

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P879382

Luminaire Tested: **LD4C20D010 EU4209035 4LBDWWH**

Issue Date: 10/1/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P879382
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20D010 EU4209035 4LBDWWH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

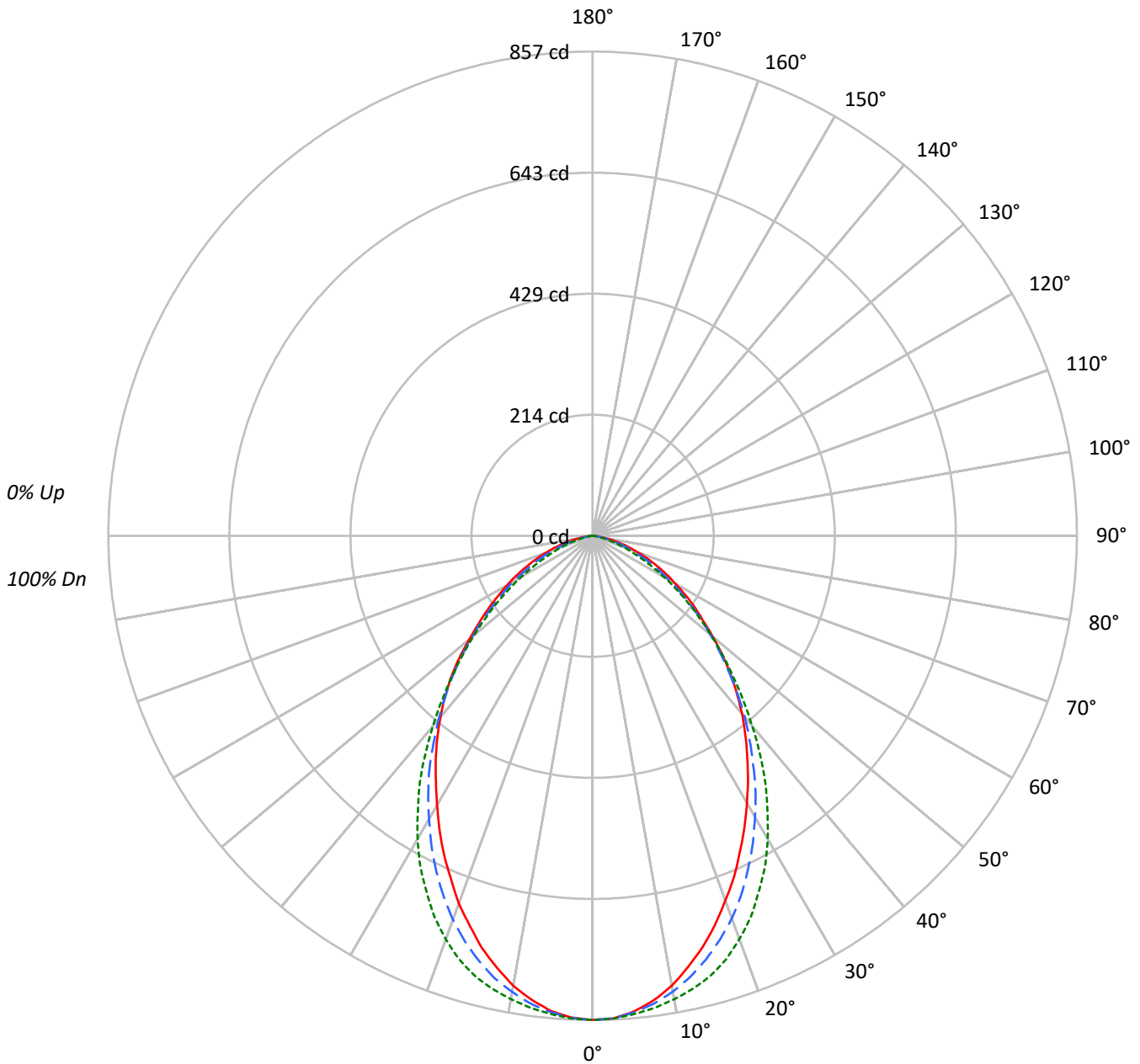
Lumens per Lamp: N/A
Luminaire Lumens: 1533.0 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
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			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	100	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47	47	47	47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35	35	35	35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	105298	105298	105298
5°	104220	104800	104109
10°	100834	103891	100872
15°	95797	102564	96115
20°	89791	99335	90536
25°	83623	94251	84396
30°	77469	87910	78051
35°	71464	79922	72559
40°	65930	70420	67132
45°	59715	61035	61522
50°	52942	52273	54261
55°	47186	44016	48278
60°	41303	35726	42851
65°	36134	27645	37413
70°	30424	20223	32005
75°	23733	13148	25110
80°	15565	6933	17121
85°	5356	3101	7048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.0	5.2
10°-20°	218.6	14.3
20°-30°	300.7	19.6
30°-40°	313.7	20.5
40°-50°	268.3	17.5
50°-60°	191.9	12.5
60°-70°	111.4	7.3
70°-80°	42.9	2.8
80°-90°	5.5	0.4
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°	599.3	39.1
0°-40°	912.9	59.6
0°-60°	1373.2	89.6
0°-90°	1533.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1533.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	857	857	857	857	857	
5°	845	847	850	847	844	79
15°	753	776	806	779	756	211
25°	617	651	695	655	623	284
35°	476	495	533	503	484	298
45°	344	341	351	349	354	265
55°	220	209	206	215	225	197
65°	124	110	95	114	129	124
75°	50	38	28	40	53	54
85°	4	3	2	3	5	7
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°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	854.9	854.2	854.6	854.6	854.6	854.2	854.9	854.9	854.6	854.6	854.6
5°	845.1	844.5	844.8	845.1	845.1	845.1	845.4	845.7	846.1	846.4	846.7
7.5°	829.4	828.4	829.4	830.6	830.6	830.9	831.3	831.6	832.5	834.1	835.0
10°	808.3	808.3	808.6	809.5	811.1	810.8	811.7	813.3	815.2	817.4	819.0
