

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: P212716

Luminaire Tested: **LD4B15D010 EU4B10209727 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212716
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 EU4B10209727 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 97CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 969.1 lumens
Efficiency: N/A
Efficacy: 67.3 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

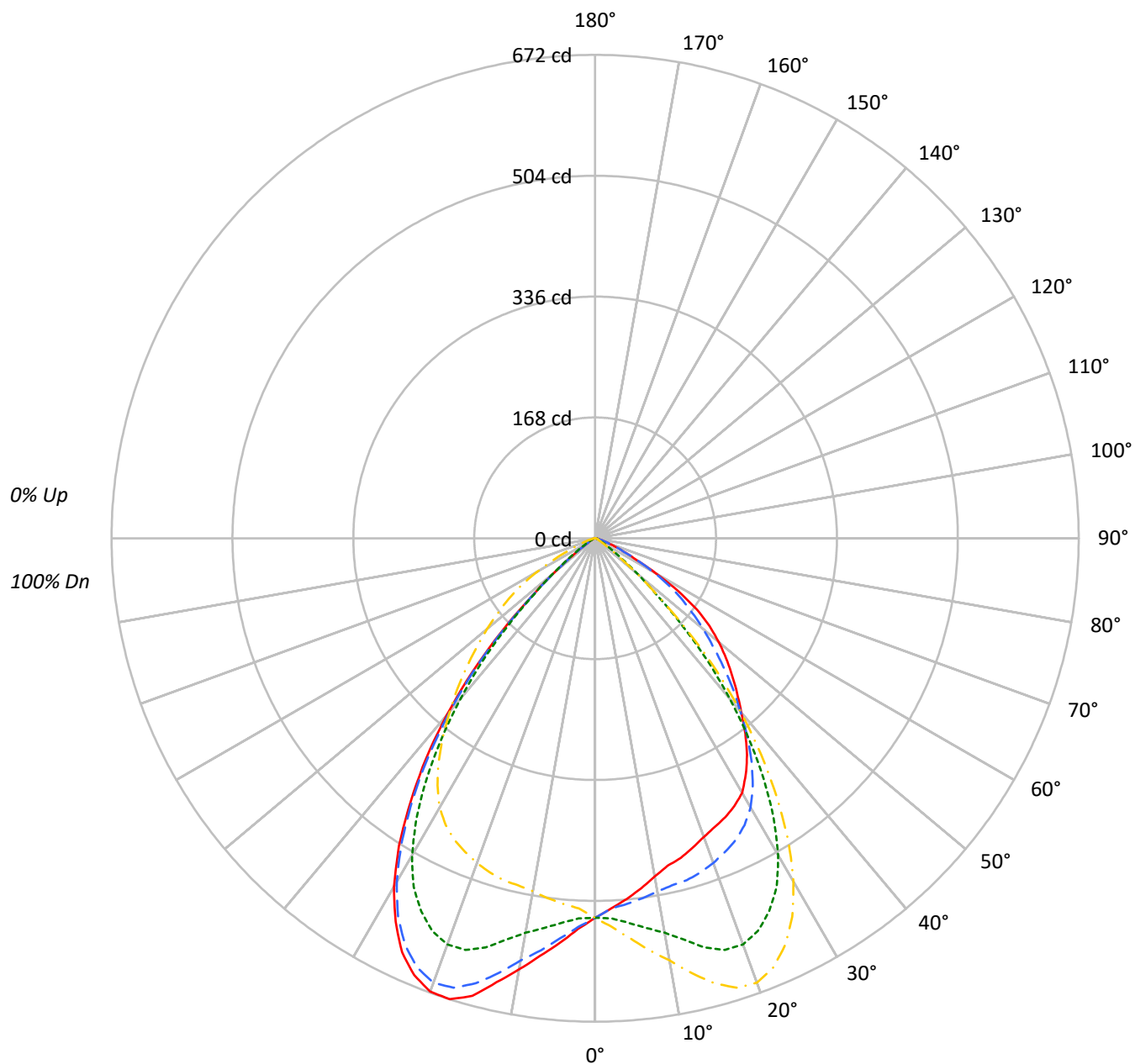
Input Watts (W): 14.39
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	65065	65065	65065	65065
5°	62305	66440	69895	66440
10°	59794	69738	76201	69738
15°	58728	75201	84101	75201
20°	57991	78849	87998	78849
25°	58236	77861	86408	77861
30°	58167	72453	79603	72453
35°	55412	61496	67263	61496
40°	50833	46791	51622	46791
45°	46924	29776	32096	29776
50°	42926	14449	14046	14449
55°	37160	6301	4494	6301
60°	24077	3084	2072	3084
65°	12608	2043	1634	2043
70°	6780	1515	1262	1515
75°	3670	1334	1001	1334
80°	2486	994	497	994
85°	1981	991	0	991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.4	5.3
10°-20°	160.9	16.6
20°-30°	250.1	25.8
30°-40°	252.6	26.1
40°-50°	160.0	16.5
50°-60°	67.1	6.9
60°-70°	21.3	2.2
70°-80°	4.9	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°	462.4	47.7
0°-40°	715.1	73.8
0°-60°	942.2	97.2
0°-90°	969.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	969.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	528	528	528	528	528	
5°	503	537	564	537	503	47
15°	460	589	659	589	460	130
25°	428	572	635	572	428	197
35°	368	408	447	408	368	229
45°	269	171	184	171	269	208
55°	173	29	21	29	173	149
65°	43	7	6	7	43	48
75°	8	3	2	3	8	9
85°	1	1	0	1	1	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°	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5
2.5°	515.0	510.1	514.3	515.7	515.7	515.0	516.4	515.0	512.9	521.3	515.0
5°	503.2	499.7	503.2	504.5	505.2	505.9	507.3	507.3	506.6	514.3	510.1
7.5°	490.6	488.5	491.3	493.4	496.2	495.5	497.6	498.3	499.7	508.7	504.5
10°	477.4	475.3	478.8	480.2	483.6	484.3	485.7	487.8	490.6	499.7	498.3
12.5°	466.2	465.5	467.6	470.4	473.9	474.6	476.0	479.5	483.6	493.4	494.1
15°	459.9	459.2	461.3	464.1	466.9	468.3	469.7	474.6	478.8	489.2	492.0
