

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 EX4C209050 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 EX4C209050 4LBSQLWWH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

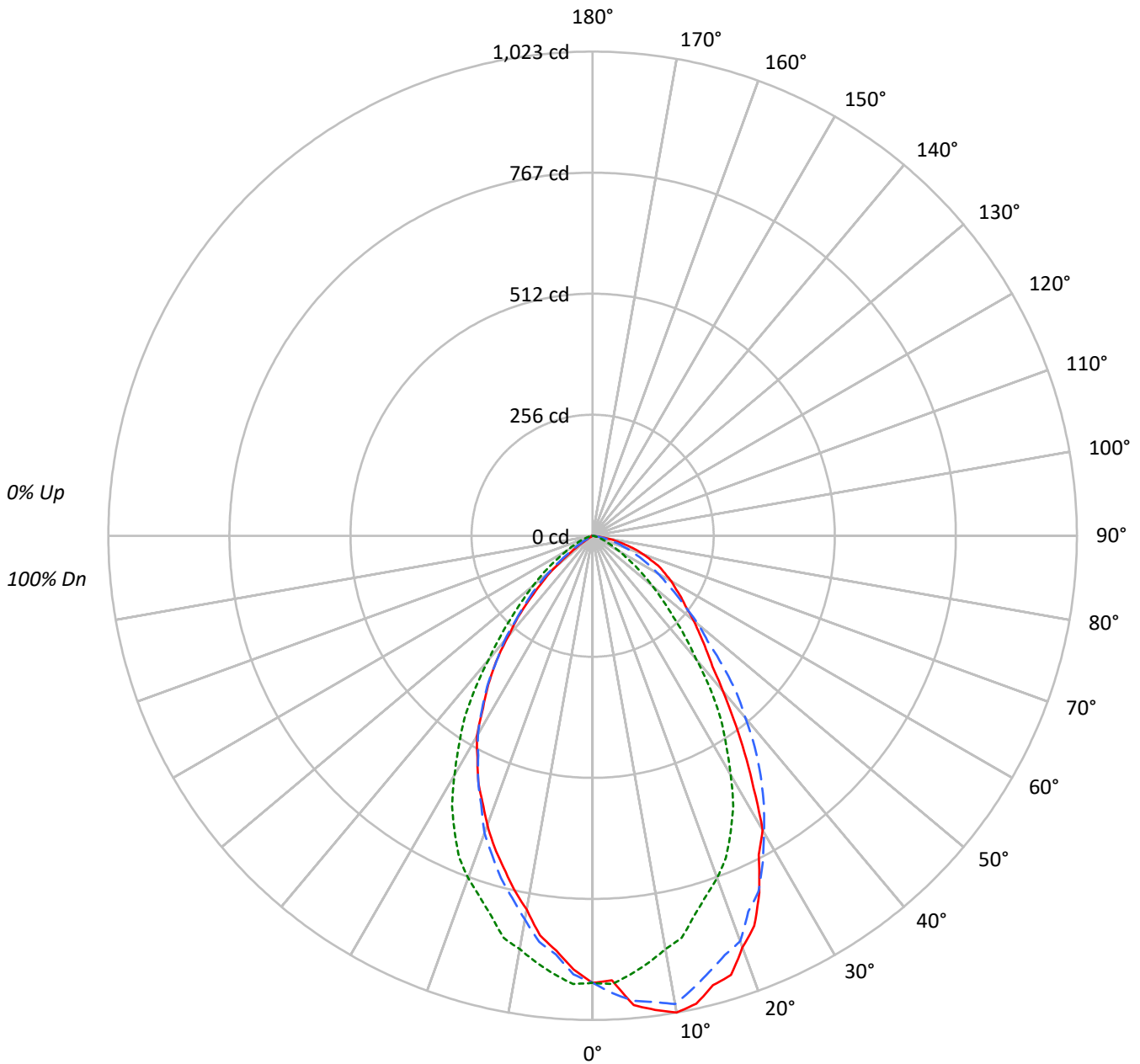
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1354.0 lumens
Efficiency: N/A
Efficacy: 62.1 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 (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: P#
CATALOG NUMBER: LD4C20D010 EX4C209050 4LBSQLWWH

Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209050 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°	91143	91143	91143
5°	96431	90068	85244
10°	100211	86896	78568
15°	98204	82931	72522
20°	95021	78962	66753
25°	88631	73428	60897
30°	80008	64989	54516
35°	65904	55633	45232
40°	53784	42939	34815
45°	46218	32613	25040
50°	41821	24828	15807
55°	38489	17916	5720
60°	36936	12235	868
65°	35685	8288	274
70°	31935	5755	339
75°	26171	2945	0
80°	16392	1278	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209050 4LBSQLWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.5	6.5
10°-20°	238.4	17.6
20°-30°	318.4	23.5
30°-40°	302.2	22.3
40°-50°	208.9	15.4
50°-60°	115.4	8.5
60°-70°	57.3	4.2
70°-80°	22.6	1.7
80°-90°	2.2	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°	645.3	47.7
0°-40°	947.6	70.0
0°-60°	1271.9	93.9
0°-90°	1354.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1354.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	945	945	945	945	945	
5°	996	986	930	888	880	95
15°	983	954	830	749	726	278
25°	832	829	690	572	572	380
35°	560	618	472	388	384	351
45°	339	388	239	196	184	264
55°	229	215	106	54	34	206
65°	156	113	36	1	1	152
75°	70	43	8	0	0	75
85°	0	1	0	0	0	6
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C20D010 EX4C209050 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	940.1	966.1	968.4	966.1	969.5	968.4	974.0	968.4	975.2	965.0	967.3
5°	995.6	985.4	1006.9	995.6	995.6	994.5	991.0	989.9	994.5	979.7	986.5
7.5°	1010.3	1025.0	1044.3	1020.5	1021.6	1021.6	1014.8	1012.6	1012.6	985.4	993.3
10°	1022.8	1013.7	1023.9	1014.8	1022.8	1021.6	1026.1	1011.4	1021.6	1005.8	1004.6