12.5°	781.5	782.2	783.1	784.1	785.6	786.6	788.1	790.0	793.2	796.3	799.8
15°	753.2	753.5	753.8	756.0	757.6	759.8	761.1	764.9	767.7	772.1	775.9
17.5°	721.4	721.1	722.0	723.9	727.7	728.7	730.2	734.3	738.4	744.4	749.4
20°	686.8	688.7	689.9	692.5	694.7	697.2	698.4	703.5	708.2	713.9	720.5
22.5°	654.1	652.5	654.7	657.5	659.4	661.3	663.5	668.9	673.9	680.8	687.4
25°	616.9	617.9	619.4	621.6	624.2	626.7	629.2	634.9	637.7	644.9	650.9
27.5°	581.7	583.2	583.9	586.7	588.9	590.8	592.1	598.7	601.2	607.5	613.5
30°	546.1	547.7	547.7	550.8	552.4	554.3	557.4	561.8	565.6	570.0	574.4
32.5°	511.8	511.8	513.0	515.9	517.5	519.7	520.6	523.7	527.5	531.9	536.7
35°	476.5	477.5	478.7	478.7	481.6	482.8	484.1	487.2	489.8	491.6	495.4
37.5°	444.1	444.1	443.2	444.7	446.6	446.3	448.2	449.8	451.4	453.6	456.7
40°	411.1	411.1	409.8	410.8	412.0	411.7	411.1	412.6	413.9	415.5	418.6
42.5°	377.4	376.8	376.4	376.4	377.1	376.4	377.1	377.4	377.4	377.4	379.3
45°	343.7	345.3	343.4	342.8	341.8	340.9	340.6	340.9	342.1	340.6	340.9
47.5°	310.7	311.3	310.0	309.1	308.1	307.5	308.1	306.3	306.9	307.2	305.9
50°	277.0	275.7	275.7	274.8	275.1	274.8	274.2	273.5	273.5	271.9	271.0
52.5°	245.8	246.5	247.1	244.9	245.2	243.6	243.9	242.4	242.4	240.5	241.1
55°	220.3	219.4	219.4	218.4	218.1	216.6	216.2	215.3	213.1	211.8	209.3
57.5°	193.9	193.6	192.3	192.6	190.7	190.4	189.8	188.2	186.6	185.1	182.2
60°	168.1	168.4	168.4	167.8	166.8	165.2	165.6	163.4	161.2	158.3	155.8
62.5°	146.7	145.7	145.4	144.8	142.9	142.9	141.3	139.8	137.5	134.7	132.5
65°	124.3	124.6	123.7	122.8	120.9	120.6	119.3	118.0	115.8	113.0	109.8
67.5°	104.2	103.6	103.2	102.3	100.4	100.1	99.1	96.3	94.4	91.6	89.1
70°	84.7	84.0	84.4	82.8	80.9	79.9	79.6	77.4	74.6	72.4	69.9
72.5°	66.4	66.4	66.1	64.5	63.6	63.0	61.7	59.2	57.6	55.1	53.2
75°	50.0	49.7	49.1	48.2	46.9	46.3	45.6	44.1	41.9	39.0	37.5
77.5°	34.6	34.9	34.3	34.0	32.4	31.5	31.2	30.2	28.3	26.4	24.9
80°	22.0	21.7	21.4	20.8	20.5	20.1	19.2	18.6	16.7	15.7	14.8
82.5°	12.0	11.3	11.3	11.0	10.4	10.1	9.8	9.1	8.8	8.2	7.6
85°	3.8	4.1	3.8	3.8	3.8	3.5	3.5	3.5	3.1	3.1	2.8
87.5°	0.3	0.6	0.3	0.3	0.6	0.3	0.3	0.6	0.3	0.3	0.6
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°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	854.6	854.9	854.9	855.2	855.2	855.2	855.2	855.2	855.2	855.2	855.2
