6	303.7	307.3
42.5°	290.6	283.3	270.9	262.2	258.5	254.9	247.6	247.6	238.2	241.8	242.5
45°	254.2	241.8	225.0	217.0	207.6	201.7	192.3	182.8	176.2	178.4	176.2
47.5°	220.7	206.1	186.4	172.6	161.7	153.7	140.6	129.6	123.1	120.2	117.3
50°	191.5	177.0	154.4	136.9	126.0	116.5	103.4	91.0	83.0	78.7	76.5
52.5°	165.3	150.0	128.2	110.0	98.3	89.6	75.0	62.6	53.9	48.8	45.9
55°	140.6	126.7	106.3	89.6	78.7	69.9	55.4	43.7	35.7	30.6	26.9
57.5°	115.8	103.4	86.7	70.6	61.2	53.2	40.8	30.6	24.0	19.7	16.8
60°	88.9	79.4	65.5	53.2	45.2	38.6	29.1	21.1	16.8	13.1	11.7
62.5°	62.6	56.8	46.6	37.9	32.8	27.7	20.4	15.3	11.7	9.5	8.7
65°	42.2	37.9	32.0	25.5	21.8	18.9	14.6	10.9	8.7	7.3	6.6
67.5°	27.7	25.5	21.1	17.5	15.3	13.1	10.2	8.0	6.6	5.8	5.1
70°	18.2	16.8	13.8	11.7	10.9	9.5	7.3	5.8	5.1	4.4	4.4
72.5°	11.7	10.2	9.5	8.0	7.3	6.6	5.1	4.4	3.6	3.6	3.6
75°	7.3	6.6	5.8	5.1	5.1	4.4	3.6	3.6	2.9	2.9	2.9
77.5°	4.4	4.4	3.6	3.6	2.9	2.9	2.9	2.2	2.2	2.2	2.2
80°	2.9	2.9	2.2	2.2	2.2	2.2	1.5	1.5	1.5	1.5	1.5
82.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	555.7	557.1	555.7	560.1	552.8	560.8	557.9	559.3	565.2	563.0	565.2
5°	566.6	569.5	569.5	574.6	568.1	577.5	574.6	577.5	583.4	583.4	586.3
7.5°	580.5	584.1	585.6	590.7	584.1	595.7	592.8	596.5	603.8	603.8	605.9
10°	595.0	599.4	602.3	608.1	600.8	614.0	611.0	616.1	622.7	623.4	627.1
12.5°	613.2	619.1	622.7	627.8	622.7	635.8	632.9	638.0	646.7	647.5	651.8
15°	633.6	640.9	645.3	651.1	645.3	659.8	656.9	662.8	669.3	672.2	676.6
17.5°	646.7	655.5	659.1	665.7	659.8	674.4	670.8	678.8	684.6	686.1	691.2
20°	648.9	656.9	662.0	667.1	662.0	676.6	672.9	679.5	686.8	688.2	691.9
22.5°	639.4	646.0	651.8	656.2	651.8	666.4	661.3	668.6	675.1	676.6	679.5
25°	617.6	625.6	631.4	635.1	630.7	644.5	640.2	646.7	652.6	655.5	656.2
27.5°	587.0	594.3	600.1	602.3	599.4	612.5	606.7	614.7	619.8	621.2	623.4
30°	545.5	552.1	557.9	559.3	557.1	566.6	563.7	571.0	576.1	577.5	579.0
32.5°	494.5	501.1	504.7	506.2	504.0	513.5	510.5	516.4	522.2	522.2	522.2
35°	437.0	442.8	445.0	449.4	444.3	453.7	450.8	455.9	461.0	461.0	461.7
37.5°	375.1	379.4	380.9	385.3	380.2	388.9	386.7	391.1	395.5	394.7	396.2
40°	308.8	313.2	314.6	318.3	313.9	321.2	319.7	324.1	327.7	327.7	327.7
42.5°	244.7	247.6	247.6	251.3	246.9	253.4	253.4	256.4	260.0	259.3	259.3
45°	177.7	177.0	178.4	177.7	177.7	183.5	183.5	185.0	187.9	186.4	187.2
47.5°	118.0	118.7	115.8	118.0	115.1	120.2	120.2	120.2	122.4	120.9	122.4
50°	75.0	72.8	71.4	71.4	70.6	74.3	72.8	73.6	75.0	73.6	75.0
52.5°	42.2	41.5	40.1	40.8	39.3	40.1	40.1	40.1	40.8	40.1	41.5
