

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: P212706

Luminaire Tested: **LD4B15D010 EU4B10208030 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212706
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 EU4B10208030 4LBSWL1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1357.0 lumens
Efficiency: N/A
Efficacy: 94.3 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

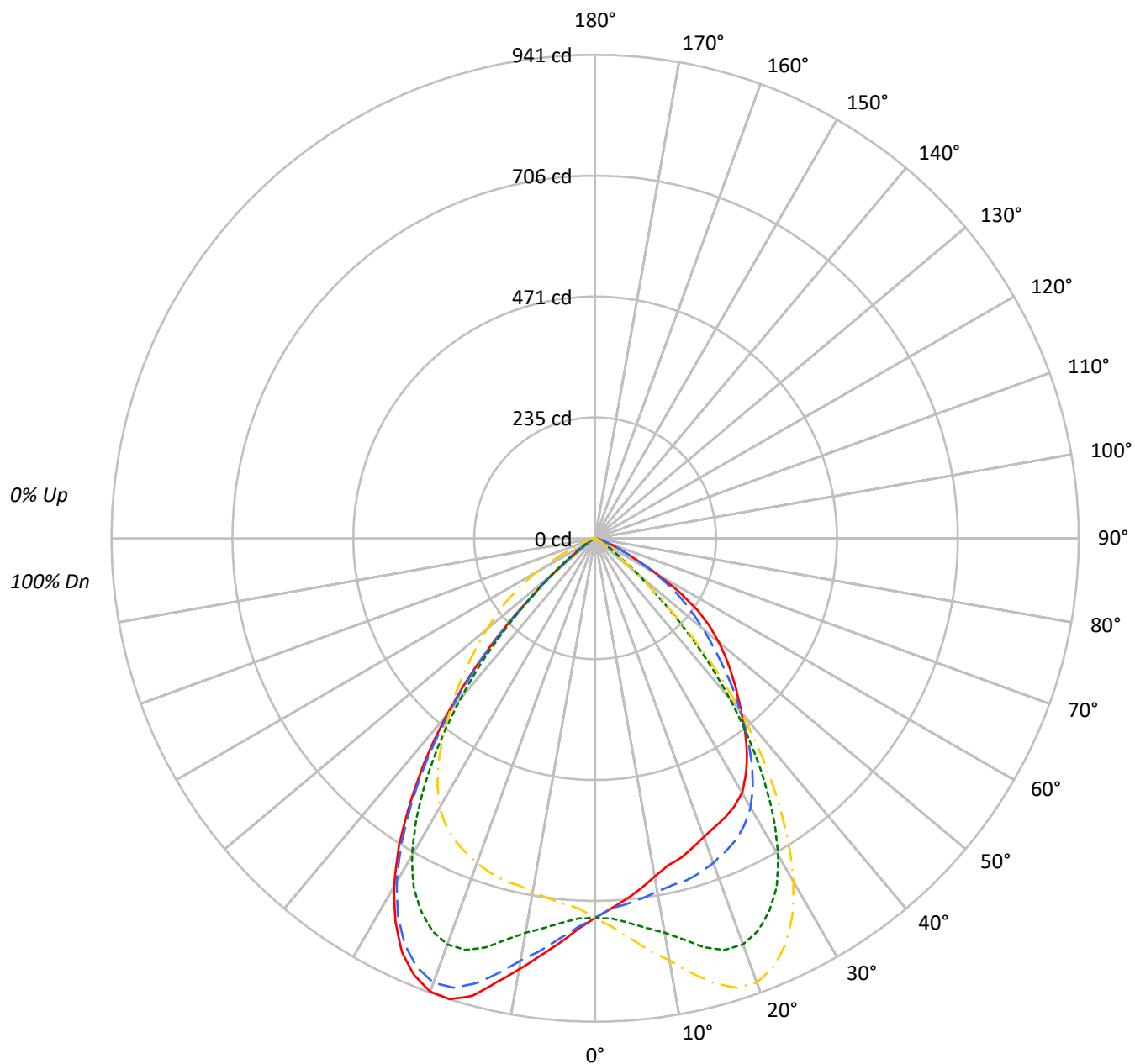
Input Watts (W): 14.39
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	91115	91115	91115	91115
5°	87241	93036	97865	93036
10°	83729	97656	106699	97656
15°	82250	105299	117762	105299
20°	81212	110417	123228	110417
25°	81549	109041	120990	109041
30°	81454	101465	111464	101465
35°	77592	86115	94186	86115
40°	71185	65518	72280	65518
45°	65710	41708	44935	41708
50°	60120	20225	19669	20225
55°	52041	8817	6301	8817
60°	33698	4342	2886	4342
65°	17658	2860	2277	2860
70°	9485	2128	1767	2128
75°	5099	1859	1382	1859
80°	3481	1421	710	1421
85°	2830	1415	0	1415



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	5.3
10°-20°	225.3	16.6
20°-30°	350.3	25.8
30°-40°	353.8	26.1
40°-50°	224.0	16.5
50°-60°	94.0	6.9
60°-70°	29.8	2.2
70°-80°	6.8	0.5
80°-90°	1.0	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°	647.6	47.7
0°-40°	1001.3	73.8
0°-60°	1319.4	97.2
0°-90°	1357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1357.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	739	739	739	739	739	
5°	705	751	790	751	705	66
15°	644	825	922	825	644	182
25°	599	801	889	801	599	276
35°	515	572	626	572	515	320
45°	377	239	258	239	377	291
55°	242	41	29	41	242	209
65°	60	10	8	10	60	67
75°	11	4	3	4	11	13
85°	2	1	0	1	2	2
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°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	721.2	714.3	720.2	722.1	722.1	721.2	723.1	721.2	718.2	729.9	721.2
5°	704.6	699.7	704.6	706.5	707.5	708.5	710.4	710.4	709.4	720.2	714.3
7.5°	687.0	684.1	688.0	690.9	694.8	693.8	696.8	697.7	699.7	712.4	706.5
10°	668.5	665.5	670.4	672.4	677.2	678.2	680.2	683.1	687.0	699.7	697.7
12.5°	652.8	651.9	654.8	658.7	663.6	664.6	666.5	671.4	677.2	690.9	691.9
15°	644.1	643.1	646.0	649.9	653.8	655.8	657.7	664.6	670.4	685.1	689.0
17.5°	631.4	631.4	634.3	638.2	643.1	645.0	648.0	654.8	662.6	677.2	682.1