5°	847.6	847.6	848.3	848.9	848.9	848.9	849.2	849.8	849.8	849.8	849.5
7.5°	836.3	837.6	838.8	840.1	840.4	840.7	841.3	842.6	842.6	842.6	842.6
10°	821.5	824.3	825.9	827.8	828.7	829.4	831.3	831.6	832.5	832.8	832.5
12.5°	802.6	806.4	809.9	813.0	814.3	815.5	817.4	819.3	820.2	821.2	820.9
15°	781.5	785.6	791.0	794.4	797.0	798.8	801.7	804.2	805.8	806.4	806.4
17.5°	756.0	761.1	766.7	772.4	774.0	777.1	780.3	783.7	785.6	785.9	785.6
20°	727.7	733.4	738.1	743.8	747.2	748.8	753.2	757.6	759.5	759.8	759.5
22.5°	694.0	699.4	705.7	711.7	714.5	717.3	722.0	726.5	729.0	730.9	729.0
25°	656.6	664.1	670.1	675.1	679.2	682.1	688.1	691.5	695.6	695.3	695.6
27.5°	619.7	626.0	632.7	638.6	641.2	644.3	649.0	654.7	658.1	660.4	660.0
30°	582.0	587.0	592.7	598.0	602.1	604.6	611.6	614.1	618.5	619.7	618.8
32.5°	542.0	545.5	551.1	558.4	559.9	562.5	566.9	573.2	574.7	575.4	575.7
35°	499.5	506.1	510.8	515.3	516.5	518.7	523.7	528.5	530.0	532.9	531.6
37.5°	460.2	463.9	466.1	470.6	474.3	476.2	478.7	481.9	485.0	486.3	486.0
40°	420.8	422.7	424.6	429.3	429.6	429.6	433.4	437.8	437.8	439.1	439.1
42.5°	380.5	380.9	383.4	385.9	386.5	387.1	390.9	391.6	393.4	394.4	395.6
45°	341.5	343.4	345.0	345.3	346.9	347.2	348.1	349.1	351.9	351.3	351.9
47.5°	305.9	306.9	307.8	307.8	308.8	308.5	310.0	309.1	311.0	311.6	312.5
50°	271.0	272.6	271.6	272.3	271.9	272.9	272.3	272.3	272.3	273.5	274.5
52.5°	238.9	239.2	238.3	238.6	238.6	238.0	238.6	238.3	238.0	238.0	238.3
55°	209.3	208.1	207.4	206.2	204.6	206.5	205.5	204.9	206.2	205.5	206.2
57.5°	180.7	179.1	177.8	177.2	175.0	176.3	175.0	174.4	174.4	174.4	175.9
60°	153.6	152.0	150.5	148.6	148.2	147.6	147.0	145.4	145.7	145.4	146.0
62.5°	130.0	126.8	124.6	123.1	122.8	121.8	120.9	119.3	119.6	119.6	119.9
65°	108.3	104.8	101.7	99.5	99.5	97.9	96.3	96.3	94.4	95.1	95.4
67.5°	86.6	83.7	80.6	79.0	78.1	76.8	75.9	75.2	74.3	74.3	74.9
70°	67.0	64.2	62.6	60.1	59.8	58.9	57.6	56.7	56.3	56.3	56.0
72.5°	50.7	48.2	46.3	44.7	43.8	42.8	41.5	41.2	40.6	40.6	41.2
75°	35.3	33.7	32.1	30.5	29.9	29.6	28.6	28.0	28.0	27.7	28.0
77.5°	23.6	22.0	20.5	19.8	19.2	18.6	18.3	17.9	17.0	17.0	17.0
80°	13.5	12.9	12.3	11.3	11.3	11.0	10.4	10.1	9.8	9.8	9.8
82.5°	6.9	6.6	6.0	5.7	5.7	5.7	5.4	5.4	5.0	5.0	5.0