17.5°	450.9	450.9	453.0	455.8	459.2	460.6	462.7	467.6	473.2	483.6	487.1
20°	441.8	442.5	443.9	446.7	450.2	451.6	453.7	458.6	464.8	475.3	480.2
22.5°	434.2	436.3	436.9	439.0	442.5	444.6	445.3	450.9	456.5	465.5	471.8
25°	427.9	430.7	430.7	432.1	436.3	436.9	437.6	443.2	448.1	456.5	462.7
27.5°	419.5	422.3	422.3	424.4	427.2	428.6	428.6	433.5	438.3	444.6	449.5
30°	408.4	410.5	410.5	411.2	414.0	415.3	414.6	419.5	423.0	427.2	432.1
32.5°	389.6	393.0	391.7	393.7	395.1	396.5	395.1	399.3	402.1	406.3	407.7
35°	368.0	370.7	368.7	370.0	372.8	372.8	372.1	374.9	376.3	378.4	379.1
37.5°	342.9	345.0	343.6	344.3	345.7	346.4	345.0	347.7	347.7	348.4	347.1
40°	315.7	319.2	317.1	317.1	318.5	319.2	317.1	318.5	319.9	316.4	313.6
42.5°	292.0	295.5	293.4	293.4	293.4	294.1	291.3	292.0	292.0	287.1	282.9
45°	269.0	271.8	269.7	267.6	268.3	269.0	266.2	265.5	263.4	257.8	251.6
47.5°	246.7	249.5	246.7	245.3	245.3	245.3	241.8	239.7	236.9	229.3	221.6
50°	223.7	226.5	224.4	223.0	221.6	221.6	218.8	216.0	211.9	204.2	195.8
52.5°	200.0	202.1	200.0	198.6	197.2	197.2	193.7	191.6	186.8	179.1	170.0
55°	172.8	174.2	172.1	170.7	170.0	170.0	167.3	165.2	161.0	154.7	146.3
57.5°	136.6	139.4	135.9	137.3	137.3	136.6	134.5	133.8	132.4	126.8	120.6
60°	97.6	97.6	96.9	99.7	99.0	100.4	99.0	99.7	100.4	96.2	92.0
62.5°	64.1	66.2	64.8	66.2	67.6	67.6	66.9	68.3	69.7	67.6	65.5
65°	43.2	43.2	43.2	43.9	43.9	44.6	43.9	44.6	45.3	44.6	43.2
67.5°	28.6	29.3	28.6	29.3	28.6	29.3	29.3	29.3	30.0	29.3	28.6
70°	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	19.5	18.8	18.1
72.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
75°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.8	3.5	2.8	2.8
82.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.7	1.4	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°	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5
2.5°	518.5	516.4	526.8	517.8	522.7	522.0	522.7	526.8	526.8	528.9	528.2
5°	515.7	513.6	525.5	518.5	524.1	524.1	526.2	532.4	532.4	536.6	537.3
7.5°	511.5	512.2	524.8	520.6	526.8	527.5	531.0	538.7	540.8	546.4	549.1
10°	506.6	509.4	522.7	521.3	529.6	530.3	537.3	546.4	549.1	556.8	561.7
12.5°	504.5	509.4	524.8	526.2	534.5	538.0	545.7	557.5	562.4	571.4	578.4
15°	503.9	510.8	527.5	532.4	542.2	547.1	557.5	571.4	577.0	588.9	597.2