20°	618.7	619.7	621.6	625.5	630.4	632.4	635.3	642.1	650.9	665.5	672.4
22.5°	608.0	610.9	611.9	614.8	619.7	622.6	623.6	631.4	639.2	651.9	660.7
25°	599.2	603.1	603.1	605.0	610.9	611.9	612.8	620.6	627.5	639.2	648.0
27.5°	587.5	591.4	591.4	594.3	598.2	600.2	600.2	607.0	613.8	622.6	629.4
30°	571.9	574.8	574.8	575.8	579.7	581.6	580.6	587.5	592.3	598.2	605.0
32.5°	545.5	550.4	548.4	551.4	553.3	555.3	553.3	559.2	563.1	568.9	570.9
35°	515.3	519.2	516.2	518.2	522.1	522.1	521.1	525.0	527.0	529.9	530.9
37.5°	480.1	483.0	481.1	482.1	484.0	485.0	483.0	487.0	487.0	487.9	486.0
40°	442.1	446.9	444.0	444.0	446.0	446.9	444.0	446.0	447.9	443.0	439.1
42.5°	408.9	413.8	410.8	410.8	410.8	411.8	407.9	408.9	408.9	402.1	396.2
45°	376.7	380.6	377.7	374.7	375.7	376.7	372.8	371.8	368.9	361.1	352.3
47.5°	345.5	349.4	345.5	343.5	343.5	343.5	338.6	335.7	331.8	321.1	310.3
50°	313.3	317.2	314.2	312.3	310.3	310.3	306.4	302.5	296.7	285.9	274.2
52.5°	280.1	283.0	280.1	278.1	276.2	276.2	271.3	268.4	261.5	250.8	238.1
55°	242.0	244.0	241.0	239.1	238.1	238.1	234.2	231.3	225.4	216.6	204.9
57.5°	191.3	195.2	190.3	192.2	192.2	191.3	188.3	187.4	185.4	177.6	168.8
60°	136.6	136.6	135.6	139.5	138.6	140.5	138.6	139.5	140.5	134.7	128.8
62.5°	89.8	92.7	90.8	92.7	94.7	94.7	93.7	95.6	97.6	94.7	91.7
65°	60.5	60.5	60.5	61.5	61.5	62.5	61.5	62.5	63.4	62.5	60.5
67.5°	40.0	41.0	40.0	41.0	40.0	41.0	41.0	41.0	42.0	41.0	40.0
70°	26.3	26.3	26.3	26.3	26.3	26.3	26.3	26.3	27.3	26.3	25.4
72.5°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
75°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
77.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
80°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	3.9	4.9	3.9	3.9
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
85°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	2.0	1.0	1.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	726.0	723.1	737.7	725.1	731.9	730.9	731.9	737.7	737.7	740.7	739.7
5°	722.1	719.2	735.8	726.0	733.8	733.8	736.8	745.6	745.6	751.4	752.4
7.5°	716.3	717.3	734.8	729.0	737.7	738.7	743.6	754.3	757.3	765.1	769.0
10°	709.4	713.4	731.9	729.9	741.7	742.6	752.4	765.1	769.0	779.7	786.5
12.5°	706.5	713.4	734.8	736.8	748.5	753.4	764.1	780.7	787.5	800.2	810.0
