

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: P880553

Luminaire Tested: **LD4C20D010 EU4209030 4LBDWNH**

Issue Date: 10/4/2024

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: P880553
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20D010 EU4209030 4LBDWNH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

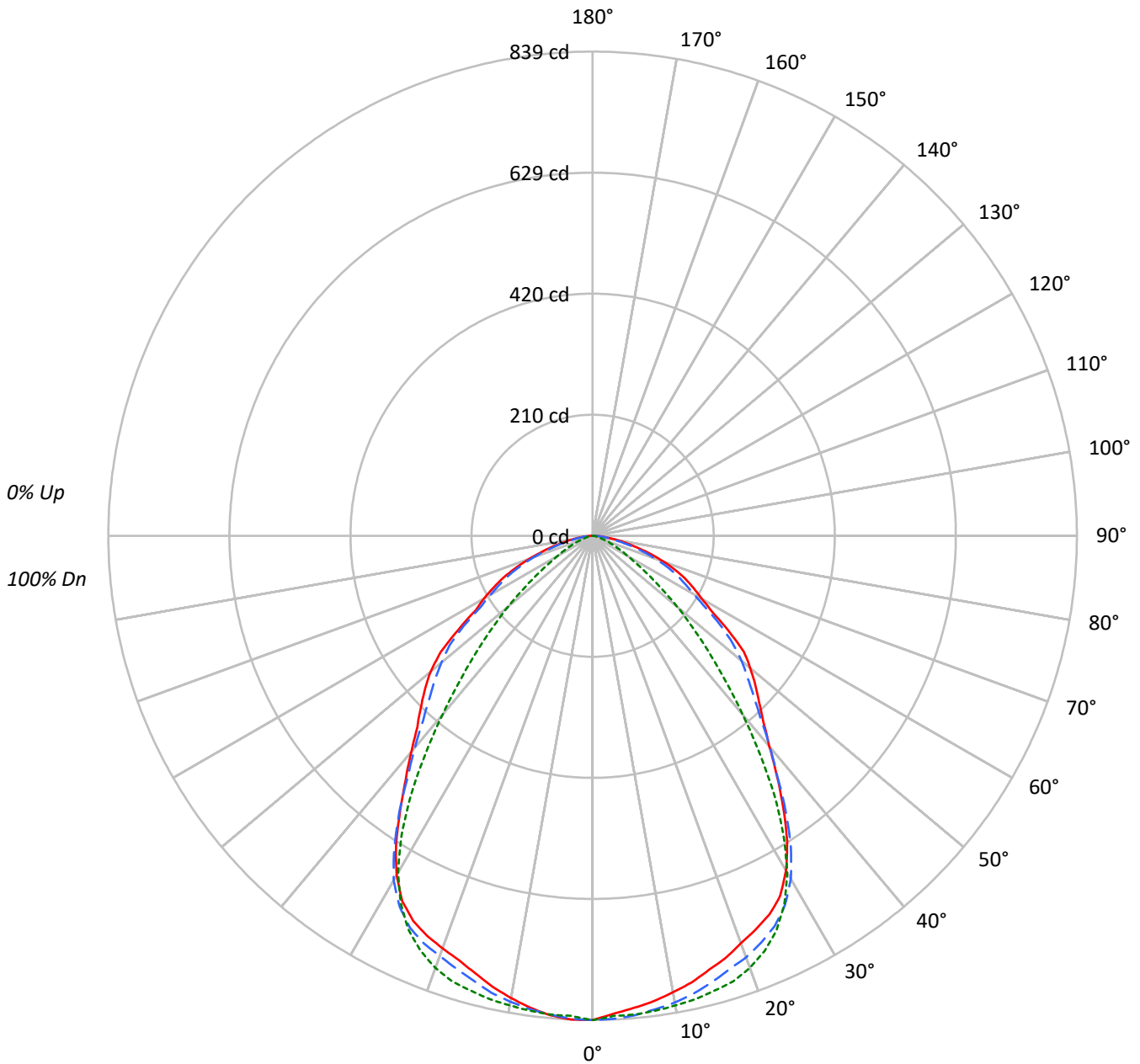
Lumens per Lamp: N/A
Luminaire Lumens: 1708.0 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P880553