17.5°	500.4	509.4	527.5	535.2	545.7	550.5	563.8	579.8	586.8	600.0	609.8
20°	494.1	503.9	522.0	531.7	542.9	549.8	563.1	579.8	586.8	600.7	611.9
22.5°	485.7	495.5	512.9	524.1	533.8	541.5	555.4	571.4	577.7	591.0	602.1
25°	475.3	485.0	499.7	510.8	519.9	526.8	538.7	555.4	559.6	572.1	584.0
27.5°	460.6	469.7	480.9	491.3	499.7	505.2	515.7	530.3	533.8	546.4	556.1
30°	441.1	446.7	456.5	463.4	469.7	475.3	482.9	496.2	497.6	508.7	517.8
32.5°	414.6	417.4	424.4	427.9	433.5	435.6	441.8	453.0	451.6	462.0	469.7
35°	382.6	384.0	384.0	388.2	389.6	390.3	395.1	401.4	399.3	408.4	414.0
37.5°	347.7	347.1	342.9	342.9	343.6	341.5	343.6	346.4	343.6	350.5	355.4
40°	312.2	308.0	300.4	296.2	294.1	293.4	289.2	292.7	285.7	290.6	294.1
42.5°	278.1	271.1	259.2	250.9	247.4	243.9	236.9	236.9	227.9	231.4	232.1
45°	243.2	231.4	215.3	207.7	198.6	193.0	184.0	174.9	168.6	170.7	168.6
47.5°	211.2	197.2	178.4	165.2	154.7	147.0	134.5	124.0	117.8	115.0	112.2
50°	183.3	169.3	147.7	131.0	120.6	111.5	99.0	87.1	79.4	75.3	73.2
52.5°	158.2	143.6	122.7	105.2	94.1	85.7	71.8	59.9	51.6	46.7	43.9
55°	134.5	121.3	101.7	85.7	75.3	66.9	53.0	41.8	34.1	29.3	25.8
57.5°	110.8	99.0	82.9	67.6	58.5	50.9	39.0	29.3	23.0	18.8	16.0
60°	85.0	76.0	62.7	50.9	43.2	36.9	27.9	20.2	16.0	12.5	11.2
62.5°	59.9	54.4	44.6	36.2	31.4	26.5	19.5	14.6	11.2	9.1	8.4
65°	40.4	36.2	30.7	24.4	20.9	18.1	13.9	10.5	8.4	7.0	6.3
67.5°	26.5	24.4	20.2	16.7	14.6	12.5	9.8	7.7	6.3	5.6	4.9
70°	17.4	16.0	13.2	11.2	10.5	9.1	7.0	5.6	4.9	4.2	4.2
72.5°	11.2	9.8	9.1	7.7	7.0	6.3	4.9	4.2	3.5	3.5	3.5
75°	7.0	6.3	5.6	4.9	4.9	4.2	3.5	3.5	2.8	2.8	2.8
77.5°	4.2	4.2	3.5	3.5	2.8	2.8	2.8	2.1	2.1	2.1	2.1
80°	2.8	2.8	2.1	2.1	2.1	2.1	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	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°	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5
2.5°	531.7	533.1	531.7	535.9	528.9	536.6	533.8	535.2	540.8	538.7	540.8
5°	542.2	545.0	545.0	549.8	543.6	552.6	549.8	552.6	558.2	558.2	561.0
7.5°	555.4	558.9	560.3	565.2	558.9	570.1	567.3	570.8	577.7	577.7	579.8
10°	569.4	573.5	576.3	581.9	574.9	587.5	584.7	589.6	595.8	596.5	600.0
12.5°	586.8	592.4	595.8	600.7	595.8	608.4	605.6	610.5	618.8	619.5	623.7
15°	606.3	613.3	617.4	623.0	617.4	631.4	628.6	634.2	640.4	643.2	647.4