15°	705.5	715.3	738.7	745.6	759.2	766.0	780.7	800.2	808.0	824.6	836.3
17.5°	700.7	713.4	738.7	749.5	764.1	770.9	789.5	811.9	821.7	840.2	853.9
20°	691.9	705.5	730.9	744.6	760.2	770.0	788.5	811.9	821.7	841.2	856.8
22.5°	680.2	693.8	718.2	733.8	747.5	758.2	777.8	800.2	809.0	827.5	843.1
25°	665.5	679.2	699.7	715.3	728.0	737.7	754.3	777.8	783.6	801.2	817.8
27.5°	645.0	657.7	673.3	688.0	699.7	707.5	722.1	742.6	747.5	765.1	778.7
30°	617.7	625.5	639.2	648.9	657.7	665.5	676.3	694.8	696.8	712.4	725.1
32.5°	580.6	584.5	594.3	599.2	607.0	609.9	618.7	634.3	632.4	647.0	657.7
35°	535.7	537.7	537.7	543.6	545.5	546.5	553.3	562.1	559.2	571.9	579.7
37.5°	487.0	486.0	480.1	480.1	481.1	478.2	481.1	485.0	481.1	490.9	497.7
40°	437.2	431.3	420.6	414.7	411.8	410.8	405.0	409.9	400.1	406.9	411.8
42.5°	389.4	379.6	363.0	351.3	346.4	341.6	331.8	331.8	319.1	324.0	325.0
45°	340.6	324.0	301.5	290.8	278.1	270.3	257.6	244.9	236.2	239.1	236.2
47.5°	295.7	276.2	249.8	231.3	216.6	205.9	188.3	173.7	164.9	161.0	157.1
50°	256.7	237.1	206.9	183.5	168.8	156.1	138.6	122.0	111.2	105.4	102.5
52.5°	221.5	201.0	171.8	147.4	131.7	120.0	100.5	83.9	72.2	65.4	61.5
55°	188.3	169.8	142.5	120.0	105.4	93.7	74.2	58.6	47.8	41.0	36.1
57.5°	155.2	138.6	116.1	94.7	82.0	71.2	54.6	41.0	32.2	26.3	22.4
60°	119.1	106.4	87.8	71.2	60.5	51.7	39.0	28.3	22.4	17.6	15.6
62.5°	83.9	76.1	62.5	50.7	43.9	37.1	27.3	20.5	15.6	12.7	11.7
65°	56.6	50.7	42.9	34.2	29.3	25.4	19.5	14.6	11.7	9.8	8.8
67.5°	37.1	34.2	28.3	23.4	20.5	17.6	13.7	10.7	8.8	7.8	6.8
70°	24.4	22.4	18.5	15.6	14.6	12.7	9.8	7.8	6.8	5.9	5.9
72.5°	15.6	13.7	12.7	10.7	9.8	8.8	6.8	5.9	4.9	4.9	4.9
75°	9.8	8.8	7.8	6.8	6.8	5.9	4.9	4.9	3.9	3.9	3.9
77.5°	5.9	5.9	4.9	4.9	3.9	3.9	3.9	2.9	2.9	2.9	2.9
80°	3.9	3.9	2.9	2.9	2.9	2.9	2.0	2.0	2.0	2.0	2.0
82.5°	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	744.6	746.5	744.6	750.4	740.7	751.4	747.5	749.5	757.3	754.3	757.3
5°	759.2	763.1	763.1	770.0	761.2	773.9	770.0	773.9	781.7	781.7	785.6
7.5°	777.8	782.6	784.6	791.4	782.6	798.3	794.3	799.2	809.0	809.0	811.9
10°	797.3	803.1	807.0	814.8	805.1	822.6	818.7	825.6	834.4	835.3	840.2
12.5°	821.7	829.5	834.4	841.2	834.4	851.9	848.0	854.9	866.6	867.5	873.4
15°	849.0	858.8	864.6	872.4	864.6	884.1	880.2	888.0	896.8	900.7	906.6
