

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: P212730

Luminaire Tested: **LD4B20D010 EU4B10209730 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212730
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: LD4B20D010 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: 1372.1 lumens
Efficiency: N/A
Efficacy: 66.0 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

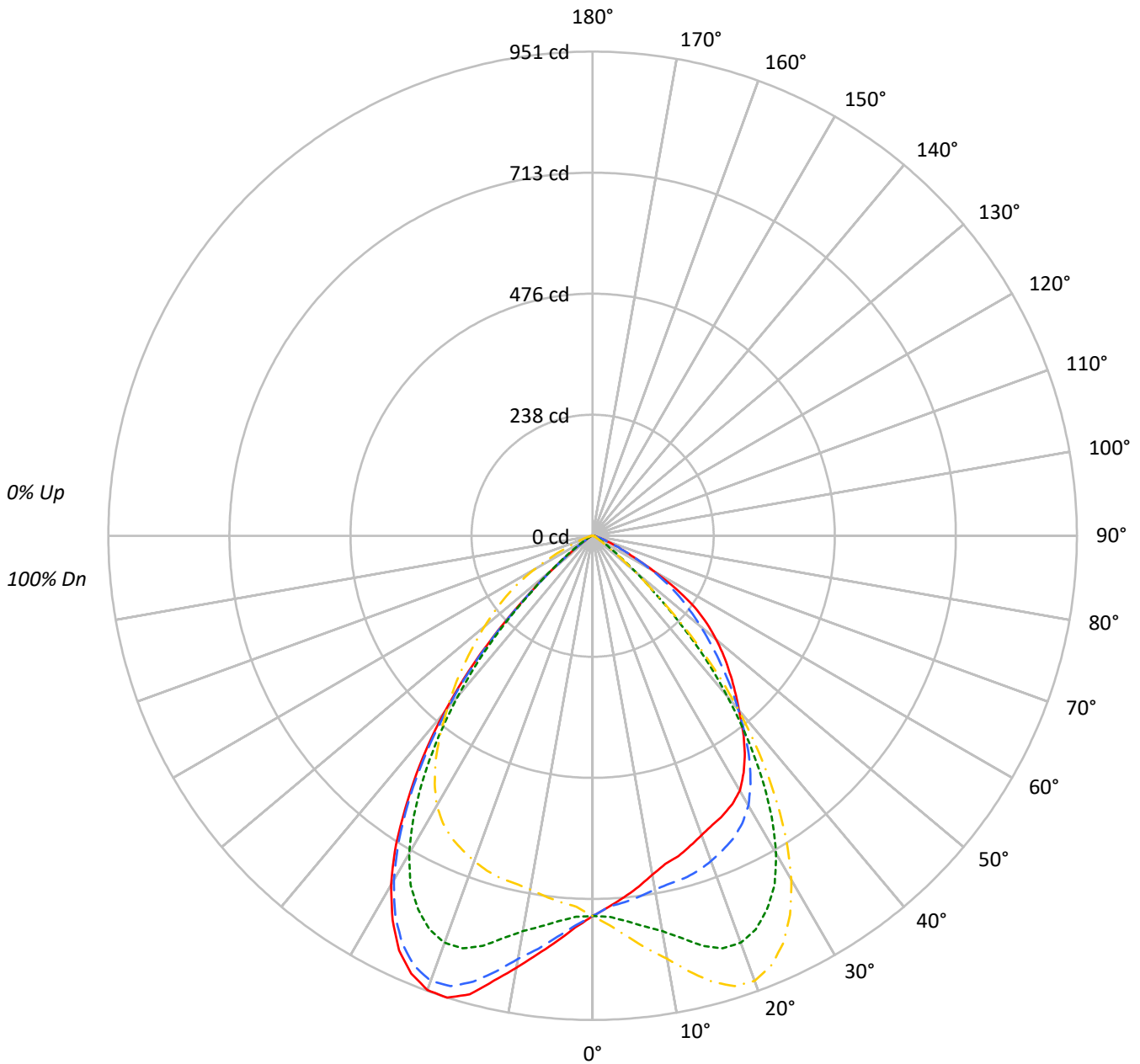
Input Watts (W): 20.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	110	107	104	102	103	100	99	99	97	96	95	94	93	91																			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82																			
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73																			
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66																			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60																			
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54																			
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49																			
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	48	43	53	47	43	52	47	43	52	46	43	41																			
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	92127	92127	92127	92127
5°	88207	94076	98954	94076
10°	84655	98746	107889	98746
15°	83156	106474	119077	106474
20°	82117	111651	124594	111651
25°	82447	110252	122337	110252
30°	82351	102590	112717	102590
35°	78451	87064	95240	87064
40°	71974	66258	73085	66258
45°	66443	42161	45441	42161
50°	60772	20456	19880	20456
55°	52622	8903	6365	8903
60°	34068	4391	2911	4391
65°	17862	2889	2306	2889
70°	9593	2128	1767	2128
75°	5195	1859	1430	1859
80°	3481	1421	710	1421
85°	2830	1415	0	1415



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	5.3
10°-20°	227.8	16.6
20°-30°	354.2	25.8
30°-40°	357.7	26.1
40°-50°	226.5	16.5
50°-60°	95.1	6.9
60°-70°	30.1	2.2
70°-80°	6.9	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°	654.8	47.7
0°-40°	1012.5	73.8
0°-60°	1334.1	97.2
0°-90°	1372.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1372.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	747	747	747	747	747	
5°	712	760	799	760	712	67
15°	651	834	932	834	651	184
25°	606	810	899	810	606	279
35°	521	578	632	578	521	324
45°	381	242	260	242	381	294
55°	245	41	30	41	245	211
65°	61	10	8	10	61	68
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°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	729.2	722.3	728.2	730.2	730.2	729.2	731.2	729.2	726.2	738.1	729.2
5°	712.4	707.5	712.4	714.4	715.4	716.4	718.3	718.3	717.3	728.2	722.3
7.5°	694.7	691.7	695.6	698.6	702.5	701.6	704.5	705.5	707.5	720.3	714.4
10°	675.9	672.9	677.9	679.9	684.8	685.8	687.7	690.7	694.7	707.5	705.5