12.5°	1012.6	1009.1	1022.8	1008.0	1003.5	1004.6	999.0	995.6	999.0	980.8	979.7
15°	983.1	986.5	1006.9	991.0	988.8	986.5	979.7	968.4	977.5	952.5	953.7
17.5°	972.9	967.3	970.7	957.1	960.5	958.2	957.1	946.9	944.6	928.7	928.7
20°	925.4	937.8	937.8	928.7	928.7	927.6	912.9	922.0	911.7	907.2	911.7
22.5°	892.5	893.6	893.6	885.7	886.9	882.3	874.4	868.7	874.4	868.7	859.7
25°	832.5	834.8	848.3	833.6	831.3	835.9	829.1	825.7	824.6	811.0	829.1
27.5°	760.0	782.6	781.5	775.8	782.6	773.6	770.2	771.3	774.7	773.6	778.1
30°	718.1	721.5	724.9	720.4	721.5	718.1	718.1	719.2	728.3	724.9	723.7
32.5°	633.1	644.4	653.5	653.5	654.6	658.1	656.9	680.7	686.4	675.1	672.8
35°	559.5	567.4	575.3	576.5	591.2	592.3	593.5	600.3	616.1	619.5	618.4
37.5°	489.3	497.2	499.5	509.7	517.6	525.5	534.6	543.7	557.2	568.6	562.9
40°	427.0	430.4	436.1	440.6	456.4	456.4	461.0	479.1	493.8	502.9	501.7
42.5°	374.9	376.0	380.5	388.5	403.2	399.8	403.2	415.7	437.2	438.3	450.8
45°	338.7	337.5	340.9	342.0	351.1	355.7	357.9	367.0	385.1	387.3	388.5
47.5°	305.8	304.7	310.3	312.6	316.0	320.5	320.5	321.7	328.5	334.1	329.6
50°	278.6	278.6	278.6	280.9	286.6	285.4	286.6	291.1	294.5	292.2	291.1
52.5°	249.2	253.7	257.1	258.3	259.4	259.4	260.5	258.3	257.1	253.7	246.9
55°	228.8	233.3	233.3	233.3	233.3	237.8	232.2	233.3	233.3	224.3	215.2
57.5°	208.4	212.9	216.3	211.8	216.3	211.8	209.5	208.4	206.1	197.1	183.5
60°	191.4	193.7	192.5	191.4	193.7	190.3	188.0	183.5	181.2	168.8	159.7
62.5°	172.2	173.3	174.4	172.2	169.9	168.8	164.2	157.4	152.9	142.7	134.8
65°	156.3	152.9	151.8	150.6	148.4	145.0	141.6	133.7	130.2	121.2	113.2
67.5°	132.5	131.4	133.7	130.2	124.6	124.6	121.2	114.4	106.5	100.8	92.9
70°	113.2	112.1	109.9	106.5	105.3	100.8	100.8	92.9	90.6	80.4	73.6
72.5°	92.9	92.9	89.5	86.1	82.7	80.4	79.3	73.6	70.2	64.6	58.9
75°	70.2	70.2	69.1	65.7	63.4	61.1	60.0	55.5	52.1	46.5	43.0
77.5°	49.8	49.8	45.3	43.0	44.2	41.9	39.6	38.5	37.4	34.0	29.5
80°	29.5	28.3	24.9	26.0	24.9	24.9	23.8	22.6	20.4	18.1	15.8
82.5°	7.9	9.1	9.1	9.1	10.2	7.9	7.9	7.9	9.1	9.1	5.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
87.5°	1.2	2.3	4.5	4.5	4.5	4.5	4.5	3.4	3.4	3.4	2.3