17.5°	866.6	878.3	883.2	891.9	884.1	903.6	898.8	909.5	917.3	919.3	926.1
20°	869.5	880.2	887.1	893.9	887.1	906.6	901.7	910.5	920.2	922.2	927.1
22.5°	856.8	865.6	873.4	879.2	873.4	892.9	886.1	895.8	904.6	906.6	910.5
25°	827.5	838.3	846.1	850.9	845.1	863.6	857.8	866.6	874.4	878.3	879.2
27.5°	786.5	796.3	804.1	807.0	803.1	820.7	812.9	823.6	830.5	832.4	835.3
30°	730.9	739.7	747.5	749.5	746.5	759.2	755.3	765.1	771.9	773.9	775.8
32.5°	662.6	671.4	676.3	678.2	675.3	688.0	684.1	691.9	699.7	699.7	699.7
35°	585.5	593.3	596.2	602.1	595.3	608.0	604.1	610.9	617.7	617.7	618.7
37.5°	502.6	508.4	510.4	516.2	509.4	521.1	518.2	524.0	529.9	528.9	530.9
40°	413.8	419.6	421.6	426.4	420.6	430.4	428.4	434.3	439.1	439.1	439.1
42.5°	327.9	331.8	331.8	336.7	330.8	339.6	339.6	343.5	348.4	347.4	347.4
45°	238.1	237.1	239.1	238.1	238.1	245.9	245.9	247.9	251.8	249.8	250.8
47.5°	158.1	159.1	155.2	158.1	154.2	161.0	161.0	161.0	163.9	162.0	163.9
50°	100.5	97.6	95.6	95.6	94.7	99.5	97.6	98.6	100.5	98.6	100.5
52.5°	56.6	55.6	53.7	54.6	52.7	53.7	53.7	53.7	54.6	53.7	55.6
55°	33.2	30.3	29.3	29.3	28.3	29.3	28.3	28.3	28.3	27.3	28.3
57.5°	19.5	18.5	17.6	17.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
60°	13.7	12.7	12.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
62.5°	10.7	9.8	9.8	9.8	8.8	8.8	8.8	8.8	8.8	9.8	8.8
65°	7.8	7.8	7.8	7.8	7.8	7.8	6.8	7.8	7.8	7.8	7.8
67.5°	6.8	6.8	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	0.0	1.0	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



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	760.2	756.3	747.5	753.4	754.3	750.4	755.3	761.2	755.3	750.4	754.3
5°	788.5	785.6	777.8	782.6	783.6	782.6	785.6	790.4	785.6	782.6	783.6
7.5°	816.8	814.8	806.1	811.9	813.9	811.9	814.8	819.7	814.8	811.9	813.9
10°	844.1	843.1	834.4	842.2	843.1	841.2	844.1	851.9	844.1	841.2	843.1
12.5°	875.3	877.3	867.5	876.3	877.3	875.3	879.2	885.1	879.2	875.3	877.3
15°	911.5	910.5	902.7	909.5	911.5	909.5	914.4	922.2	914.4	909.5	911.5
17.5°	929.0	929.0	923.2	930.0	931.0	931.0	934.9	940.7	934.9	931.0	931.0
20°	930.0	931.0	924.1	931.9	931.9	931.9	935.8	938.8	935.8	931.9	931.9
22.5°	914.4	915.4	908.5	915.4	915.4	916.3	918.3	920.2	918.3	916.3	915.4
25°	884.1	885.1	879.2	885.1	884.1	884.1	886.1	889.0	886.1	884.1	884.1