17.5°	618.8	627.2	630.7	637.0	631.4	645.3	641.8	649.5	655.1	656.5	661.3
20°	620.9	628.6	633.5	638.4	633.5	647.4	643.9	650.2	657.2	658.6	662.0
22.5°	611.9	618.1	623.7	627.9	623.7	637.7	632.8	639.7	646.0	647.4	650.2
25°	591.0	598.6	604.2	607.7	603.5	616.7	612.6	618.8	624.4	627.2	627.9
27.5°	561.7	568.7	574.2	576.3	573.5	586.1	580.5	588.2	593.1	594.4	596.5
30°	522.0	528.2	533.8	535.2	533.1	542.2	539.4	546.4	551.2	552.6	554.0
32.5°	473.2	479.5	482.9	484.3	482.2	491.3	488.5	494.1	499.7	499.7	499.7
35°	418.1	423.7	425.8	430.0	425.1	434.2	431.4	436.3	441.1	441.1	441.8
37.5°	358.9	363.1	364.5	368.7	363.8	372.1	370.0	374.2	378.4	377.7	379.1
40°	295.5	299.7	301.1	304.5	300.4	307.3	305.9	310.1	313.6	313.6	313.6
42.5°	234.2	236.9	236.9	240.4	236.2	242.5	242.5	245.3	248.8	248.1	248.1
45°	170.0	169.3	170.7	170.0	170.0	175.6	175.6	177.0	179.8	178.4	179.1
47.5°	112.9	113.6	110.8	112.9	110.1	115.0	115.0	115.0	117.1	115.7	117.1
50°	71.8	69.7	68.3	68.3	67.6	71.1	69.7	70.4	71.8	70.4	71.8
52.5°	40.4	39.7	38.3	39.0	37.6	38.3	38.3	38.3	39.0	38.3	39.7
55°	23.7	21.6	20.9	20.9	20.2	20.9	20.2	20.2	20.2	19.5	20.2
57.5°	13.9	13.2	12.5	12.5	11.8	11.8	11.8	11.8	11.8	11.8	11.8
60°	9.8	9.1	9.1	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
62.5°	7.7	7.0	7.0	7.0	6.3	6.3	6.3	6.3	6.3	7.0	6.3
65°	5.6	5.6	5.6	5.6	5.6	5.6	4.9	5.6	5.6	5.6	5.6
67.5°	4.9	4.9	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	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°	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5
2.5°	542.9	540.1	533.8	538.0	538.7	535.9	539.4	543.6	539.4	535.9	538.7
5°	563.1	561.0	555.4	558.9	559.6	558.9	561.0	564.5	561.0	558.9	559.6
7.5°	583.3	581.9	575.6	579.8	581.2	579.8	581.9	585.4	581.9	579.8	581.2
10°	602.8	602.1	595.8	601.4	602.1	600.7	602.8	608.4	602.8	600.7	602.1
12.5°	625.1	626.5	619.5	625.8	626.5	625.1	627.9	632.1	627.9	625.1	626.5
15°	650.9	650.2	644.6	649.5	650.9	649.5	653.0	658.6	653.0	649.5	650.9
17.5°	663.4	663.4	659.3	664.1	664.8	664.8	667.6	671.8	667.6	664.8	664.8
20°	664.1	664.8	660.0	665.5	665.5	665.5	668.3	670.4	668.3	665.5	665.5
22.5°	653.0	653.7	648.8	653.7	653.7	654.4	655.8	657.2	655.8	654.4	653.7
25°	631.4	632.1	627.9	632.1	631.4	631.4	632.8	634.9	632.8	631.4	631.4
27.5°	599.3	600.0	594.4	599.3	598.6	597.9	600.0	600.7	600.0	597.9	598.6