55°	24.8	22.6	21.8	21.8	21.1	21.8	21.1	21.1	21.1	20.4	21.1
57.5°	14.6	13.8	13.1	13.1	12.4	12.4	12.4	12.4	12.4	12.4	12.4
60°	10.2	9.5	9.5	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
62.5°	8.0	7.3	7.3	7.3	6.6	6.6	6.6	6.6	6.6	7.3	6.6
65°	5.8	5.8	5.8	5.8	5.8	5.8	5.1	5.8	5.8	5.8	5.8
67.5°	5.1	5.1	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	567.3	564.4	557.9	562.2	563.0	560.1	563.7	568.1	563.7	560.1	563.0
5°	588.5	586.3	580.5	584.1	584.8	584.1	586.3	589.9	586.3	584.1	584.8
7.5°	609.6	608.1	601.6	605.9	607.4	605.9	608.1	611.8	608.1	605.9	607.4
10°	630.0	629.3	622.7	628.5	629.3	627.8	630.0	635.8	630.0	627.8	629.3
12.5°	653.3	654.7	647.5	654.0	654.7	653.3	656.2	660.6	656.2	653.3	654.7
15°	680.2	679.5	673.7	678.8	680.2	678.8	682.4	688.2	682.4	678.8	680.2
17.5°	693.3	693.3	689.0	694.1	694.8	694.8	697.7	702.1	697.7	694.8	694.8
20°	694.1	694.8	689.7	695.5	695.5	695.5	698.4	700.6	698.4	695.5	695.5
22.5°	682.4	683.1	678.0	683.1	683.1	683.9	685.3	686.8	685.3	683.9	683.1
25°	659.8	660.6	656.2	660.6	659.8	659.8	661.3	663.5	661.3	659.8	659.8
27.5°	626.3	627.1	621.2	626.3	625.6	624.9	627.1	627.8	627.1	624.9	625.6
30°	581.9	582.6	577.5	581.9	581.2	580.5	583.4	584.1	583.4	580.5	581.2
32.5°	528.7	527.3	523.6	527.3	526.6	526.6	528.0	530.2	528.0	526.6	526.6
35°	464.7	464.7	462.5	465.4	463.2	466.1	466.1	466.8	466.1	466.1	463.2
37.5°	399.1	399.1	397.7	399.1	398.4	401.3	401.3	403.5	401.3	401.3	398.4
40°	330.6	330.6	329.2	330.6	332.8	332.8	332.1	335.0	332.1	332.8	332.8
42.5°	261.5	261.5	260.7	264.4	264.4	264.4	262.2	265.1	262.2	264.4	264.4
45°	190.1	188.6	187.9	187.9	188.6	191.5	188.6	192.3	188.6	191.5	188.6
47.5°	120.9	121.6	122.4	124.5	123.1	122.4	122.4	124.5	122.4	122.4	123.1
50°	74.3	75.0	75.0	76.5	74.3	75.7	75.0	76.5	75.0	75.7	74.3
52.5°	40.8	40.8	40.8	42.2	40.8	41.5	40.8	42.2	40.8	41.5	40.8
55°	21.1	21.1	21.1	21.8	21.1	21.1	21.1	21.8	21.1	21.1	21.1
57.5°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
60°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
62.5°	7.3	6.6	6.6	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
65°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
67.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212717

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	562.2	557.9	564.4	567.3	565.2	563.0	565.2	559.3	557.9	560.8	552.8
5°	584.1	580.5	586.3	588.5	586.3	583.4	583.4	577.5	574.6	577.5	568.1
7.5°	605.9	601.6	608.1	609.6	605.9	603.8	603.8	596.5	592.8	595.7	584.1
