

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: P#

Luminaire Tested: **LD4C20D010 EX4C209030 4LBSQLWWH**

Issue Date: 2/18/2022

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: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20D010 EX4C209030 4LBSQLWWH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

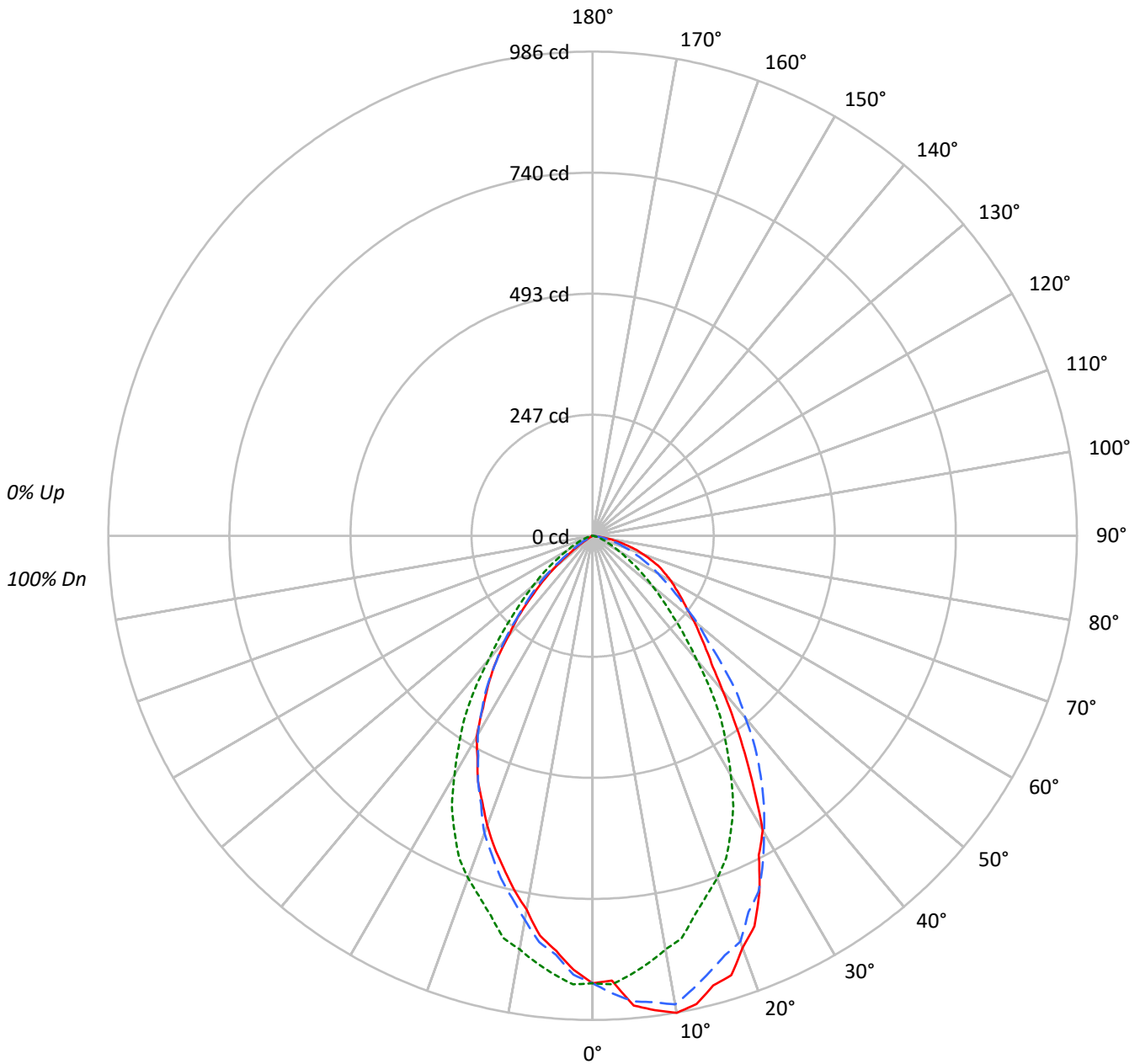
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1306.0 lumens
Efficiency: N/A
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V):
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