12.5°	660.1	659.1	662.1	666.0	671.0	672.0	673.9	678.9	684.8	698.6	699.6
15°	651.2	650.2	653.2	657.2	661.1	663.1	665.1	672.0	677.9	692.7	696.6
17.5°	638.4	638.4	641.4	645.3	650.2	652.2	655.2	662.1	670.0	684.8	689.7
20°	625.6	626.6	628.5	632.5	637.4	639.4	642.4	649.3	658.1	672.9	679.9
22.5°	614.7	617.7	618.7	621.6	626.6	629.5	630.5	638.4	646.3	659.1	668.0
25°	605.8	609.8	609.8	611.8	617.7	618.7	619.7	627.6	634.5	646.3	655.2
27.5°	594.0	598.0	598.0	600.9	604.9	606.8	606.8	613.7	620.6	629.5	636.4
30°	578.2	581.2	581.2	582.2	586.1	588.1	587.1	594.0	598.9	604.9	611.8
32.5°	551.6	556.5	554.5	557.5	559.5	561.4	559.5	565.4	569.3	575.3	577.2
35°	521.0	524.9	522.0	523.9	527.9	527.9	526.9	530.9	532.8	535.8	536.8
37.5°	485.5	488.4	486.5	487.4	489.4	490.4	488.4	492.4	492.4	493.4	491.4
40°	447.0	451.9	449.0	449.0	450.9	451.9	449.0	450.9	452.9	448.0	444.0
42.5°	413.4	418.4	415.4	415.4	415.4	416.4	412.4	413.4	413.4	406.5	400.6
45°	380.9	384.8	381.9	378.9	379.9	380.9	376.9	375.9	373.0	365.1	356.2
47.5°	349.3	353.2	349.3	347.3	347.3	347.3	342.4	339.4	335.5	324.6	313.8
50°	316.7	320.7	317.7	315.8	313.8	313.8	309.8	305.9	300.0	289.1	277.3
52.5°	283.2	286.1	283.2	281.2	279.2	279.2	274.3	271.3	264.4	253.6	240.8
55°	244.7	246.7	243.7	241.7	240.8	240.8	236.8	233.9	227.9	219.1	207.2
57.5°	193.4	197.3	192.4	194.4	194.4	193.4	190.4	189.5	187.5	179.6	170.7
60°	138.1	138.1	137.2	141.1	140.1	142.1	140.1	141.1	142.1	136.2	130.2
62.5°	90.8	93.7	91.8	93.7	95.7	95.7	94.7	96.7	98.7	95.7	92.8
65°	61.2	61.2	61.2	62.2	62.2	63.2	62.2	63.2	64.1	63.2	61.2
67.5°	40.5	41.4	40.5	41.4	40.5	41.4	41.4	41.4	42.4	41.4	40.5
70°	26.6	26.6	26.6	26.6	26.6	26.6	26.6	26.6	27.6	26.6	25.7
72.5°	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
75°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
77.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
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°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	734.1	731.2	746.0	733.1	740.0	739.1	740.0	746.0	746.0	748.9	747.9
5°	730.2	727.2	744.0	734.1	742.0	742.0	745.0	753.9	753.9	759.8	760.8
7.5°	724.3	725.2	743.0	737.1	746.0	746.9	751.9	762.7	765.7	773.6	777.5
10°	717.3	721.3	740.0	738.1	749.9	750.9	760.8	773.6	777.5	788.4	795.3
12.5°	714.4	721.3	743.0	745.0	756.8	761.7	772.6	789.4	796.3	809.1	819.0
15°	713.4	723.3	746.9	753.9	767.7	774.6	789.4	809.1	817.0	833.8	845.6
17.5°	708.5	721.3	746.9	757.8	772.6	779.5	798.3	821.0	830.8	849.6	863.4
20°	699.6	713.4	739.1	752.9	768.7	778.5	797.3	821.0	830.8	850.6	866.3
22.5°	687.7	701.6	726.2	742.0	755.8	766.7	786.4	809.1	818.0	836.7	852.5
25°	672.9	686.8	707.5	723.3	736.1	746.0	762.7	786.4	792.3	810.1	826.9