27.5°	839.2	840.2	832.4	839.2	838.3	837.3	840.2	841.2	840.2	837.3	838.3
30°	779.7	780.7	773.9	779.7	778.7	777.8	781.7	782.6	781.7	777.8	778.7
32.5°	708.5	706.5	701.6	706.5	705.5	705.5	707.5	710.4	707.5	705.5	705.5
35°	622.6	622.6	619.7	623.6	620.6	624.5	624.5	625.5	624.5	624.5	620.6
37.5°	534.8	534.8	532.8	534.8	533.8	537.7	537.7	540.6	537.7	537.7	533.8
40°	443.0	443.0	441.1	443.0	446.0	446.0	445.0	448.9	445.0	446.0	446.0
42.5°	350.3	350.3	349.4	354.2	354.2	354.2	351.3	355.2	351.3	354.2	354.2
45°	254.7	252.7	251.8	251.8	252.7	256.7	252.7	257.6	252.7	256.7	252.7
47.5°	162.0	163.0	163.9	166.9	164.9	163.9	163.9	166.9	163.9	163.9	164.9
50°	99.5	100.5	100.5	102.5	99.5	101.5	100.5	102.5	100.5	101.5	99.5
52.5°	54.6	54.6	54.6	56.6	54.6	55.6	54.6	56.6	54.6	55.6	54.6
55°	28.3	28.3	28.3	29.3	28.3	28.3	28.3	29.3	28.3	28.3	28.3
57.5°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
60°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
62.5°	9.8	8.8	8.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
65°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P212706

CATALOG NUMBER: LD4B15D010 EU4B10208030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	753.4	747.5	756.3	760.2	757.3	754.3	757.3	749.5	747.5	751.4	740.7
5°	782.6	777.8	785.6	788.5	785.6	781.7	781.7	773.9	770.0	773.9	761.2
7.5°	811.9	806.1	814.8	816.8	811.9	809.0	809.0	799.2	794.3	798.3	782.6
10°	842.2	834.4	843.1	844.1	840.2	835.3	834.4	825.6	818.7	822.6	805.1
12.5°	876.3	867.5	877.3	875.3	873.4	867.5	866.6	854.9	848.0	851.9	834.4
15°	909.5	902.7	910.5	911.5	906.6	900.7	896.8	888.0	880.2	884.1	864.6
17.5°	930.0	923.2	929.0	929.0	926.1	919.3	917.3	909.5	898.8	903.6	884.1
20°	931.9	924.1	931.0	930.0	927.1	922.2	920.2	910.5	901.7	906.6	887.1
22.5°	915.4	908.5	915.4	914.4	910.5	906.6	904.6	895.8	886.1	892.9	873.4
25°	885.1	879.2	885.1	884.1	879.2	878.3	874.4	866.6	857.8	863.6	845.1
27.5°	839.2	832.4	840.2	839.2	835.3	832.4	830.5	823.6	812.9	820.7	803.1
30°	779.7	773.9	780.7	779.7	775.8	773.9	771.9	765.1	755.3	759.2	746.5
32.5°	706.5	701.6	706.5	708.5	699.7	699.7	699.7	691.9	684.1	688.0	675.3
35°	623.6	619.7	622.6	622.6	618.7	617.7	617.7	610.9	604.1	608.0	595.3
37.5°	534.8	532.8	534.8	534.8	530.9	528.9	529.9	524.0	518.2	521.1	509.4