TEST NUMBER: P#
CATALOG NUMBER: LD4C20D010 EX4C209030 4LBSQLWWH

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209030 4LBSQLWWH

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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	87911	87911	87911
5°	93012	86871	82222
10°	96655	83810	75776
15°	94718	79994	69955
20°	91653	76169	64391
25°	85490	70830	58736
30°	77167	62683	52588
35°	63572	53666	43630
40°	51882	41415	33580
45°	44580	31453	24153
50°	40335	23943	15251
55°	37127	17277	5518
60°	35624	11810	849
65°	34407	7991	251
70°	30807	5529	310
75°	25276	2871	0
80°	15781	1222	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209030 4LBSQLWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.4	6.5
10°-20°	230.0	17.6
20°-30°	307.1	23.5
30°-40°	291.5	22.3
40°-50°	201.5	15.4
50°-60°	111.3	8.5
60°-70°	55.3	4.2
70°-80°	21.8	1.7
80°-90°	2.1	0.2
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°	622.5	47.7
0°-40°	914.0	70.0
0°-60°	1226.9	93.9
0°-90°	1306.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1306.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	911	911	911	911	911	
5°	960	952	897	856	849	92
15°	948	920	801	722	700	268
25°	803	800	665	552	552	366
35°	540	596	456	375	370	338
45°	327	375	230	189	177	255
55°	221	208	103	52	33	199
65°	151	109	35	1	1	146
75°	68	42	8	0	0	72
85°	0	1	0	0	0	6
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209030 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1
2.5°	906.7	931.9	934.0	931.9	935.1	934.0	939.5	934.0	940.6	930.8	933.0
5°	960.3	950.4	971.2	960.3	960.3	959.2	955.9	954.8	959.2	945.0	951.5
7.5°	974.5	988.7	1007.3	984.3	985.4	985.4	978.8	976.7	976.7	950.4	958.1
10°	986.5	977.7	987.6	978.8	986.5	985.4	989.8	975.6	985.4	970.1	969.0
12.5°	976.7	973.4	986.5	972.3	967.9	969.0	963.6	960.3	963.6	946.1	945.0
15°	948.2	951.5	971.2	955.9	953.7	951.5	945.0	934.0	942.8	918.8	919.9
17.5°	938.4	933.0	936.3	923.1	926.4	924.2	923.1	913.3	911.1	895.8	895.8
20°	892.6	904.5	904.5	895.8	895.8	894.7	880.5	889.3	879.4	875.1	879.4
22.5°	860.8	862.0	862.0	854.3	855.4	851.0	843.4	837.9	843.4	837.9	829.2
25°	803.0	805.2	818.3	804.1	801.9	806.2	799.7	796.4	795.3	782.2	799.7
27.5°	733.0	754.9	753.8	748.3	754.9	746.1	742.9	744.0	747.3	746.1	750.5
30°	692.6	695.9	699.2	694.8	695.9	692.6	692.6	693.7	702.4	699.2	698.1
32.5°	610.7	621.6	630.4	630.4	631.4	634.7	633.6	656.6	662.0	651.1	648.9
35°	539.7	547.3	555.0	556.1	570.3	571.3	572.5	579.0	594.3	597.6	596.5
37.5°	472.0	479.6	481.8	491.6	499.3	506.9	515.7	524.4	537.5	548.4	543.0
40°	411.9	415.1	420.6	425.0	440.2	440.2	444.6	462.1	476.3	485.1	483.9
42.5°	361.6	362.7	367.1	374.7	388.9	385.6	388.9	401.0	421.7	422.8	434.8
45°	326.7	325.5	328.8	329.9	338.7	343.0	345.2	354.0	371.4	373.6	374.7
47.5°	295.0	293.9	299.3	301.5	304.8	309.1	309.1	310.3	316.8	322.3	317.9
50°	268.7	268.7	268.7	270.9	276.4	275.3	276.4	280.8	284.0	281.8	280.8
52.5°	240.3	244.7	248.0	249.1	250.2	250.2	251.3	249.1	248.0	244.7	238.1
55°	220.7	225.0	225.0	225.0	225.0	229.4	224.0	225.0	225.0	216.3	207.6
57.5°	201.0	205.4	208.7	204.3	208.7	204.3	202.1	201.0	198.8	190.1	177.0
60°	184.6	186.8	185.7	184.6	186.8	183.5	181.3	177.0	174.8	162.8	154.0
62.5°	166.1	167.1	168.2	166.1	163.9	162.8	158.4	151.9	147.5	137.6	130.0
65°	150.7	147.5	146.4	145.3	143.1	139.8	136.6	128.9	125.6	116.9	109.2
67.5°	127.8	126.7	128.9	125.6	120.2	120.2	116.9	110.3	102.7	97.2	89.6
70°	109.2	108.2	106.0	102.7	101.6	97.2	97.2	89.6	87.4	77.6	71.0
72.5°	89.6	89.6	86.3	83.0	79.7	77.6	76.5	71.0	67.8	62.3	56.8
75°	67.8	67.8	66.6	63.3	61.2	59.0	57.9	53.5	50.2	44.8	41.5
77.5°	48.1	48.1	43.7	41.5	42.6	40.4	38.2	37.2	36.0	32.8	28.4
80°	28.4	27.3	24.1	25.1	24.1	24.1	22.9	21.8	19.6	17.5	15.3
82.5°	7.7	8.7	8.7	8.7	9.8	7.7	7.7	7.7	8.7	8.7	5.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
87.5°	1.1	2.2	4.4	4.4	4.4	4.4	4.4	3.3	3.3	3.3	2.2
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: P#