30°	556.8	557.5	552.6	556.8	556.1	555.4	558.2	558.9	558.2	555.4	556.1
32.5°	505.9	504.5	501.1	504.5	503.9	503.9	505.2	507.3	505.2	503.9	503.9
35°	444.6	444.6	442.5	445.3	443.2	446.0	446.0	446.7	446.0	446.0	443.2
37.5°	381.9	381.9	380.5	381.9	381.2	384.0	384.0	386.1	384.0	384.0	381.2
40°	316.4	316.4	315.0	316.4	318.5	318.5	317.8	320.6	317.8	318.5	318.5
42.5°	250.2	250.2	249.5	253.0	253.0	253.0	250.9	253.7	250.9	253.0	253.0
45°	181.9	180.5	179.8	179.8	180.5	183.3	180.5	184.0	180.5	183.3	180.5
47.5°	115.7	116.4	117.1	119.2	117.8	117.1	117.1	119.2	117.1	117.1	117.8
50°	71.1	71.8	71.8	73.2	71.1	72.5	71.8	73.2	71.8	72.5	71.1
52.5°	39.0	39.0	39.0	40.4	39.0	39.7	39.0	40.4	39.0	39.7	39.0
55°	20.2	20.2	20.2	20.9	20.2	20.2	20.2	20.9	20.2	20.2	20.2
57.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
60°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
62.5°	7.0	6.3	6.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
65°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
67.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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: P212716

CATALOG NUMBER: LD4B15D010 EU4B10209727 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5
2.5°	538.0	533.8	540.1	542.9	540.8	538.7	540.8	535.2	533.8	536.6	528.9
5°	558.9	555.4	561.0	563.1	561.0	558.2	558.2	552.6	549.8	552.6	543.6
7.5°	579.8	575.6	581.9	583.3	579.8	577.7	577.7	570.8	567.3	570.1	558.9
10°	601.4	595.8	602.1	602.8	600.0	596.5	595.8	589.6	584.7	587.5	574.9
12.5°	625.8	619.5	626.5	625.1	623.7	619.5	618.8	610.5	605.6	608.4	595.8
15°	649.5	644.6	650.2	650.9	647.4	643.2	640.4	634.2	628.6	631.4	617.4
17.5°	664.1	659.3	663.4	663.4	661.3	656.5	655.1	649.5	641.8	645.3	631.4
20°	665.5	660.0	664.8	664.1	662.0	658.6	657.2	650.2	643.9	647.4	633.5
22.5°	653.7	648.8	653.7	653.0	650.2	647.4	646.0	639.7	632.8	637.7	623.7
25°	632.1	627.9	632.1	631.4	627.9	627.2	624.4	618.8	612.6	616.7	603.5
27.5°	599.3	594.4	600.0	599.3	596.5	594.4	593.1	588.2	580.5	586.1	573.5
30°	556.8	552.6	557.5	556.8	554.0	552.6	551.2	546.4	539.4	542.2	533.1
32.5°	504.5	501.1	504.5	505.9	499.7	499.7	499.7	494.1	488.5	491.3	482.2
35°	445.3	442.5	444.6	444.6	441.8	441.1	441.1	436.3	431.4	434.2	425.1