27.5°	652.2	665.1	680.8	695.6	707.5	715.4	730.2	750.9	755.8	773.6	787.4
30°	624.6	632.5	646.3	656.2	665.1	672.9	683.8	702.5	704.5	720.3	733.1
32.5°	587.1	591.0	600.9	605.8	613.7	616.7	625.6	641.4	639.4	654.2	665.1
35°	541.7	543.7	543.7	549.6	551.6	552.6	559.5	568.4	565.4	578.2	586.1
37.5°	492.4	491.4	485.5	485.5	486.5	483.5	486.5	490.4	486.5	496.3	503.2
40°	442.1	436.1	425.3	419.4	416.4	415.4	409.5	414.4	404.6	411.5	416.4
42.5°	393.7	383.8	367.1	355.2	350.3	345.4	335.5	335.5	322.7	327.6	328.6
45°	344.4	327.6	304.9	294.0	281.2	273.3	260.5	247.7	238.8	241.7	238.8
47.5°	299.0	279.2	252.6	233.9	219.1	208.2	190.4	175.6	166.8	162.8	158.9
50°	259.5	239.8	209.2	185.5	170.7	157.9	140.1	123.3	112.5	106.6	103.6
52.5°	224.0	203.3	173.7	149.0	133.2	121.4	101.6	84.9	73.0	66.1	62.2
55°	190.4	171.7	144.1	121.4	106.6	94.7	75.0	59.2	48.3	41.4	36.5
57.5°	156.9	140.1	117.4	95.7	82.9	72.0	55.3	41.4	32.6	26.6	22.7
60°	120.4	107.6	88.8	72.0	61.2	52.3	39.5	28.6	22.7	17.8	15.8
62.5°	84.9	77.0	63.2	51.3	44.4	37.5	27.6	20.7	15.8	12.8	11.8
65°	57.2	51.3	43.4	34.5	29.6	25.7	19.7	14.8	11.8	9.9	8.9
67.5°	37.5	34.5	28.6	23.7	20.7	17.8	13.8	10.9	8.9	7.9	6.9
70°	24.7	22.7	18.7	15.8	14.8	12.8	9.9	7.9	6.9	5.9	5.9
72.5°	15.8	13.8	12.8	10.9	9.9	8.9	6.9	5.9	4.9	4.9	4.9
75°	9.9	8.9	7.9	6.9	6.9	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	3.0	3.0	3.0	3.0
80°	3.9	3.9	3.0	3.0	3.0	3.0	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°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	752.9	754.8	752.9	758.8	748.9	759.8	755.8	757.8	765.7	762.7	765.7
5°	767.7	771.6	771.6	778.5	769.6	782.5	778.5	782.5	790.4	790.4	794.3
7.5°	786.4	791.4	793.3	800.2	791.4	807.1	803.2	808.1	818.0	818.0	821.0
10°	806.2	812.1	816.0	823.9	814.0	831.8	827.9	834.8	843.6	844.6	849.6
12.5°	830.8	838.7	843.6	850.6	843.6	861.4	857.5	864.4	876.2	877.2	883.1
15°	858.4	868.3	874.2	882.1	874.2	894.0	890.0	897.9	906.8	910.7	916.7
17.5°	876.2	888.0	893.0	901.9	894.0	913.7	908.8	919.6	927.5	929.5	936.4
20°	879.2	890.0	896.9	903.8	896.9	916.7	911.7	920.6	930.5	932.5	937.4
22.5°	866.3	875.2	883.1	889.0	883.1	902.9	895.9	905.8	914.7	916.7	920.6
25°	836.7	847.6	855.5	860.4	854.5	873.2	867.3	876.2	884.1	888.0	889.0
27.5°	795.3	805.2	813.1	816.0	812.1	829.8	821.9	832.8	839.7	841.7	844.6
30°	739.1	747.9	755.8	757.8	754.8	767.7	763.7	773.6	780.5	782.5	784.4
32.5°	670.0	678.9	683.8	685.8	682.8	695.6	691.7	699.6	707.5	707.5	707.5
35°	592.0	599.9	602.9	608.8	601.9	614.7	610.8	617.7	624.6	624.6	625.6
37.5°	508.2	514.1	516.1	522.0	515.1	526.9	523.9	529.9	535.8	534.8	536.8
40°	418.4	424.3	426.3	431.2	425.3	435.1	433.2	439.1	444.0	444.0	444.0