CATALOG NUMBER: LD4C20D010 EX4C209030 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1
2.5°	922.1	920.9	922.1	914.4	931.9	918.8	916.6	914.4	922.1	914.4	903.5
5°	941.7	930.8	927.5	924.2	934.0	918.8	915.5	916.6	911.1	896.9	898.0
7.5°	948.2	938.4	928.6	907.8	916.6	913.3	904.5	898.0	889.3	877.2	875.1
10°	950.4	939.5	925.3	918.8	905.7	901.3	898.0	887.1	876.2	855.4	849.9
12.5°	943.9	930.8	913.3	907.8	898.0	883.8	876.2	865.2	855.4	839.0	827.0
15°	915.5	904.5	899.1	880.5	876.2	867.4	852.1	836.8	822.6	800.8	794.2
17.5°	882.7	878.4	872.9	858.7	857.6	848.9	834.7	821.5	803.0	769.1	758.2
20°	848.9	848.9	831.4	825.9	836.8	819.3	808.4	796.4	758.2	741.8	722.1
22.5°	823.7	811.7	801.9	793.1	794.2	783.3	768.0	744.0	729.7	710.1	687.2
25°	774.6	778.9	757.1	753.8	757.1	731.9	724.3	704.6	683.9	665.3	647.8
27.5°	744.0	731.9	717.8	705.7	705.7	695.9	674.1	669.7	638.0	620.5	598.7
30°	698.1	689.3	677.3	659.9	657.7	650.0	632.5	621.6	588.9	562.6	550.6
32.5°	640.2	636.9	627.1	607.4	600.9	592.1	570.3	551.7	536.4	506.9	492.7
35°	598.7	586.7	565.9	549.5	544.0	528.8	511.3	498.2	481.8	455.6	437.0
37.5°	536.4	524.4	504.7	485.1	485.1	469.8	445.7	432.6	409.7	394.4	379.1
40°	481.8	466.5	446.8	423.9	420.6	398.7	388.9	367.1	352.8	328.8	326.7
42.5°	420.6	406.4	388.9	371.4	358.3	347.4	322.3	305.9	290.6	278.6	275.3
45°	364.9	346.3	331.0	309.1	296.1	283.0	266.6	255.6	243.6	230.5	222.9
47.5°	316.8	301.5	279.7	260.0	246.9	240.3	221.7	209.8	199.9	191.2	185.7
50°	267.7	249.1	237.1	215.2	213.0	197.7	182.5	172.6	167.1	159.5	151.9
52.5°	230.5	213.0	196.6	180.3	171.5	166.1	151.9	142.0	134.4	128.9	124.5
55°	194.4	179.2	166.1	149.7	144.2	136.6	120.2	118.0	110.3	102.7	97.2
57.5°	167.1	152.9	137.6	126.7	116.9	111.5	98.3	89.6	85.2	78.7	73.2
60°	142.0	126.7	114.7	101.6	97.2	89.6	79.7	72.1	66.6	61.2	55.7
62.5°	119.1	106.0	92.9	81.9	75.4	71.0	63.3	56.8	51.4	47.0	42.6
65°	98.3	86.3	75.4	64.5	61.2	55.7	50.2	44.8	40.4	35.0	30.6
67.5°	80.9	69.9	59.0	51.4	48.1	45.9	39.3	33.9	30.6	27.3	22.9
70°	63.3	55.7	47.0	40.4	37.2	33.9	29.5	26.2	21.8	19.6	16.4
72.5°	49.2	42.6	35.0	29.5	27.3	25.1	20.8	17.5	15.3	13.1	10.9
75°	35.0	29.5	25.1	19.6	18.6	17.5	14.2	12.0	9.8	7.7	6.5
77.5°	24.1	19.6	15.3	13.1	12.0	9.8	8.7	6.5	5.5	4.4	3.3
80°	13.1	9.8	7.7	6.5	5.5	4.4	4.4	3.3	2.2	2.2	1.1
82.5°	4.4	3.3	2.2	1.1	1.1	1.1	1.1	1.1	1.1	0.0	1.1
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°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	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: P#