40°	443.0	441.1	443.0	443.0	439.1	439.1	439.1	434.3	428.4	430.4	420.6
42.5°	354.2	349.4	350.3	350.3	347.4	347.4	348.4	343.5	339.6	339.6	330.8
45°	251.8	251.8	252.7	254.7	250.8	249.8	251.8	247.9	245.9	245.9	238.1
47.5°	166.9	163.9	163.0	162.0	163.9	162.0	163.9	161.0	161.0	161.0	154.2
50°	102.5	100.5	100.5	99.5	100.5	98.6	100.5	98.6	97.6	99.5	94.7
52.5°	56.6	54.6	54.6	54.6	55.6	53.7	54.6	53.7	53.7	53.7	52.7
55°	29.3	28.3	28.3	28.3	28.3	27.3	28.3	28.3	28.3	29.3	28.3
57.5°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
60°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
62.5°	9.8	8.8	8.8	9.8	8.8	9.8	8.8	8.8	8.8	8.8	8.8
65°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	6.8	7.8	7.8
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P212706

CATALOG NUMBER: LD4B15D010 EU4B10208030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	750.4	744.6	746.5	744.6	739.7	740.7	737.7	737.7	731.9	730.9	731.9
5°	770.0	763.1	763.1	759.2	752.4	751.4	745.6	745.6	736.8	733.8	733.8
7.5°	791.4	784.6	782.6	777.8	769.0	765.1	757.3	754.3	743.6	738.7	737.7
10°	814.8	807.0	803.1	797.3	786.5	779.7	769.0	765.1	752.4	742.6	741.7
12.5°	841.2	834.4	829.5	821.7	810.0	800.2	787.5	780.7	764.1	753.4	748.5
15°	872.4	864.6	858.8	849.0	836.3	824.6	808.0	800.2	780.7	766.0	759.2
17.5°	891.9	883.2	878.3	866.6	853.9	840.2	821.7	811.9	789.5	770.9	764.1
20°	893.9	887.1	880.2	869.5	856.8	841.2	821.7	811.9	788.5	770.0	760.2
22.5°	879.2	873.4	865.6	856.8	843.1	827.5	809.0	800.2	777.8	758.2	747.5
25°	850.9	846.1	838.3	827.5	817.8	801.2	783.6	777.8	754.3	737.7	728.0
27.5°	807.0	804.1	796.3	786.5	778.7	765.1	747.5	742.6	722.1	707.5	699.7
30°	749.5	747.5	739.7	730.9	725.1	712.4	696.8	694.8	676.3	665.5	657.7
32.5°	678.2	676.3	671.4	662.6	657.7	647.0	632.4	634.3	618.7	609.9	607.0
35°	602.1	596.2	593.3	585.5	579.7	571.9	559.2	562.1	553.3	546.5	545.5
37.5°	516.2	510.4	508.4	502.6	497.7	490.9	481.1	485.0	481.1	478.2	481.1
40°	426.4	421.6	419.6	413.8	411.8	406.9	400.1	409.9	405.0	410.8	411.8
42.5°	336.7	331.8	331.8	327.9	325.0	324.0	319.1	331.8	331.8	341.6	346.4
45°	238.1	239.1	237.1	238.1	236.2	239.1	236.2	244.9	257.6	270.3	278.1
47.5°	158.1	155.2	159.1	158.1	157.1	161.0	164.9	173.7	188.3	205.9	216.6