10°	628.5	622.7	629.3	630.0	627.1	623.4	622.7	616.1	611.0	614.0	600.8
12.5°	654.0	647.5	654.7	653.3	651.8	647.5	646.7	638.0	632.9	635.8	622.7
15°	678.8	673.7	679.5	680.2	676.6	672.2	669.3	662.8	656.9	659.8	645.3
17.5°	694.1	689.0	693.3	693.3	691.2	686.1	684.6	678.8	670.8	674.4	659.8
20°	695.5	689.7	694.8	694.1	691.9	688.2	686.8	679.5	672.9	676.6	662.0
22.5°	683.1	678.0	683.1	682.4	679.5	676.6	675.1	668.6	661.3	666.4	651.8
25°	660.6	656.2	660.6	659.8	656.2	655.5	652.6	646.7	640.2	644.5	630.7
27.5°	626.3	621.2	627.1	626.3	623.4	621.2	619.8	614.7	606.7	612.5	599.4
30°	581.9	577.5	582.6	581.9	579.0	577.5	576.1	571.0	563.7	566.6	557.1
32.5°	527.3	523.6	527.3	528.7	522.2	522.2	522.2	516.4	510.5	513.5	504.0
35°	465.4	462.5	464.7	464.7	461.7	461.0	461.0	455.9	450.8	453.7	444.3
37.5°	399.1	397.7	399.1	399.1	396.2	394.7	395.5	391.1	386.7	388.9	380.2
40°	330.6	329.2	330.6	330.6	327.7	327.7	327.7	324.1	319.7	321.2	313.9
42.5°	264.4	260.7	261.5	261.5	259.3	259.3	260.0	256.4	253.4	253.4	246.9
45°	187.9	187.9	188.6	190.1	187.2	186.4	187.9	185.0	183.5	183.5	177.7
47.5°	124.5	122.4	121.6	120.9	122.4	120.9	122.4	120.2	120.2	120.2	115.1
50°	76.5	75.0	75.0	74.3	75.0	73.6	75.0	73.6	72.8	74.3	70.6
52.5°	42.2	40.8	40.8	40.8	41.5	40.1	40.8	40.1	40.1	40.1	39.3
55°	21.8	21.1	21.1	21.1	21.1	20.4	21.1	21.1	21.1	21.8	21.1
57.5°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
60°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
62.5°	7.3	6.6	6.6	7.3	6.6	7.3	6.6	6.6	6.6	6.6	6.6
65°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.1	5.8	5.8
67.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212717

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	560.1	555.7	557.1	555.7	552.1	552.8	550.6	550.6	546.2	545.5	546.2
5°	574.6	569.5	569.5	566.6	561.5	560.8	556.4	556.4	549.9	547.7	547.7
7.5°	590.7	585.6	584.1	580.5	573.9	571.0	565.2	563.0	555.0	551.3	550.6
10°	608.1	602.3	599.4	595.0	587.0	581.9	573.9	571.0	561.5	554.2	553.5
12.5°	627.8	622.7	619.1	613.2	604.5	597.2	587.7	582.6	570.3	562.2	558.6
15°	651.1	645.3	640.9	633.6	624.2	615.4	603.0	597.2	582.6	571.7	566.6
17.5°	665.7	659.1	655.5	646.7	637.3	627.1	613.2	605.9	589.2	575.4	570.3
20°	667.1	662.0	656.9	648.9	639.4	627.8	613.2	605.9	588.5	574.6	567.3
22.5°	656.2	651.8	646.0	639.4	629.3	617.6	603.8	597.2	580.5	565.9	557.9
25°	635.1	631.4	625.6	617.6	610.3	597.9	584.8	580.5	563.0	550.6	543.3
27.5°	602.3	600.1	594.3	587.0	581.2	571.0	557.9	554.2	538.9	528.0	522.2
30°	559.3	557.9	552.1	545.5	541.1	531.7	520.0	518.5	504.7	496.7	490.9