42.5°	331.5	335.5	335.5	340.4	334.5	343.4	343.4	347.3	352.3	351.3	351.3
45°	240.8	239.8	241.7	240.8	240.8	248.7	248.7	250.6	254.6	252.6	253.6
47.5°	159.8	160.8	156.9	159.8	155.9	162.8	162.8	162.8	165.8	163.8	165.8
50°	101.6	98.7	96.7	96.7	95.7	100.6	98.7	99.7	101.6	99.7	101.6
52.5°	57.2	56.2	54.3	55.3	53.3	54.3	54.3	54.3	55.3	54.3	56.2
55°	33.5	30.6	29.6	29.6	28.6	29.6	28.6	28.6	28.6	27.6	28.6
57.5°	19.7	18.7	17.8	17.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
60°	13.8	12.8	12.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
62.5°	10.9	9.9	9.9	9.9	8.9	8.9	8.9	8.9	8.9	9.9	8.9
65°	7.9	7.9	7.9	7.9	7.9	7.9	6.9	7.9	7.9	7.9	7.9
67.5°	6.9	6.9	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°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	768.7	764.7	755.8	761.7	762.7	758.8	763.7	769.6	763.7	758.8	762.7
5°	797.3	794.3	786.4	791.4	792.3	791.4	794.3	799.2	794.3	791.4	792.3
7.5°	825.9	823.9	815.0	821.0	822.9	821.0	823.9	828.8	823.9	821.0	822.9
10°	853.5	852.5	843.6	851.5	852.5	850.6	853.5	861.4	853.5	850.6	852.5
12.5°	885.1	887.1	877.2	886.1	887.1	885.1	889.0	895.0	889.0	885.1	887.1
15°	921.6	920.6	912.7	919.6	921.6	919.6	924.6	932.5	924.6	919.6	921.6
17.5°	939.4	939.4	933.4	940.3	941.3	941.3	945.3	951.2	945.3	941.3	941.3
20°	940.3	941.3	934.4	942.3	942.3	942.3	946.3	949.2	946.3	942.3	942.3
22.5°	924.6	925.5	918.6	925.5	925.5	926.5	928.5	930.5	928.5	926.5	925.5
25°	894.0	895.0	889.0	895.0	894.0	894.0	895.9	898.9	895.9	894.0	894.0
27.5°	848.6	849.6	841.7	848.6	847.6	846.6	849.6	850.6	849.6	846.6	847.6
30°	788.4	789.4	782.5	788.4	787.4	786.4	790.4	791.4	790.4	786.4	787.4
32.5°	716.4	714.4	709.5	714.4	713.4	713.4	715.4	718.3	715.4	713.4	713.4
35°	629.5	629.5	626.6	630.5	627.6	631.5	631.5	632.5	631.5	631.5	627.6
37.5°	540.7	540.7	538.8	540.7	539.7	543.7	543.7	546.6	543.7	543.7	539.7
40°	448.0	448.0	446.0	448.0	450.9	450.9	449.9	453.9	449.9	450.9	450.9
42.5°	354.2	354.2	353.2	358.2	358.2	358.2	355.2	359.2	355.2	358.2	358.2
45°	257.5	255.6	254.6	254.6	255.6	259.5	255.6	260.5	255.6	259.5	255.6
47.5°	163.8	164.8	165.8	168.7	166.8	165.8	165.8	168.7	165.8	165.8	166.8
50°	100.6	101.6	101.6	103.6	100.6	102.6	101.6	103.6	101.6	102.6	100.6
52.5°	55.3	55.3	55.3	57.2	55.3	56.2	55.3	57.2	55.3	56.2	55.3
55°	28.6	28.6	28.6	29.6	28.6	28.6	28.6	29.6	28.6	28.6	28.6
57.5°	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
60°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
62.5°	9.9	8.9	8.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
65°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
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°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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: P212730