50°	95.6	95.6	97.6	100.5	102.5	105.4	111.2	122.0	138.6	156.1	168.8
52.5°	54.6	53.7	55.6	56.6	61.5	65.4	72.2	83.9	100.5	120.0	131.7
55°	29.3	29.3	30.3	33.2	36.1	41.0	47.8	58.6	74.2	93.7	105.4
57.5°	17.6	17.6	18.5	19.5	22.4	26.3	32.2	41.0	54.6	71.2	82.0
60°	11.7	12.7	12.7	13.7	15.6	17.6	22.4	28.3	39.0	51.7	60.5
62.5°	9.8	9.8	9.8	10.7	11.7	12.7	15.6	20.5	27.3	37.1	43.9
65°	7.8	7.8	7.8	7.8	8.8	9.8	11.7	14.6	19.5	25.4	29.3
67.5°	5.9	5.9	6.8	6.8	6.8	7.8	8.8	10.7	13.7	17.6	20.5
70°	4.9	4.9	4.9	4.9	5.9	5.9	6.8	7.8	9.8	12.7	14.6
72.5°	3.9	3.9	3.9	3.9	4.9	4.9	4.9	5.9	6.8	8.8	9.8
75°	2.9	2.9	2.9	2.9	3.9	3.9	3.9	4.9	4.9	5.9	6.8
77.5°	2.0	2.0	2.0	2.0	2.9	2.9	2.9	2.9	3.9	3.9	3.9
80°	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	2.9
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
85°	0.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P212706

CATALOG NUMBER: LD4B15D010 EU4B10208030 4LBSWL11

CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7	738.7
2.5°	725.1	737.7	723.1	726.0	721.2	729.9	718.2	721.2	723.1	721.2	722.1
5°	726.0	735.8	719.2	722.1	714.3	720.2	709.4	710.4	710.4	708.5	707.5
7.5°	729.0	734.8	717.3	716.3	706.5	712.4	699.7	697.7	696.8	693.8	694.8
10°	729.9	731.9	713.4	709.4	697.7	699.7	687.0	683.1	680.2	678.2	677.2
12.5°	736.8	734.8	713.4	706.5	691.9	690.9	677.2	671.4	666.5	664.6	663.6
15°	745.6	738.7	715.3	705.5	689.0	685.1	670.4	664.6	657.7	655.8	653.8
17.5°	749.5	738.7	713.4	700.7	682.1	677.2	662.6	654.8	648.0	645.0	643.1
20°	744.6	730.9	705.5	691.9	672.4	665.5	650.9	642.1	635.3	632.4	630.4
22.5°	733.8	718.2	693.8	680.2	660.7	651.9	639.2	631.4	623.6	622.6	619.7
25°	715.3	699.7	679.2	665.5	648.0	639.2	627.5	620.6	612.8	611.9	610.9
27.5°	688.0	673.3	657.7	645.0	629.4	622.6	613.8	607.0	600.2	600.2	598.2
30°	648.9	639.2	625.5	617.7	605.0	598.2	592.3	587.5	580.6	581.6	579.7
32.5°	599.2	594.3	584.5	580.6	570.9	568.9	563.1	559.2	553.3	555.3	553.3
35°	543.6	537.7	537.7	535.7	530.9	529.9	527.0	525.0	521.1	522.1	522.1
37.5°	480.1	480.1	486.0	487.0	486.0	487.9	487.0	487.0	483.0	485.0	484.0
40°	414.7	420.6	431.3	437.2	439.1	443.0	447.9	446.0	444.0	446.9	446.0
42.5°	351.3	363.0	379.6	389.4	396.2	402.1	408.9	408.9	407.9	411.8	410.8
45°	290.8	301.5	324.0	340.6	352.3	361.1	368.9	371.8	372.8	376.7	375.7