CATALOG NUMBER: LD4C20D010 EX4C209030 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1
2.5°	910.0	898.0	901.3	901.3	899.1	899.1	896.9	893.6	894.7	888.2	874.0
5°	900.2	884.9	882.7	884.9	876.2	874.0	869.6	876.2	856.5	864.1	855.4
7.5°	871.8	857.6	854.3	862.0	851.0	844.5	843.4	852.1	834.7	825.9	816.1
10°	840.1	834.7	824.8	819.3	816.1	817.1	808.4	797.5	794.2	792.0	783.3
12.5°	811.7	799.7	791.0	784.4	782.2	782.2	768.0	765.8	756.0	753.8	740.7
15°	777.8	763.6	758.2	749.4	741.8	746.1	729.7	725.4	722.1	707.9	710.1
17.5°	748.3	733.0	719.9	714.5	707.9	701.4	686.1	689.3	681.7	681.7	662.0
20°	710.1	693.7	683.9	673.0	673.0	664.2	653.3	654.4	644.5	634.7	617.2
22.5°	669.7	652.2	640.2	635.8	624.9	622.7	609.6	606.3	593.2	594.3	579.0
25°	627.1	609.6	593.2	594.3	584.5	580.1	572.5	557.2	551.7	545.2	540.8
27.5°	576.8	564.8	550.6	549.5	530.9	532.0	522.2	517.8	504.7	508.0	498.2
30°	530.9	513.5	500.3	497.1	489.4	487.2	472.0	465.4	467.6	458.8	453.4
32.5°	483.9	457.8	452.3	445.7	441.4	435.9	425.0	429.3	419.5	421.7	412.9
35°	421.7	410.8	396.5	396.5	392.2	387.8	380.2	384.6	374.7	370.4	361.6
37.5°	369.2	359.4	345.2	349.6	341.9	335.4	328.8	329.9	321.2	320.1	311.3
40°	312.4	307.0	297.2	297.2	291.7	291.7	288.4	285.1	279.7	273.1	263.3
42.5°	258.9	254.5	250.2	251.3	243.6	250.2	241.4	246.9	229.4	228.3	221.7
45°	219.6	209.8	210.8	206.5	202.1	204.3	196.6	198.8	189.0	186.8	180.3
47.5°	178.1	174.8	168.2	166.1	166.1	162.8	159.5	158.4	154.0	148.6	139.8
50°	146.4	134.4	132.2	128.9	126.7	126.7	122.4	115.8	116.9	111.5	102.7
52.5°	114.7	104.9	100.5	99.4	95.1	92.9	87.4	83.0	79.7	77.6	72.1
55°	88.5	79.7	74.3	74.3	67.8	67.8	60.1	56.8	52.4	48.1	44.8
57.5°	66.6	62.3	56.8	52.4	50.2	44.8	40.4	35.0	31.7	25.1	20.8
60°	50.2	45.9	40.4	37.2	35.0	29.5	24.1	19.6	12.0	9.8	8.7
62.5°	37.2	32.8	27.3	25.1	22.9	18.6	13.1	6.5	3.3	3.3	3.3
65°	27.3	21.8	17.5	15.3	13.1	9.8	4.4	2.2	1.1	1.1	1.1
67.5°	18.6	14.2	9.8	8.7	6.5	3.3	1.1	1.1	1.1	1.1	1.1
70°	12.0	8.7	4.4	3.3	2.2	1.1	1.1	1.1	1.1	1.1	1.1
72.5°	7.7	4.4	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	4.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	1.1	1.1	1.1
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: P#