CATALOG NUMBER: LD4C20D010 EU4209030 4LBDWNH

Luminous Intensity Polar Plot





TEST NUMBER: P880553

CATALOG NUMBER: LD4C20D010 EU4209030 4LBDWNH

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				
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				76				
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66				66				
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58				
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51				51				
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46				46				
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41				41				
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37				37				
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34				
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31				31				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	103099	103099	103099
5°	101273	102703	102864
10°	100186	103092	101471
15°	99028	103785	99842
20°	98236	104159	99426
25°	98182	102208	99754
30°	95060	95613	96351
35°	86356	82307	87136
40°	76402	64807	78262
45°	70886	49342	73128
50°	68117	36524	70086
55°	61665	25167	60830
60°	53613	17126	53294
65°	51802	12384	49157
70°	46840	8369	41739
75°	38591	5506	33084
80°	31059	3679	24691
85°	25513	1832	16351



TEST NUMBER: P880553

CATALOG NUMBER: LD4C20D010 EU4209030 4LBDWNH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.2	4.6
10°-20°	226.5	13.3
20°-30°	342.2	20.0
30°-40°	358.1	21.0
40°-50°	290.1	17.0
50°-60°	211.0	12.4
60°-70°	130.1	7.6
70°-80°	58.8	3.4
80°-90°	12.0	0.7
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°	648.0	37.9
0°-40°	1006.1	58.9
0°-60°	1507.1	88.2
0°-90°	1708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1708.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	839	839	839	839	839	
5°	821	834	833	833	834	78
15°	779	800	816	798	785	220
25°	724	746	754	749	736	332
35°	576	584	549	584	581	359
45°	408	395	284	400	421	317
55°	288	270	118	272	284	257
65°	178	160	43	158	169	174
75°	81	70	12	61	70	88
85°	18	14	1	10	12	21
90°	0	0	0	0	0	



TEST NUMBER: P880553

CATALOG NUMBER: LD4C20D010 EU4209030 4LBDWNH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2
2.5°	828.9	828.9	836.7	845.7	838.0	830.2	835.3	832.8	841.9	841.9	838.0
5°	821.2	823.7	830.2	838.0	831.5	823.7	830.2	827.6	836.7	836.7	834.1
7.5°	813.4	814.7	822.5	831.5	825.0	817.3	822.5	821.2	828.9	830.2	827.6
10°	803.1	804.4	812.2	821.2	814.7	808.3	813.4	812.2	822.5	822.5	821.2
12.5°	792.8	794.0	801.8	809.5	803.1	796.7	801.8	801.8	812.2	813.4	812.2
15°	778.6	781.1	787.6	795.3	791.5	783.7	788.9	788.9	797.9	800.5	800.5
17.5°	767.0	768.2	774.7	782.5	777.3	770.8	775.9	775.9	785.0	787.6	787.6
20°	751.4	754.0	760.5	768.2	764.4	759.2	763.1	763.1	773.4	775.9	777.3
22.5°	738.5	741.1	746.2	756.6	750.1	746.2	751.4	750.1	761.8	763.1	763.1
25°	724.3	727.0	733.4	739.8	735.9	732.1	735.9	735.9	745.0	746.2	746.2
27.5°	703.7	705.0	711.4	717.9	714.0	708.8	714.0	712.7	721.7	723.1	721.7
30°	670.1	672.7	675.3	684.3	680.4	676.5	681.7	679.2	688.2	688.2	686.9
32.5°	627.5	627.5	632.7	639.1	634.0	631.3	635.2	636.5	643.0	643.0	639.1
35°	575.8	578.5	582.3	586.2	582.3	579.7	583.6	582.3	590.1	587.4	583.6
37.5°	524.2	525.5	529.4	534.6	529.4	525.5	526.8	525.5	531.9	531.9	525.5
40°	476.4	479.0	481.6	486.8	481.6	479.0	480.3	476.4	484.2	481.6	477.7
42.5°	437.7	439.0	442.8	445.5	440.3	439.0	440.3	437.7	441.6	439.0	431.2
45°	408.0	408.0	409.3	413.1	408.0	406.7	406.7	404.1	408.0	402.8	395.1
47.5°	382.2	383.4	384.8	387.3	383.4	379.6	380.9	375.7	378.3	374.4	364.1
50°	356.4	358.9	360.3	362.8	358.9	356.4	357.6	352.5	352.5	346.0	337.0
52.5°	330.6	331.8	330.6	333.1	330.6	326.7	327.9	322.8	322.8	315.1	306.0
55°	287.9	289.2	290.5	293.1	290.5	286.7	289.2	285.4	285.4	280.1	269.8
57.5°	245.3	246.6	247.9	249.2	249.2	246.6	247.9	245.3	244.0	240.1	232.4
60°	218.2	218.2	218.2	219.5	218.2	216.9	216.9	214.3	214.3	209.2	201.5
62.5°	197.6	198.8	198.8	200.1	198.8	197.6	196.3	193.7	192.4	187.2	180.7
65°	178.2	178.2	176.9	179.5	178.2	176.9	176.9	174.3	171.8	166.6	160.1
67.5°	154.9	156.2	154.9	156.2	156.2	154.9	153.6	151.0	149.8	145.9	138.2
70°	130.4	130.4	130.4	131.7	130.4	130.4	131.7	127.8	126.6	121.3	114.9
72.5°	105.8	107.2	107.2	105.8	107.2	104.6	104.6	104.6	103.3	98.1	91.6
75°	81.3	82.7	82.7	83.9	82.7	81.3	81.3	80.0	78.8	74.9	69.7
77.5°	60.7	60.7	61.9	61.9	61.9	60.7	60.7	58.1	58.1	55.5	50.3
80°	43.9	43.9	42.6	43.9	43.9	42.6	42.6	41.3	41.3	38.7	34.9
82.5°	28.4	29.7	29.7	29.7	29.7	28.4	28.4	28.4	27.1	25.8	23.3
85°	18.1	18.1	18.1	18.1	19.4	18.1	19.4	18.1	18.1	15.5	14.2
87.5°	7.8	7.8	7.8	9.1	9.1	7.8	7.8	7.8	7.8	7.8	6.4
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: P880553