CATALOG NUMBER: LD4B20D010 EU4B10209730 4LBSWLI1

CANDELA DISTRIBUTION (continued):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	761.7	755.8	764.7	768.7	765.7	762.7	765.7	757.8	755.8	759.8	748.9
5°	791.4	786.4	794.3	797.3	794.3	790.4	790.4	782.5	778.5	782.5	769.6
7.5°	821.0	815.0	823.9	825.9	821.0	818.0	818.0	808.1	803.2	807.1	791.4
10°	851.5	843.6	852.5	853.5	849.6	844.6	843.6	834.8	827.9	831.8	814.0
12.5°	886.1	877.2	887.1	885.1	883.1	877.2	876.2	864.4	857.5	861.4	843.6
15°	919.6	912.7	920.6	921.6	916.7	910.7	906.8	897.9	890.0	894.0	874.2
17.5°	940.3	933.4	939.4	939.4	936.4	929.5	927.5	919.6	908.8	913.7	894.0
20°	942.3	934.4	941.3	940.3	937.4	932.5	930.5	920.6	911.7	916.7	896.9
22.5°	925.5	918.6	925.5	924.6	920.6	916.7	914.7	905.8	895.9	902.9	883.1
25°	895.0	889.0	895.0	894.0	889.0	888.0	884.1	876.2	867.3	873.2	854.5
27.5°	848.6	841.7	849.6	848.6	844.6	841.7	839.7	832.8	821.9	829.8	812.1
30°	788.4	782.5	789.4	788.4	784.4	782.5	780.5	773.6	763.7	767.7	754.8
32.5°	714.4	709.5	714.4	716.4	707.5	707.5	707.5	699.6	691.7	695.6	682.8
35°	630.5	626.6	629.5	629.5	625.6	624.6	624.6	617.7	610.8	614.7	601.9
37.5°	540.7	538.8	540.7	540.7	536.8	534.8	535.8	529.9	523.9	526.9	515.1
40°	448.0	446.0	448.0	448.0	444.0	444.0	444.0	439.1	433.2	435.1	425.3
42.5°	358.2	353.2	354.2	354.2	351.3	351.3	352.3	347.3	343.4	343.4	334.5
45°	254.6	254.6	255.6	257.5	253.6	252.6	254.6	250.6	248.7	248.7	240.8
47.5°	168.7	165.8	164.8	163.8	165.8	163.8	165.8	162.8	162.8	162.8	155.9
50°	103.6	101.6	101.6	100.6	101.6	99.7	101.6	99.7	98.7	100.6	95.7
52.5°	57.2	55.3	55.3	55.3	56.2	54.3	55.3	54.3	54.3	54.3	53.3
55°	29.6	28.6	28.6	28.6	28.6	27.6	28.6	28.6	28.6	29.6	28.6
57.5°	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
60°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
62.5°	9.9	8.9	8.9	9.9	8.9	9.9	8.9	8.9	8.9	8.9	8.9
65°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.9	7.9	7.9
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°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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



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CANDELA DISTRIBUTION (continued):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	758.8	752.9	754.8	752.9	747.9	748.9	746.0	746.0	740.0	739.1	740.0
5°	778.5	771.6	771.6	767.7	760.8	759.8	753.9	753.9	745.0	742.0	742.0
7.5°	800.2	793.3	791.4	786.4	777.5	773.6	765.7	762.7	751.9	746.9	746.0
10°	823.9	816.0	812.1	806.2	795.3	788.4	777.5	773.6	760.8	750.9	749.9
12.5°	850.6	843.6	838.7	830.8	819.0	809.1	796.3	789.4	772.6	761.7	756.8
15°	882.1	874.2	868.3	858.4	845.6	833.8	817.0	809.1	789.4	774.6	767.7