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 EX4C209050 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	955.9	954.8	955.9	948.0	966.1	952.5	950.3	948.0	955.9	948.0	936.7
5°	976.3	965.0	961.6	958.2	968.4	952.5	949.2	950.3	944.6	929.9	931.0
7.5°	983.1	972.9	962.7	941.2	950.3	946.9	937.8	931.0	922.0	909.5	907.2
10°	985.4	974.0	959.3	952.5	938.9	934.4	931.0	919.7	908.4	886.9	881.2
12.5°	978.6	965.0	946.9	941.2	931.0	916.3	908.4	897.0	886.9	869.9	857.4
15°	949.2	937.8	932.2	912.9	908.4	899.3	883.4	867.6	852.9	830.2	823.4
17.5°	915.2	910.6	905.0	890.2	889.1	880.1	865.3	851.7	832.5	797.3	786.0
20°	880.1	880.1	861.9	856.3	867.6	849.4	838.1	825.7	786.0	769.0	748.7
22.5°	854.0	841.5	831.3	822.3	823.4	812.1	796.2	771.3	756.6	736.2	712.4
25°	803.0	807.6	784.9	781.5	784.9	758.8	750.9	730.5	709.0	689.7	671.6
27.5°	771.3	758.8	744.1	731.7	731.7	721.5	698.8	694.3	661.4	643.3	620.7
30°	723.7	714.7	702.2	684.1	681.8	673.9	655.8	644.4	610.5	583.3	570.8
32.5°	663.7	660.3	650.1	629.8	623.0	613.9	591.2	572.0	556.1	525.5	510.8
35°	620.7	608.2	586.7	569.7	564.0	548.2	530.0	516.5	499.5	472.3	453.1
37.5°	556.1	543.7	523.3	502.9	502.9	487.0	462.1	448.5	424.7	408.9	393.0
40°	499.5	483.6	463.3	439.5	436.1	413.4	403.2	380.5	365.8	340.9	338.7
42.5°	436.1	421.3	403.2	385.1	371.5	360.2	334.1	317.1	301.3	288.8	285.4
45°	378.3	359.0	343.2	320.5	306.9	293.4	276.4	265.0	252.6	239.0	231.1
47.5°	328.5	312.6	289.9	269.6	256.0	249.2	229.9	217.5	207.3	198.2	192.5
50°	277.5	258.3	245.8	223.1	220.8	205.0	189.2	179.0	173.3	165.4	157.4
52.5°	239.0	220.8	203.9	186.9	177.8	172.2	157.4	147.2	139.3	133.7	129.1
55°	201.6	185.7	172.2	155.2	149.5	141.6	124.6	122.3	114.4	106.5	100.8
57.5°	173.3	158.5	142.7	131.4	121.2	115.5	101.9	92.9	88.3	81.6	75.9
60°	147.2	131.4	118.9	105.3	100.8	92.9	82.7	74.8	69.1	63.4	57.8
62.5°	123.4	109.9	96.3	84.9	78.1	73.6	65.7	58.9	53.2	48.7	44.2
65°	101.9	89.5	78.1	66.8	63.4	57.8	52.1	46.5	41.9	36.3	31.7
67.5°	83.8	72.5	61.1	53.2	49.8	47.6	40.8	35.1	31.7	28.3	23.8
70°	65.7	57.8	48.7	41.9	38.5	35.1	30.6	27.2	22.6	20.4	17.0
72.5°	51.0	44.2	36.3	30.6	28.3	26.0	21.5	18.1	15.8	13.6	11.3