CATALOG NUMBER: LD4C20D010 EU4209030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2
2.5°	838.0	839.2	835.3	840.5	836.7	838.0	839.2	838.0	832.8	832.8	847.0
5°	832.8	835.3	831.5	838.0	835.3	835.3	838.0	836.7	831.5	832.8	845.7
7.5°	827.6	831.5	828.9	835.3	831.5	831.5	834.1	834.1	828.9	830.2	841.9
10°	819.9	825.0	823.7	830.2	826.4	826.4	830.2	830.2	825.0	826.4	838.0
12.5°	813.4	818.6	817.3	823.7	821.2	822.5	823.7	826.4	819.9	822.5	832.8
15°	803.1	808.3	808.3	814.7	812.2	814.7	817.3	821.2	816.0	816.0	826.4
17.5°	791.5	797.9	797.9	803.1	803.1	804.4	809.5	813.4	808.3	809.5	818.6
20°	778.6	786.3	786.3	792.8	791.5	794.0	797.9	801.8	796.7	796.7	807.0
22.5°	765.6	772.1	773.4	777.3	777.3	778.6	782.5	785.0	778.6	778.6	788.9
25°	747.6	754.0	755.3	757.9	755.3	755.3	757.9	760.5	754.0	754.0	763.1
27.5°	723.1	729.5	729.5	728.2	725.6	727.0	725.6	727.0	720.4	719.2	728.2
30°	686.9	690.7	690.7	689.5	685.6	685.6	681.7	683.0	674.0	674.0	681.7
32.5°	637.9	641.7	639.1	636.5	631.3	628.8	626.2	624.9	615.9	615.9	624.9
35°	579.7	582.3	578.5	573.3	566.8	562.9	559.1	553.9	547.4	548.8	553.9
37.5°	520.3	520.3	515.2	504.9	499.7	493.2	486.8	486.8	476.4	475.2	479.0
40°	470.0	464.8	455.8	441.6	432.5	426.1	417.0	411.9	404.1	404.1	410.6
42.5°	424.8	414.5	402.8	383.4	374.4	366.7	355.1	349.9	340.9	339.5	343.4
45°	384.8	374.4	357.6	337.0	325.4	316.3	299.5	293.1	285.4	284.0	286.7
47.5°	352.5	340.9	320.2	293.1	281.5	269.8	253.1	244.0	237.6	233.7	237.6
50°	324.1	308.6	286.7	258.2	242.7	232.4	211.8	202.7	193.7	191.1	192.4
52.5°	293.1	277.6	254.3	224.6	210.4	194.9	175.6	162.7	154.9	151.0	154.9
55°	259.5	244.0	220.8	191.1	175.6	161.4	140.7	130.4	121.3	117.5	121.3
57.5°	223.4	209.2	188.5	158.8	144.6	131.7	112.4	102.0	93.0	90.4	93.0
60°	192.4	180.7	160.1	131.7	120.1	105.8	89.1	78.8	71.0	69.7	71.0
62.5°	171.8	158.8	139.4	112.4	100.7	89.1	73.6	63.3	56.8	55.5	56.8
65°	151.0	136.9	118.8	95.5	83.9	74.9	59.4	50.3	43.9	42.6	43.9
67.5°	127.8	114.9	99.4	78.8	69.7	60.7	47.8	38.7	33.6	32.3	33.6
70°	105.8	94.3	78.8	63.3	54.2	47.8	36.1	29.7	24.5	23.3	24.5
72.5°	83.9	73.6	60.7	47.8	42.6	36.1	28.4	21.9	18.1	16.8	18.1
75°	64.6	56.8	46.5	34.9	31.0	27.1	19.4	15.5	12.9	11.6	12.9
77.5°	45.2	40.0	32.3	25.8	21.9	19.4	14.2	10.3	9.1	7.8	9.1
80°	31.0	27.1	21.9	16.8	14.2	11.6	9.1	6.4	5.2	5.2	5.2
82.5°	20.6	16.8	12.9	10.3	9.1	7.8	5.2	3.9	3.9	2.6	2.6
85°	11.6	10.3	7.8	6.4	5.2	3.9	2.6	2.6	1.3	1.3	1.3
87.5°	5.2	3.9	2.6	2.6	1.3	1.3	1.3	1.3	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: P880553