37.5°	381.9	380.5	381.9	381.9	379.1	377.7	378.4	374.2	370.0	372.1	363.8
40°	316.4	315.0	316.4	316.4	313.6	313.6	313.6	310.1	305.9	307.3	300.4
42.5°	253.0	249.5	250.2	250.2	248.1	248.1	248.8	245.3	242.5	242.5	236.2
45°	179.8	179.8	180.5	181.9	179.1	178.4	179.8	177.0	175.6	175.6	170.0
47.5°	119.2	117.1	116.4	115.7	117.1	115.7	117.1	115.0	115.0	115.0	110.1
50°	73.2	71.8	71.8	71.1	71.8	70.4	71.8	70.4	69.7	71.1	67.6
52.5°	40.4	39.0	39.0	39.0	39.7	38.3	39.0	38.3	38.3	38.3	37.6
55°	20.9	20.2	20.2	20.2	20.2	19.5	20.2	20.2	20.2	20.9	20.2
57.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
60°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
62.5°	7.0	6.3	6.3	7.0	6.3	7.0	6.3	6.3	6.3	6.3	6.3
65°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.9	5.6	5.6
67.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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: P212716

CATALOG NUMBER: LD4B15D010 EU4B10209727 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5
2.5°	535.9	531.7	533.1	531.7	528.2	528.9	526.8	526.8	522.7	522.0	522.7
5°	549.8	545.0	545.0	542.2	537.3	536.6	532.4	532.4	526.2	524.1	524.1
7.5°	565.2	560.3	558.9	555.4	549.1	546.4	540.8	538.7	531.0	527.5	526.8
10°	581.9	576.3	573.5	569.4	561.7	556.8	549.1	546.4	537.3	530.3	529.6
12.5°	600.7	595.8	592.4	586.8	578.4	571.4	562.4	557.5	545.7	538.0	534.5
15°	623.0	617.4	613.3	606.3	597.2	588.9	577.0	571.4	557.5	547.1	542.2
17.5°	637.0	630.7	627.2	618.8	609.8	600.0	586.8	579.8	563.8	550.5	545.7
20°	638.4	633.5	628.6	620.9	611.9	600.7	586.8	579.8	563.1	549.8	542.9
22.5°	627.9	623.7	618.1	611.9	602.1	591.0	577.7	571.4	555.4	541.5	533.8
25°	607.7	604.2	598.6	591.0	584.0	572.1	559.6	555.4	538.7	526.8	519.9
27.5°	576.3	574.2	568.7	561.7	556.1	546.4	533.8	530.3	515.7	505.2	499.7
30°	535.2	533.8	528.2	522.0	517.8	508.7	497.6	496.2	482.9	475.3	469.7
32.5°	484.3	482.9	479.5	473.2	469.7	462.0	451.6	453.0	441.8	435.6	433.5
35°	430.0	425.8	423.7	418.1	414.0	408.4	399.3	401.4	395.1	390.3	389.6
37.5°	368.7	364.5	363.1	358.9	355.4	350.5	343.6	346.4	343.6	341.5	343.6
40°	304.5	301.1	299.7	295.5	294.1	290.6	285.7	292.7	289.2	293.4	294.1
42.5°	240.4	236.9	236.9	234.2	232.1	231.4	227.9	236.9	236.9	243.9	247.4
45°	170.0	170.7	169.3	170.0	168.6	170.7	168.6	174.9	184.0	193.0	198.6