47.5°	231.3	249.8	276.2	295.7	310.3	321.1	331.8	335.7	338.6	343.5	343.5
50°	183.5	206.9	237.1	256.7	274.2	285.9	296.7	302.5	306.4	310.3	310.3
52.5°	147.4	171.8	201.0	221.5	238.1	250.8	261.5	268.4	271.3	276.2	276.2
55°	120.0	142.5	169.8	188.3	204.9	216.6	225.4	231.3	234.2	238.1	238.1
57.5°	94.7	116.1	138.6	155.2	168.8	177.6	185.4	187.4	188.3	191.3	192.2
60°	71.2	87.8	106.4	119.1	128.8	134.7	140.5	139.5	138.6	140.5	138.6
62.5°	50.7	62.5	76.1	83.9	91.7	94.7	97.6	95.6	93.7	94.7	94.7
65°	34.2	42.9	50.7	56.6	60.5	62.5	63.4	62.5	61.5	62.5	61.5
67.5°	23.4	28.3	34.2	37.1	40.0	41.0	42.0	41.0	41.0	41.0	40.0
70°	15.6	18.5	22.4	24.4	25.4	26.3	27.3	26.3	26.3	26.3	26.3
72.5°	10.7	12.7	13.7	15.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
75°	6.8	7.8	8.8	9.8	10.7	10.7	10.7	10.7	10.7	10.7	10.7
77.5°	4.9	4.9	5.9	5.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8
80°	2.9	2.9	3.9	3.9	3.9	3.9	4.9	3.9	4.9	4.9	4.9
82.5°	2.0	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9
85°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	2.0	2.0	2.0
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: P212706

CATALOG NUMBER: LD4B15D010 EU4B10208030 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	738.7	738.7	738.7	738.7
2.5°	722.1	720.2	714.3	721.2
5°	706.5	704.6	699.7	704.6
7.5°	690.9	688.0	684.1	687.0
10°	672.4	670.4	665.5	668.5
12.5°	658.7	654.8	651.9	652.8
15°	649.9	646.0	643.1	644.1
17.5°	638.2	634.3	631.4	631.4
20°	625.5	621.6	619.7	618.7
22.5°	614.8	611.9	610.9	608.0
25°	605.0	603.1	603.1	599.2
27.5°	594.3	591.4	591.4	587.5
30°	575.8	574.8	574.8	571.9
32.5°	551.4	548.4	550.4	545.5
35°	518.2	516.2	519.2	515.3
37.5°	482.1	481.1	483.0	480.1
40°	444.0	444.0	446.9	442.1
42.5°	410.8	410.8	413.8	408.9
45°	374.7	377.7	380.6	376.7
47.5°	343.5	345.5	349.4	345.5
50°	312.3	314.2	317.2	313.3
52.5°	278.1	280.1	283.0	280.1
55°	239.1	241.0	244.0	242.0
57.5°	192.2	190.3	195.2	191.3
60°	139.5	135.6	136.6	136.6
62.5°	92.7	90.8	92.7	89.8
65°	61.5	60.5	60.5	60.5
67.5°	41.0	40.0	41.0	40.0
70°	26.3	26.3	26.3	26.3
72.5°	16.6	16.6	16.6	16.6
75°	10.7	10.7	10.7	10.7
77.5°	6.8	6.8	6.8	6.8
80°	4.9	4.9	4.9	4.9
82.5°	2.9	2.9	2.9	2.9
85°	2.0	2.0	2.0	2.0
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)