32.5°	506.2	504.7	501.1	494.5	490.9	482.9	471.9	473.4	461.7	455.2	453.0
35°	449.4	445.0	442.8	437.0	432.6	426.8	417.3	419.5	412.9	407.8	407.1
37.5°	385.3	380.9	379.4	375.1	371.4	366.3	359.1	362.0	359.1	356.9	359.1
40°	318.3	314.6	313.2	308.8	307.3	303.7	298.6	305.9	302.2	306.6	307.3
42.5°	251.3	247.6	247.6	244.7	242.5	241.8	238.2	247.6	247.6	254.9	258.5
45°	177.7	178.4	177.0	177.7	176.2	178.4	176.2	182.8	192.3	201.7	207.6
47.5°	118.0	115.8	118.7	118.0	117.3	120.2	123.1	129.6	140.6	153.7	161.7
50°	71.4	71.4	72.8	75.0	76.5	78.7	83.0	91.0	103.4	116.5	126.0
52.5°	40.8	40.1	41.5	42.2	45.9	48.8	53.9	62.6	75.0	89.6	98.3
55°	21.8	21.8	22.6	24.8	26.9	30.6	35.7	43.7	55.4	69.9	78.7
57.5°	13.1	13.1	13.8	14.6	16.8	19.7	24.0	30.6	40.8	53.2	61.2
60°	8.7	9.5	9.5	10.2	11.7	13.1	16.8	21.1	29.1	38.6	45.2
62.5°	7.3	7.3	7.3	8.0	8.7	9.5	11.7	15.3	20.4	27.7	32.8
65°	5.8	5.8	5.8	5.8	6.6	7.3	8.7	10.9	14.6	18.9	21.8
67.5°	4.4	4.4	5.1	5.1	5.1	5.8	6.6	8.0	10.2	13.1	15.3
70°	3.6	3.6	3.6	3.6	4.4	4.4	5.1	5.8	7.3	9.5	10.9
72.5°	2.9	2.9	2.9	2.9	3.6	3.6	3.6	4.4	5.1	6.6	7.3
75°	2.2	2.2	2.2	2.2	2.9	2.9	2.9	3.6	3.6	4.4	5.1
77.5°	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.2	2.9	2.9	2.9
80°	0.7	0.7	0.7	1.5	1.5	1.5	1.5	1.5	1.5	2.2	2.2
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.5	1.5
85°	0.0	0.0	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212717

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSWL11

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3	551.3
2.5°	541.1	550.6	539.7	541.9	538.2	544.8	536.0	538.2	539.7	538.2	538.9
5°	541.9	549.1	536.8	538.9	533.1	537.5	529.5	530.2	530.2	528.7	528.0
7.5°	544.0	548.4	535.3	534.6	527.3	531.7	522.2	520.7	520.0	517.8	518.5
10°	544.8	546.2	532.4	529.5	520.7	522.2	512.7	509.8	507.6	506.2	505.4
12.5°	549.9	548.4	532.4	527.3	516.4	515.6	505.4	501.1	497.4	496.0	495.2
15°	556.4	551.3	533.8	526.6	514.2	511.3	500.3	496.0	490.9	489.4	488.0
17.5°	559.3	551.3	532.4	522.9	509.1	505.4	494.5	488.7	483.6	481.4	479.9
20°	555.7	545.5	526.6	516.4	501.8	496.7	485.8	479.2	474.1	471.9	470.5
22.5°	547.7	536.0	517.8	507.6	493.1	486.5	477.0	471.2	465.4	464.7	462.5
25°	533.8	522.2	506.9	496.7	483.6	477.0	468.3	463.2	457.4	456.6	455.9
27.5°	513.5	502.5	490.9	481.4	469.8	464.7	458.1	453.0	447.9	447.9	446.4
30°	484.3	477.0	466.8	461.0	451.5	446.4	442.1	438.4	433.3	434.1	432.6
32.5°	447.2	443.5	436.3	433.3	426.1	424.6	420.2	417.3	412.9	414.4	412.9
35°	405.7	401.3	401.3	399.8	396.2	395.5	393.3	391.8	388.9	389.6	389.6