17.5°	901.9	893.0	888.0	876.2	863.4	849.6	830.8	821.0	798.3	779.5	772.6
20°	903.8	896.9	890.0	879.2	866.3	850.6	830.8	821.0	797.3	778.5	768.7
22.5°	889.0	883.1	875.2	866.3	852.5	836.7	818.0	809.1	786.4	766.7	755.8
25°	860.4	855.5	847.6	836.7	826.9	810.1	792.3	786.4	762.7	746.0	736.1
27.5°	816.0	813.1	805.2	795.3	787.4	773.6	755.8	750.9	730.2	715.4	707.5
30°	757.8	755.8	747.9	739.1	733.1	720.3	704.5	702.5	683.8	672.9	665.1
32.5°	685.8	683.8	678.9	670.0	665.1	654.2	639.4	641.4	625.6	616.7	613.7
35°	608.8	602.9	599.9	592.0	586.1	578.2	565.4	568.4	559.5	552.6	551.6
37.5°	522.0	516.1	514.1	508.2	503.2	496.3	486.5	490.4	486.5	483.5	486.5
40°	431.2	426.3	424.3	418.4	416.4	411.5	404.6	414.4	409.5	415.4	416.4
42.5°	340.4	335.5	335.5	331.5	328.6	327.6	322.7	335.5	335.5	345.4	350.3
45°	240.8	241.7	239.8	240.8	238.8	241.7	238.8	247.7	260.5	273.3	281.2
47.5°	159.8	156.9	160.8	159.8	158.9	162.8	166.8	175.6	190.4	208.2	219.1
50°	96.7	96.7	98.7	101.6	103.6	106.6	112.5	123.3	140.1	157.9	170.7
52.5°	55.3	54.3	56.2	57.2	62.2	66.1	73.0	84.9	101.6	121.4	133.2
55°	29.6	29.6	30.6	33.5	36.5	41.4	48.3	59.2	75.0	94.7	106.6
57.5°	17.8	17.8	18.7	19.7	22.7	26.6	32.6	41.4	55.3	72.0	82.9
60°	11.8	12.8	12.8	13.8	15.8	17.8	22.7	28.6	39.5	52.3	61.2
62.5°	9.9	9.9	9.9	10.9	11.8	12.8	15.8	20.7	27.6	37.5	44.4
65°	7.9	7.9	7.9	7.9	8.9	9.9	11.8	14.8	19.7	25.7	29.6
67.5°	5.9	5.9	6.9	6.9	6.9	7.9	8.9	10.9	13.8	17.8	20.7
70°	4.9	4.9	4.9	4.9	5.9	5.9	6.9	7.9	9.9	12.8	14.8
72.5°	3.9	3.9	3.9	3.9	4.9	4.9	4.9	5.9	6.9	8.9	9.9
75°	3.0	3.0	3.0	3.0	3.9	3.9	3.9	4.9	4.9	5.9	6.9
77.5°	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	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	3.0	3.0
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



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CANDELA DISTRIBUTION (continued):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	733.1	746.0	731.2	734.1	729.2	738.1	726.2	729.2	731.2	729.2	730.2
5°	734.1	744.0	727.2	730.2	722.3	728.2	717.3	718.3	718.3	716.4	715.4
7.5°	737.1	743.0	725.2	724.3	714.4	720.3	707.5	705.5	704.5	701.6	702.5
10°	738.1	740.0	721.3	717.3	705.5	707.5	694.7	690.7	687.7	685.8	684.8
12.5°	745.0	743.0	721.3	714.4	699.6	698.6	684.8	678.9	673.9	672.0	671.0
15°	753.9	746.9	723.3	713.4	696.6	692.7	677.9	672.0	665.1	663.1	661.1
17.5°	757.8	746.9	721.3	708.5	689.7	684.8	670.0	662.1	655.2	652.2	650.2
20°	752.9	739.1	713.4	699.6	679.9	672.9	658.1	649.3	642.4	639.4	637.4
22.5°	742.0	726.2	701.6	687.7	668.0	659.1	646.3	638.4	630.5	629.5	626.6
25°	723.3	707.5	686.8	672.9	655.2	646.3	634.5	627.6	619.7	618.7	617.7
27.5°	695.6	680.8	665.1	652.2	636.4	629.5	620.6	613.7	606.8	606.8	604.9