CATALOG NUMBER: LD4C20D010 EU4209030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2
2.5°	843.1	839.2	844.4	839.2	836.7	839.2	836.7	844.4	838.0	832.8	838.0
5°	841.9	836.7	841.9	838.0	834.1	835.3	832.8	840.5	832.8	828.9	831.5
7.5°	839.2	835.3	838.0	834.1	830.2	831.5	828.9	835.3	827.6	823.7	826.4
10°	835.3	831.5	832.8	830.2	826.4	826.4	823.7	828.9	819.9	814.7	817.3
12.5°	830.2	825.0	827.6	823.7	818.6	818.6	816.0	819.9	810.8	805.6	807.0
15°	823.7	818.6	818.6	814.7	809.5	809.5	804.4	808.3	797.9	792.8	792.8
17.5°	816.0	809.5	809.5	805.6	799.2	797.9	794.0	797.9	786.3	781.1	781.1
20°	804.4	799.2	797.9	795.3	788.9	787.6	782.5	783.7	774.7	770.8	769.5
22.5°	788.9	783.7	785.0	781.1	775.9	774.7	769.5	773.4	764.4	760.5	761.8
25°	761.8	759.2	761.8	760.5	756.6	756.6	754.0	756.6	748.9	746.2	747.6
27.5°	730.8	729.5	730.8	730.8	728.2	728.2	728.2	732.1	724.3	723.1	723.1
30°	685.6	685.6	686.9	688.2	688.2	690.7	689.5	694.6	689.5	686.9	689.5
32.5°	626.2	631.3	635.2	635.2	635.2	637.9	640.4	644.3	639.1	640.4	640.4
35°	559.1	562.9	565.5	572.0	568.1	577.1	579.7	584.9	583.6	586.2	584.9
37.5°	484.2	489.4	494.5	503.6	502.2	512.6	517.7	528.0	525.5	530.7	533.2
40°	414.5	422.2	430.0	436.4	441.6	451.9	462.2	475.2	479.0	482.9	484.2
42.5°	347.3	355.1	368.0	377.0	384.8	401.6	415.8	431.2	435.1	442.8	445.5
45°	293.1	299.5	315.1	326.7	333.1	357.6	374.4	393.8	400.3	409.3	413.1
47.5°	242.7	254.3	269.8	284.0	293.1	318.9	340.9	361.5	370.6	380.9	386.1
50°	198.8	211.8	232.4	245.3	258.2	286.7	311.2	333.1	342.2	353.7	358.9
52.5°	162.7	176.9	196.3	210.4	224.6	254.3	280.1	300.9	312.5	320.2	327.9
55°	127.8	143.3	162.7	178.2	189.8	222.1	244.0	264.7	272.4	278.9	282.8
57.5°	99.4	111.0	130.4	143.3	157.5	185.9	207.9	223.4	229.8	237.6	240.1
60°	77.5	89.1	107.2	120.1	133.0	160.1	182.1	197.6	204.0	210.4	214.3
62.5°	61.9	73.6	90.4	102.0	113.6	138.2	157.5	173.0	180.7	187.2	191.1
65°	49.1	59.4	73.6	85.2	94.3	116.2	135.5	149.8	157.5	164.0	167.9
67.5°	38.7	47.8	60.7	68.4	77.5	95.5	112.4	125.2	131.7	139.4	143.3
70°	29.7	36.1	47.8	54.2	60.7	76.1	89.1	102.0	108.5	113.6	116.2
72.5°	21.9	27.1	36.1	41.3	45.2	58.1	68.4	77.5	82.7	87.8	90.4
75°	15.5	19.4	25.8	29.7	32.3	41.3	50.3	56.8	60.7	64.6	68.4
77.5°	10.3	12.9	16.8	19.4	21.9	28.4	33.6	38.7	42.6	46.5	47.8
80°	6.4	9.1	11.6	12.9	14.2	18.1	23.3	25.8	28.4	31.0	32.3
82.5°	3.9	5.2	6.4	7.8	9.1	11.6	14.2	16.8	18.1	20.6	21.9
85°	1.3	2.6	2.6	3.9	3.9	6.4	7.8	9.1	10.3	11.6	12.9
87.5°	0.0	0.0	1.3	1.3	1.3	1.3	2.6	2.6	2.6	2.6	2.6
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: P880553