37.5°	358.3	358.3	362.7	363.4	362.7	364.1	363.4	363.4	360.5	362.0	361.2
40°	309.5	313.9	321.9	326.3	327.7	330.6	334.3	332.8	331.4	333.6	332.8
42.5°	262.2	270.9	283.3	290.6	295.7	300.1	305.2	305.2	304.4	307.3	306.6
45°	217.0	225.0	241.8	254.2	262.9	269.5	275.3	277.5	278.2	281.1	280.4
47.5°	172.6	186.4	206.1	220.7	231.6	239.6	247.6	250.5	252.7	256.4	256.4
50°	136.9	154.4	177.0	191.5	204.7	213.4	221.4	225.8	228.7	231.6	231.6
52.5°	110.0	128.2	150.0	165.3	177.7	187.2	195.2	200.3	202.5	206.1	206.1
55°	89.6	106.3	126.7	140.6	152.9	161.7	168.2	172.6	174.8	177.7	177.7
57.5°	70.6	86.7	103.4	115.8	126.0	132.6	138.4	139.8	140.6	142.7	143.5
60°	53.2	65.5	79.4	88.9	96.1	100.5	104.9	104.1	103.4	104.9	103.4
62.5°	37.9	46.6	56.8	62.6	68.5	70.6	72.8	71.4	69.9	70.6	70.6
65°	25.5	32.0	37.9	42.2	45.2	46.6	47.3	46.6	45.9	46.6	45.9
67.5°	17.5	21.1	25.5	27.7	29.9	30.6	31.3	30.6	30.6	30.6	29.9
70°	11.7	13.8	16.8	18.2	18.9	19.7	20.4	19.7	19.7	19.7	19.7
72.5°	8.0	9.5	10.2	11.7	12.4	12.4	12.4	12.4	12.4	12.4	12.4
75°	5.1	5.8	6.6	7.3	8.0	8.0	8.0	8.0	8.0	8.0	8.0
77.5°	3.6	3.6	4.4	4.4	5.1	5.1	5.1	5.1	5.1	5.1	5.1
80°	2.2	2.2	2.9	2.9	2.9	2.9	3.6	2.9	3.6	3.6	3.6
82.5°	1.5	1.5	1.5	1.5	2.2	2.2	2.2	2.2	2.2	2.2	2.2
85°	0.7	0.7	0.7	0.7	0.7	0.7	1.5	0.7	1.5	1.5	1.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P212717

CATALOG NUMBER: LD4B15D010 EU4B10209730 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	551.3	551.3	551.3	551.3
2.5°	538.9	537.5	533.1	538.2
5°	527.3	525.8	522.2	525.8
7.5°	515.6	513.5	510.5	512.7
10°	501.8	500.3	496.7	498.9
12.5°	491.6	488.7	486.5	487.2
15°	485.0	482.1	479.9	480.7
17.5°	476.3	473.4	471.2	471.2
20°	466.8	463.9	462.5	461.7
22.5°	458.8	456.6	455.9	453.7
25°	451.5	450.1	450.1	447.2
27.5°	443.5	441.3	441.3	438.4
30°	429.7	429.0	429.0	426.8
32.5°	411.5	409.3	410.8	407.1
35°	386.7	385.3	387.5	384.5
37.5°	359.8	359.1	360.5	358.3
40°	331.4	331.4	333.6	329.9
42.5°	306.6	306.6	308.8	305.2
45°	279.7	281.9	284.0	281.1
47.5°	256.4	257.8	260.7	257.8
50°	233.1	234.5	236.7	233.8
52.5°	207.6	209.0	211.2	209.0
55°	178.4	179.9	182.1	180.6
57.5°	143.5	142.0	145.7	142.7
60°	104.1	101.2	102.0	102.0
62.5°	69.2	67.7	69.2	67.0
65°	45.9	45.2	45.2	45.2
67.5°	30.6	29.9	30.6	29.9
70°	19.7	19.7	19.7	19.7
72.5°	12.4	12.4	12.4	12.4
75°	8.0	8.0	8.0	8.0
77.5°	5.1	5.1	5.1	5.1
80°	3.6	3.6	3.6	3.6
82.5°	2.2	2.2	2.2	2.2
85°	1.5	1.5	1.5	1.5
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°





















(END OF REPORT)