47.5°	112.9	110.8	113.6	112.9	112.2	115.0	117.8	124.0	134.5	147.0	154.7
50°	68.3	68.3	69.7	71.8	73.2	75.3	79.4	87.1	99.0	111.5	120.6
52.5°	39.0	38.3	39.7	40.4	43.9	46.7	51.6	59.9	71.8	85.7	94.1
55°	20.9	20.9	21.6	23.7	25.8	29.3	34.1	41.8	53.0	66.9	75.3
57.5°	12.5	12.5	13.2	13.9	16.0	18.8	23.0	29.3	39.0	50.9	58.5
60°	8.4	9.1	9.1	9.8	11.2	12.5	16.0	20.2	27.9	36.9	43.2
62.5°	7.0	7.0	7.0	7.7	8.4	9.1	11.2	14.6	19.5	26.5	31.4
65°	5.6	5.6	5.6	5.6	6.3	7.0	8.4	10.5	13.9	18.1	20.9
67.5°	4.2	4.2	4.9	4.9	4.9	5.6	6.3	7.7	9.8	12.5	14.6
70°	3.5	3.5	3.5	3.5	4.2	4.2	4.9	5.6	7.0	9.1	10.5
72.5°	2.8	2.8	2.8	2.8	3.5	3.5	3.5	4.2	4.9	6.3	7.0
75°	2.1	2.1	2.1	2.1	2.8	2.8	2.8	3.5	3.5	4.2	4.9
77.5°	1.4	1.4	1.4	1.4	2.1	2.1	2.1	2.1	2.8	2.8	2.8
80°	0.7	0.7	0.7	1.4	1.4	1.4	1.4	1.4	1.4	2.1	2.1
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.4
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: P212716

CATALOG NUMBER: LD4B15D010 EU4B10209727 4LBSWL11

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5	527.5
2.5°	517.8	526.8	516.4	518.5	515.0	521.3	512.9	515.0	516.4	515.0	515.7
5°	518.5	525.5	513.6	515.7	510.1	514.3	506.6	507.3	507.3	505.9	505.2
7.5°	520.6	524.8	512.2	511.5	504.5	508.7	499.7	498.3	497.6	495.5	496.2
10°	521.3	522.7	509.4	506.6	498.3	499.7	490.6	487.8	485.7	484.3	483.6
12.5°	526.2	524.8	509.4	504.5	494.1	493.4	483.6	479.5	476.0	474.6	473.9
15°	532.4	527.5	510.8	503.9	492.0	489.2	478.8	474.6	469.7	468.3	466.9
17.5°	535.2	527.5	509.4	500.4	487.1	483.6	473.2	467.6	462.7	460.6	459.2
20°	531.7	522.0	503.9	494.1	480.2	475.3	464.8	458.6	453.7	451.6	450.2
22.5°	524.1	512.9	495.5	485.7	471.8	465.5	456.5	450.9	445.3	444.6	442.5
25°	510.8	499.7	485.0	475.3	462.7	456.5	448.1	443.2	437.6	436.9	436.3
27.5°	491.3	480.9	469.7	460.6	449.5	444.6	438.3	433.5	428.6	428.6	427.2
30°	463.4	456.5	446.7	441.1	432.1	427.2	423.0	419.5	414.6	415.3	414.0
32.5°	427.9	424.4	417.4	414.6	407.7	406.3	402.1	399.3	395.1	396.5	395.1
35°	388.2	384.0	384.0	382.6	379.1	378.4	376.3	374.9	372.1	372.8	372.8
37.5°	342.9	342.9	347.1	347.7	347.1	348.4	347.7	347.7	345.0	346.4	345.7
40°	296.2	300.4	308.0	312.2	313.6	316.4	319.9	318.5	317.1	319.2	318.5
42.5°	250.9	259.2	271.1	278.1	282.9	287.1	292.0	292.0	291.3	294.1	293.4