CATALOG NUMBER: LD4C20D010 EU4209030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	839.2	839.2	839.2	839.2	839.2	839.2	839.2	839.2
2.5°	843.1	839.2	836.7	835.3	844.4	832.8	838.0	839.2
5°	838.0	834.1	831.5	830.2	838.0	827.6	831.5	834.1
7.5°	830.2	827.6	823.7	822.5	830.2	818.6	823.7	825.0
10°	821.2	817.3	814.7	813.4	819.9	808.3	813.4	813.4
12.5°	809.5	807.0	801.8	801.8	807.0	796.7	800.5	800.5
15°	794.0	791.5	786.3	786.3	791.5	781.1	785.0	785.0
17.5°	781.1	778.6	774.7	773.4	778.6	768.2	772.1	770.8
20°	770.8	768.2	763.1	763.1	767.0	756.6	760.5	760.5
22.5°	761.8	760.5	755.3	755.3	760.5	750.1	752.8	750.1
25°	747.6	746.2	741.1	742.4	745.0	734.7	738.5	735.9
27.5°	724.3	724.3	719.2	717.9	721.7	712.7	715.3	714.0
30°	688.2	689.5	683.0	683.0	684.3	676.5	680.4	679.2
32.5°	639.1	640.4	635.2	634.0	637.9	631.3	634.0	634.0
35°	584.9	586.2	582.3	582.3	586.2	582.3	582.3	581.0
37.5°	530.7	533.2	530.7	531.9	534.6	530.7	533.2	531.9
40°	486.8	489.4	485.5	488.0	490.6	486.8	490.6	488.0
42.5°	446.7	450.6	448.0	450.6	453.2	450.6	453.2	449.4
45°	417.0	419.7	418.3	419.7	422.2	420.9	422.2	420.9
47.5°	388.6	393.8	391.2	393.8	397.7	395.1	397.7	393.8
50°	362.8	366.7	365.4	368.0	369.2	368.0	370.6	366.7
52.5°	329.2	333.1	331.8	331.8	334.4	331.8	334.4	331.8
55°	285.4	286.7	286.7	287.9	286.7	285.4	286.7	284.0
57.5°	242.7	245.3	241.5	245.3	244.0	242.7	242.7	240.1
60°	215.6	219.5	216.9	219.5	218.2	218.2	218.2	216.9
62.5°	193.7	196.3	193.7	194.9	194.9	194.9	193.7	192.4
65°	169.1	173.0	170.4	171.8	170.4	169.1	170.4	169.1
67.5°	144.6	145.9	145.9	144.6	144.6	144.6	144.6	142.1
70°	117.5	118.8	117.5	120.1	118.8	117.5	118.8	116.2
72.5°	91.6	93.0	91.6	93.0	91.6	91.6	91.6	91.6
75°	68.4	69.7	69.7	69.7	69.7	69.7	67.2	69.7
77.5°	49.1	49.1	49.1	50.3	49.1	49.1	49.1	49.1
80°	33.6	33.6	33.6	34.9	33.6	34.9	33.6	34.9
82.5°	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9
85°	11.6	12.9	12.9	11.6	11.6	11.6	11.6	11.6
87.5°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)