85°	2.8	2.5	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.2	2.5
87.5°	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	855.2	854.9	854.9	854.9	854.9	854.9	854.6	854.6	854.2	854.2	854.2
5°	849.8	849.5	849.2	848.9	848.6	848.3	847.9	847.6	846.7	846.4	845.7
7.5°	842.3	841.7	840.7	840.4	839.8	838.8	837.6	836.9	835.7	834.1	833.5
10°	832.2	830.9	830.0	828.4	828.1	826.9	823.7	822.1	819.9	818.0	815.8
12.5°	819.9	818.7	816.5	814.3	813.0	810.2	807.3	804.8	802.0	797.9	794.8
15°	804.8	802.9	798.5	797.9	796.0	791.6	787.8	783.1	778.7	774.3	770.5
17.5°	784.7	780.6	778.4	775.6	773.3	767.7	763.6	758.2	752.3	747.2	741.9
20°	758.2	753.8	750.1	748.5	745.7	740.6	735.6	729.0	723.0	716.7	712.0
22.5°	726.8	723.9	718.3	716.4	712.9	707.9	701.9	695.6	689.9	683.0	676.7
25°	693.1	689.0	684.6	680.8	678.3	673.6	666.0	661.3	655.0	647.4	642.7
27.5°	657.2	652.5	646.2	643.7	641.5	635.2	628.9	622.9	617.9	611.3	607.2
30°	615.7	612.2	608.1	605.0	601.8	596.8	591.1	584.2	578.8	575.7	570.0
32.5°	573.5	570.6	565.3	563.7	560.3	556.2	552.1	547.0	541.4	536.7	532.2
35°	528.5	525.6	521.9	519.0	517.8	514.9	510.5	506.1	503.3	497.9	495.7
37.5°	483.5	482.5	478.7	475.9	475.0	471.5	469.3	466.1	462.1	460.8	458.3
40°	437.2	436.6	434.4	434.0	432.2	431.2	428.1	425.5	423.7	422.7	421.1
42.5°	394.7	394.1	392.2	392.5	390.6	390.0	389.7	387.5	385.9	384.0	384.3
45°	352.8	352.2	350.9	350.3	351.3	350.9	350.3	349.4	349.4	349.7	348.7
47.5°	312.5	313.2	311.9	312.5	312.5	311.6	311.6	312.9	313.2	313.8	314.4
50°	274.5	276.4	275.7	276.7	277.0	277.3	276.4	277.9	277.6	280.4	279.8
52.5°	239.8	240.2	241.4	241.7	242.0	242.4	243.9	245.2	245.5	246.8	249.0
55°	206.5	206.8	209.3	209.3	210.9	211.2	213.4	214.0	215.0	218.4	219.1
57.5°	175.0	176.9	178.2	178.8	179.7	181.3	182.6	185.4	187.0	189.2	191.4
60°	146.7	148.9	150.5	151.1	152.3	154.2	155.8	159.0	161.8	164.3	165.9
62.5°	120.6	122.4	123.7	125.9	125.9	127.5	131.3	133.1	136.3	138.5	141.3
65°	97.3	98.5	100.7	100.7	102.0	104.5	107.6	110.5	113.6	116.8	119.6
67.5°	76.2	77.1	78.4	79.6	80.3	83.4	85.9	90.0	92.9	95.1	98.5
70°	57.6	58.2	59.8	61.1	62.0	64.2	67.0	69.9	72.7	75.2	78.7
72.5°	41.2	42.5	44.1	45.0	45.6	47.2	50.0	52.9	55.4	57.9	59.8
75°	28.3	29.3	29.9	30.8	31.8	33.0	34.9	36.8	39.7	42.2	44.4
77.5°	17.6	18.6	19.5	19.8	20.1	21.4	22.7	24.6	26.4	28.3	29.9