45°	207.7	215.3	231.4	243.2	251.6	257.8	263.4	265.5	266.2	269.0	268.3
47.5°	165.2	178.4	197.2	211.2	221.6	229.3	236.9	239.7	241.8	245.3	245.3
50°	131.0	147.7	169.3	183.3	195.8	204.2	211.9	216.0	218.8	221.6	221.6
52.5°	105.2	122.7	143.6	158.2	170.0	179.1	186.8	191.6	193.7	197.2	197.2
55°	85.7	101.7	121.3	134.5	146.3	154.7	161.0	165.2	167.3	170.0	170.0
57.5°	67.6	82.9	99.0	110.8	120.6	126.8	132.4	133.8	134.5	136.6	137.3
60°	50.9	62.7	76.0	85.0	92.0	96.2	100.4	99.7	99.0	100.4	99.0
62.5°	36.2	44.6	54.4	59.9	65.5	67.6	69.7	68.3	66.9	67.6	67.6
65°	24.4	30.7	36.2	40.4	43.2	44.6	45.3	44.6	43.9	44.6	43.9
67.5°	16.7	20.2	24.4	26.5	28.6	29.3	30.0	29.3	29.3	29.3	28.6
70°	11.2	13.2	16.0	17.4	18.1	18.8	19.5	18.8	18.8	18.8	18.8
72.5°	7.7	9.1	9.8	11.2	11.8	11.8	11.8	11.8	11.8	11.8	11.8
75°	4.9	5.6	6.3	7.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7
77.5°	3.5	3.5	4.2	4.2	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	2.1	2.1	2.8	2.8	2.8	2.8	3.5	2.8	3.5	3.5	3.5
82.5°	1.4	1.4	1.4	1.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	0.7	0.7	0.7	0.7	0.7	0.7	1.4	0.7	1.4	1.4	1.4
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: P212716

CATALOG NUMBER: LD4B15D010 EU4B10209727 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	527.5	527.5	527.5	527.5
2.5°	515.7	514.3	510.1	515.0
5°	504.5	503.2	499.7	503.2
7.5°	493.4	491.3	488.5	490.6
10°	480.2	478.8	475.3	477.4
12.5°	470.4	467.6	465.5	466.2
15°	464.1	461.3	459.2	459.9
17.5°	455.8	453.0	450.9	450.9
20°	446.7	443.9	442.5	441.8
22.5°	439.0	436.9	436.3	434.2
25°	432.1	430.7	430.7	427.9
27.5°	424.4	422.3	422.3	419.5
30°	411.2	410.5	410.5	408.4
32.5°	393.7	391.7	393.0	389.6
35°	370.0	368.7	370.7	368.0
37.5°	344.3	343.6	345.0	342.9
40°	317.1	317.1	319.2	315.7
42.5°	293.4	293.4	295.5	292.0
45°	267.6	269.7	271.8	269.0
47.5°	245.3	246.7	249.5	246.7
50°	223.0	224.4	226.5	223.7
52.5°	198.6	200.0	202.1	200.0
55°	170.7	172.1	174.2	172.8
57.5°	137.3	135.9	139.4	136.6
60°	99.7	96.9	97.6	97.6
62.5°	66.2	64.8	66.2	64.1
65°	43.9	43.2	43.2	43.2
67.5°	29.3	28.6	29.3	28.6
70°	18.8	18.8	18.8	18.8
72.5°	11.8	11.8	11.8	11.8
75°	7.7	7.7	7.7	7.7
77.5°	4.9	4.9	4.9	4.9
80°	3.5	3.5	3.5	3.5
82.5°	2.1	2.1	2.1	2.1
85°	1.4	1.4	1.4	1.4
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)