CATALOG NUMBER: LD4C20D010 EX4C209030 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	911.1	911.1	911.1	911.1	911.1	911.1	911.1	911.1
2.5°	889.3	881.6	886.0	876.2	880.5	888.2	882.7	884.9
5°	858.7	854.3	848.9	834.7	845.6	854.3	849.9	848.9
7.5°	825.9	810.6	818.3	813.9	811.7	820.4	810.6	821.5
10°	792.0	781.1	780.0	772.4	772.4	778.9	780.0	773.4
12.5°	741.8	736.3	736.3	735.2	734.1	740.7	741.8	738.5
15°	705.7	703.6	698.1	697.0	690.5	700.3	701.4	700.3
17.5°	662.0	663.1	657.7	657.7	662.0	665.3	656.6	665.3
20°	632.5	627.1	624.9	615.0	620.5	626.0	626.0	627.1
22.5°	589.9	581.2	584.5	579.0	575.7	583.4	583.4	586.7
25°	541.9	541.9	544.0	540.8	543.0	547.3	544.0	551.7
27.5°	496.0	500.3	500.3	496.0	498.2	511.3	516.7	508.0
30°	453.4	454.5	457.8	455.6	462.1	466.5	465.4	472.0
32.5°	405.3	410.8	412.9	409.7	411.9	421.7	416.2	415.1
35°	368.2	358.3	357.3	358.3	362.7	364.9	362.7	370.4
37.5°	314.6	311.3	307.0	308.1	311.3	315.7	317.9	323.4
40°	263.3	258.9	258.9	257.8	254.5	266.6	266.6	266.6
42.5°	218.5	217.4	211.9	211.9	216.3	219.6	217.4	225.0
45°	179.2	174.8	171.5	171.5	174.8	174.8	178.1	177.0
47.5°	140.9	136.6	137.6	134.4	137.6	142.0	136.6	137.6
50°	106.0	106.0	103.8	106.0	104.9	106.0	103.8	101.6
52.5°	72.1	81.9	83.0	78.7	68.8	60.1	54.6	59.0
55°	41.5	37.2	37.2	36.0	33.9	32.8	29.5	32.8
57.5°	20.8	18.6	18.6	18.6	17.5	16.4	14.2	14.2
60°	8.7	7.7	7.7	6.5	5.5	4.4	3.3	4.4
62.5°	3.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2
65°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
67.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	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
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)