75°	36.3	30.6	26.0	20.4	19.3	18.1	14.7	12.5	10.2	7.9	6.8
77.5°	24.9	20.4	15.8	13.6	12.5	10.2	9.1	6.8	5.7	4.5	3.4
80°	13.6	10.2	7.9	6.8	5.7	4.5	4.5	3.4	2.3	2.3	1.2
82.5°	4.5	3.4	2.3	1.2	1.2	1.2	1.2	1.2	1.2	0.0	1.2
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°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	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 EX4C209050 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	943.5	931.0	934.4	934.4	932.2	932.2	929.9	926.5	927.6	920.8	906.1
5°	933.3	917.4	915.2	917.4	908.4	906.1	901.6	908.4	888.0	895.9	886.9
7.5°	903.8	889.1	885.7	893.6	882.3	875.5	874.4	883.4	865.3	856.3	846.1
10°	871.0	865.3	855.1	849.4	846.1	847.2	838.1	826.8	823.4	821.1	812.1
12.5°	841.5	829.1	820.0	813.2	811.0	811.0	796.2	794.0	783.8	781.5	767.9
15°	806.4	791.7	786.0	777.0	769.0	773.6	756.6	752.0	748.7	733.9	736.2
17.5°	775.8	760.0	746.4	740.7	733.9	727.2	711.3	714.7	706.7	706.7	686.4
20°	736.2	719.2	709.0	697.7	697.7	688.6	677.3	678.4	668.2	658.1	639.9
22.5°	694.3	676.2	663.7	659.2	647.9	645.6	632.0	628.6	615.0	616.1	600.3
25°	650.1	632.0	615.0	616.1	606.0	601.4	593.5	577.7	572.0	565.2	560.7
27.5°	598.0	585.6	570.8	569.7	550.5	551.6	541.4	536.9	523.3	526.7	516.5
30°	550.5	532.4	518.7	515.4	507.4	505.1	489.3	482.5	484.8	475.7	470.0
32.5°	501.7	474.6	468.9	462.1	457.6	451.9	440.6	445.1	434.9	437.2	428.1
35°	437.2	425.9	411.1	411.1	406.6	402.1	394.2	398.7	388.5	384.0	374.9
37.5°	382.8	372.6	357.9	362.4	354.5	347.7	340.9	342.0	333.0	331.9	322.8
40°	323.9	318.2	308.1	308.1	302.4	302.4	299.0	295.6	289.9	283.1	272.9
42.5°	268.4	263.9	259.4	260.5	252.6	259.4	250.3	256.0	237.8	236.7	229.9
45°	227.6	217.5	218.6	214.1	209.5	211.8	203.9	206.1	196.0	193.7	186.9
47.5°	184.6	181.2	174.4	172.2	172.2	168.8	165.4	164.2	159.7	154.0	145.0
50°	151.8	139.3	137.0	133.7	131.4	131.4	126.9	120.1	121.2	115.5	106.5
52.5°	118.9	108.7	104.2	103.1	98.6	96.3	90.6	86.1	82.7	80.4	74.8
55°	91.7	82.7	77.0	77.0	70.2	70.2	62.3	58.9	54.4	49.8	46.5
57.5°	69.1	64.6	58.9	54.4	52.1	46.5	41.9	36.3	32.8	26.0	21.5
60°	52.1	47.6	41.9	38.5	36.3	30.6	24.9	20.4	12.5	10.2	9.1
62.5°	38.5	34.0	28.3	26.0	23.8	19.3	13.6	6.8	3.4	3.4	3.4