80°	10.4	10.7	11.0	11.3	12.0	12.9	13.5	14.8	16.1	17.3	18.9
82.5°	5.4	5.7	6.0	6.0	6.0	6.3	7.2	7.9	8.2	8.8	9.8
85°	2.2	2.2	2.2	2.5	2.5	2.8	2.8	3.1	3.1	3.5	3.8
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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: P879382

CATALOG NUMBER: LD4C20D010 EU4209035 4LBLDWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	853.9	853.9	853.9	853.6	853.9	853.9	853.9	853.6
5°	845.7	845.1	845.1	844.8	844.5	844.5	844.8	844.2
7.5°	832.2	831.3	830.6	830.6	830.3	830.0	830.0	828.4
10°	814.6	812.7	812.7	812.1	809.5	809.2	808.6	808.6
12.5°	792.5	790.3	789.1	787.5	785.9	784.7	784.4	783.1
15°	766.4	763.6	761.4	760.8	758.2	756.4	756.4	755.7
17.5°	738.1	733.7	732.1	730.5	727.1	726.8	726.1	723.3
20°	706.0	701.9	699.7	698.1	695.9	692.8	692.1	692.5
22.5°	672.3	666.6	664.8	663.2	661.0	658.1	658.1	655.9
25°	637.4	632.3	630.5	628.6	625.1	623.8	622.3	622.6
27.5°	601.8	597.1	595.5	592.1	589.8	588.3	586.7	586.7
30°	564.7	562.1	559.6	559.3	554.9	553.0	551.4	550.2
32.5°	528.8	525.6	524.4	523.1	520.9	518.4	518.1	515.9
35°	493.5	490.4	488.8	487.6	485.0	484.1	483.1	483.8
37.5°	456.4	455.8	454.8	453.2	451.7	451.4	450.1	451.7
40°	419.9	419.6	418.3	418.6	418.6	418.0	418.6	418.6
42.5°	384.6	384.6	383.4	384.0	384.3	384.9	385.9	386.5
45°	350.3	350.0	350.3	350.9	350.3	351.9	353.2	354.1
47.5°	315.1	315.4	316.6	317.0	317.6	319.8	319.8	319.8
50°	281.4	283.0	282.3	284.2	283.9	285.2	283.9	283.9
52.5°	249.3	250.9	251.2	251.5	253.4	253.7	253.7	253.4
55°	220.6	222.8	221.9	223.5	224.4	225.0	226.0	225.4
57.5°	194.2	195.1	196.1	196.4	197.7	198.3	198.9	198.3
60°	168.1	170.0	171.5	171.9	172.5	173.1	173.4	174.4
62.5°	143.5	146.7	147.3	147.6	149.2	150.1	150.8	151.4
65°	121.8	124.0	125.6	126.5	127.8	127.8	128.7	128.7
67.5°	100.7	102.9	103.9	104.5	106.4	106.7	108.3	108.3
70°	81.5	83.1	83.7	84.7	86.6	87.8	88.4	89.1
72.5°	63.0	64.8	65.8	67.0	68.3	69.2	69.6	70.5
75°	46.0	48.8	49.1	50.4	51.3	52.6	53.2	52.9
77.5°	32.1	33.0	34.3	34.9	35.9	36.8	37.8	37.8
80°	19.8	21.1	21.4	21.7	23.0	23.6	24.2	24.2
82.5°	10.4	11.0	11.6	12.0	12.6	12.6	12.9	13.2
85°	4.1	4.4	4.4	4.4	4.7	5.0	5.0	5.0
87.5°	0.6	0.9	0.6	0.6	0.9	0.9	0.9	0.9
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°













(END OF REPORT)