30°	656.2	646.3	632.5	624.6	611.8	604.9	598.9	594.0	587.1	588.1	586.1
32.5°	605.8	600.9	591.0	587.1	577.2	575.3	569.3	565.4	559.5	561.4	559.5
35°	549.6	543.7	543.7	541.7	536.8	535.8	532.8	530.9	526.9	527.9	527.9
37.5°	485.5	485.5	491.4	492.4	491.4	493.4	492.4	492.4	488.4	490.4	489.4
40°	419.4	425.3	436.1	442.1	444.0	448.0	452.9	450.9	449.0	451.9	450.9
42.5°	355.2	367.1	383.8	393.7	400.6	406.5	413.4	413.4	412.4	416.4	415.4
45°	294.0	304.9	327.6	344.4	356.2	365.1	373.0	375.9	376.9	380.9	379.9
47.5°	233.9	252.6	279.2	299.0	313.8	324.6	335.5	339.4	342.4	347.3	347.3
50°	185.5	209.2	239.8	259.5	277.3	289.1	300.0	305.9	309.8	313.8	313.8
52.5°	149.0	173.7	203.3	224.0	240.8	253.6	264.4	271.3	274.3	279.2	279.2
55°	121.4	144.1	171.7	190.4	207.2	219.1	227.9	233.9	236.8	240.8	240.8
57.5°	95.7	117.4	140.1	156.9	170.7	179.6	187.5	189.5	190.4	193.4	194.4
60°	72.0	88.8	107.6	120.4	130.2	136.2	142.1	141.1	140.1	142.1	140.1
62.5°	51.3	63.2	77.0	84.9	92.8	95.7	98.7	96.7	94.7	95.7	95.7
65°	34.5	43.4	51.3	57.2	61.2	63.2	64.1	63.2	62.2	63.2	62.2
67.5°	23.7	28.6	34.5	37.5	40.5	41.4	42.4	41.4	41.4	41.4	40.5
70°	15.8	18.7	22.7	24.7	25.7	26.6	27.6	26.6	26.6	26.6	26.6
72.5°	10.9	12.8	13.8	15.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
75°	6.9	7.9	8.9	9.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
77.5°	4.9	4.9	5.9	5.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
80°	3.0	3.0	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	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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



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CANDELA DISTRIBUTION (continued):

	345°	350°	355°	360°
0°	746.9	746.9	746.9	746.9
2.5°	730.2	728.2	722.3	729.2
5°	714.4	712.4	707.5	712.4
7.5°	698.6	695.6	691.7	694.7
10°	679.9	677.9	672.9	675.9
12.5°	666.0	662.1	659.1	660.1
15°	657.2	653.2	650.2	651.2
17.5°	645.3	641.4	638.4	638.4
20°	632.5	628.5	626.6	625.6
22.5°	621.6	618.7	617.7	614.7
25°	611.8	609.8	609.8	605.8
27.5°	600.9	598.0	598.0	594.0
30°	582.2	581.2	581.2	578.2
32.5°	557.5	554.5	556.5	551.6
35°	523.9	522.0	524.9	521.0
37.5°	487.4	486.5	488.4	485.5
40°	449.0	449.0	451.9	447.0
42.5°	415.4	415.4	418.4	413.4
45°	378.9	381.9	384.8	380.9
47.5°	347.3	349.3	353.2	349.3
50°	315.8	317.7	320.7	316.7
52.5°	281.2	283.2	286.1	283.2
55°	241.7	243.7	246.7	244.7
57.5°	194.4	192.4	197.3	193.4
60°	141.1	137.2	138.1	138.1
62.5°	93.7	91.8	93.7	90.8
65°	62.2	61.2	61.2	61.2
67.5°	41.4	40.5	41.4	40.5
70°	26.6	26.6	26.6	26.6
72.5°	16.8	16.8	16.8	16.8
75°	10.9	10.9	10.9	10.9
77.5°	6.9	6.9	6.9	6.9
80°	4.9	4.9	4.9	4.9
82.5°	3.0	3.0	3.0	3.0
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)