65°	28.3	22.6	18.1	15.8	13.6	10.2	4.5	2.3	1.2	1.2	1.2
67.5°	19.3	14.7	10.2	9.1	6.8	3.4	1.2	1.2	1.2	1.2	1.2
70°	12.5	9.1	4.5	3.4	2.3	1.2	1.2	1.2	1.2	1.2	1.2
72.5°	7.9	4.5	2.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	4.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	2.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.2	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	1.2	1.2	1.2
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 EX4C209050 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	944.6	944.6	944.6	944.6	944.6	944.6	944.6	944.6
2.5°	922.0	914.0	918.5	908.4	912.9	920.8	915.2	917.4
5°	890.2	885.7	880.1	865.3	876.6	885.7	881.2	880.1
7.5°	856.3	840.4	848.3	843.8	841.5	850.6	840.4	851.7
10°	821.1	809.8	808.7	800.8	800.8	807.6	808.7	801.9
12.5°	769.0	763.4	763.4	762.3	761.1	767.9	769.0	765.7
15°	731.7	729.4	723.7	722.6	715.8	726.0	727.2	726.0
17.5°	686.4	687.5	681.8	681.8	686.4	689.7	680.7	689.7
20°	655.8	650.1	647.9	637.6	643.3	649.0	649.0	650.1
22.5°	611.6	602.5	606.0	600.3	596.9	604.8	604.8	608.2
25°	561.8	561.8	564.0	560.7	562.9	567.4	564.0	572.0
27.5°	514.2	518.7	518.7	514.2	516.5	530.0	535.7	526.7
30°	470.0	471.2	474.6	472.3	479.1	483.6	482.5	489.3
32.5°	420.2	425.9	428.1	424.7	427.0	437.2	431.5	430.4
35°	381.7	371.5	370.4	371.5	376.0	378.3	376.0	384.0
37.5°	326.2	322.8	318.2	319.4	322.8	327.3	329.6	335.2
40°	272.9	268.4	268.4	267.3	263.9	276.4	276.4	276.4
42.5°	226.5	225.4	219.7	219.7	224.3	227.6	225.4	233.3
45°	185.7	181.2	177.8	177.8	181.2	181.2	184.6	183.5
47.5°	146.1	141.6	142.7	139.3	142.7	147.2	141.6	142.7
50°	109.9	109.9	107.6	109.9	108.7	109.9	107.6	105.3
52.5°	74.8	84.9	86.1	81.6	71.4	62.3	56.6	61.1
55°	43.0	38.5	38.5	37.4	35.1	34.0	30.6	34.0
57.5°	21.5	19.3	19.3	19.3	18.1	17.0	14.7	14.7
60°	9.1	7.9	7.9	6.8	5.7	4.5	3.4	4.5
62.5°	3.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3
65°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
67.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
70°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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)