

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: **LD4C05D010 EX4C059030 4LBSQLWWLI**

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: LD4C05D010 EX4C059030 4LBSQLWWLI  
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

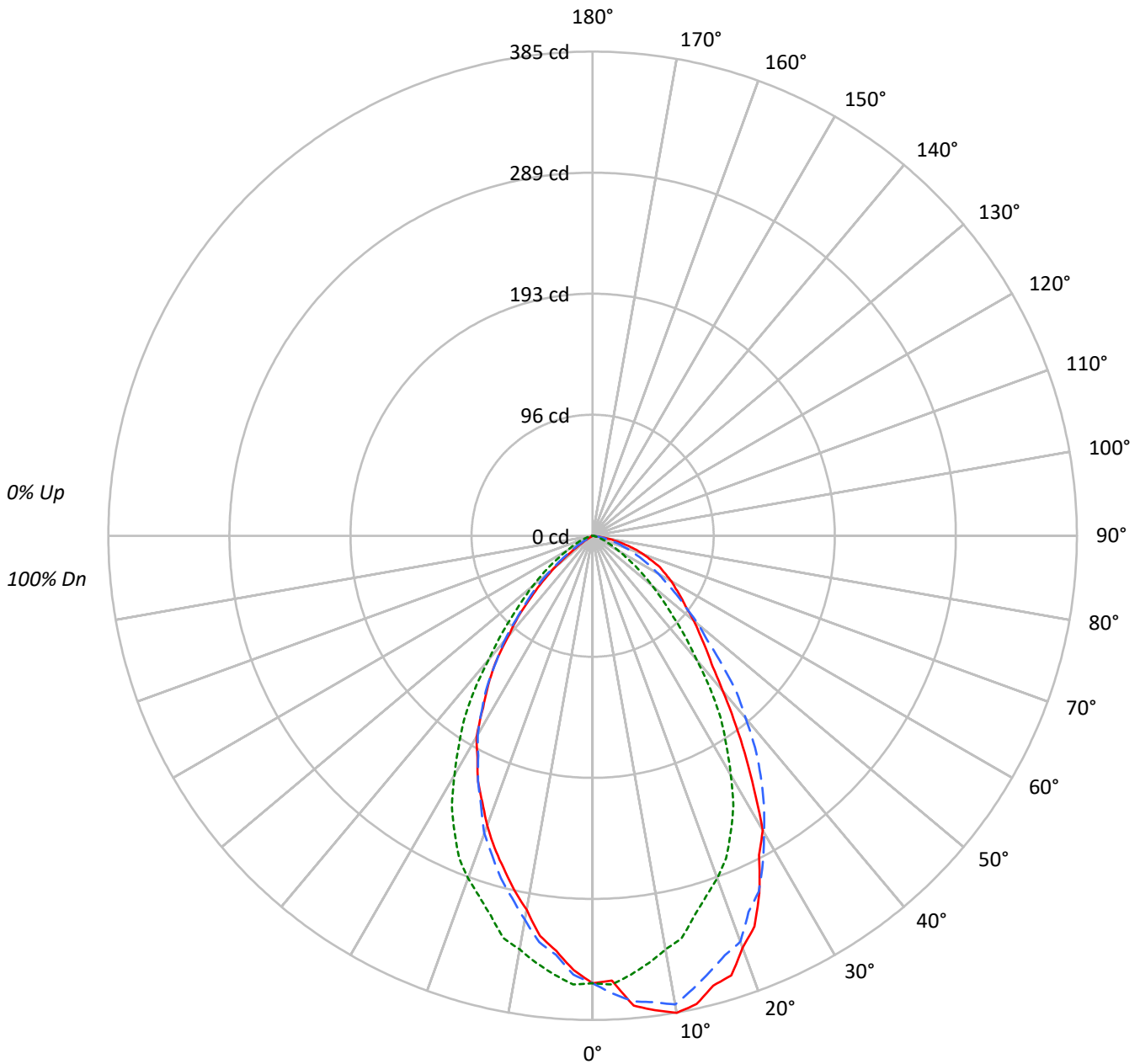
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 510.0 lumens  
Efficiency: N/A  
Efficacy: 70.8 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): 7.2  
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

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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	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°	34331	34331	34331
5°	36322	33929	32108
10°	37741	32724	29589
15°	36990	31236	27321
20°	35795	29747	25147
25°	33387	27659	22932
30°	30138	24478	20534
35°	24819	20955	17033
40°	20254	16173	13112
45°	17412	12281	9429
50°	15747	9352	5959
55°	14501	6746	2153
60°	13914	4612	328
65°	13448	3128	91
70°	12046	2172	113
75°	9879	1118	0
80°	6168	500	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.3	6.5
10°-20°	89.8	17.6
20°-30°	119.9	23.5
30°-40°	113.8	22.3
40°-50°	78.7	15.4
50°-60°	43.5	8.5
60°-70°	21.6	4.2
70°-80°	8.5	1.7
80°-90°	0.8	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°	243.1	47.7
0°-40°	356.9	70.0
0°-60°	479.1	93.9
0°-90°	510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	510.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	356	356	356	356	356	
5°	375	372	350	334	332	36
15°	370	359	313	282	274	105
25°	314	312	260	215	215	143
35°	211	233	178	146	145	132
45°	128	146	90	74	69	99
55°	86	81	40	20	13	78
65°	59	43	14	0	0	57
75°	26	16	3	0	0	28
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P#

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	354.1	363.9	364.7	363.9	365.2	364.7	366.9	364.7	367.3	363.5	364.3
5°	375.0	371.1	379.3	375.0	375.0	374.6	373.3	372.9	374.6	369.0	371.6
7.5°	380.5	386.1	393.3	384.4	384.8	384.8	382.2	381.4	381.4	371.1	374.1
10°	385.2	381.8	385.7	382.2	385.2	384.8	386.5	381.0	384.8	378.8	378.4
12.5°	381.4	380.1	385.2	379.7	378.0	378.4	376.3	375.0	376.3	369.4	369.0
15°	370.3	371.6	379.3	373.3	372.4	371.6	369.0	364.7	368.2	358.8	359.2
17.5°	366.5	364.3	365.6	360.5	361.8	360.9	360.5	356.7	355.8	349.8	349.8
20°	348.6	353.2	353.2	349.8	349.8	349.4	343.9	347.3	343.4	341.7	343.4
22.5°	336.2	336.6	336.6	333.6	334.0	332.3	329.3	327.2	329.3	327.2	323.8
25°	313.6	314.4	319.5	314.0	313.1	314.8	312.3	311.0	310.6	305.5	312.3
27.5°	286.3	294.8	294.4	292.2	294.8	291.4	290.1	290.5	291.8	291.4	293.1
30°	270.5	271.8	273.0	271.3	271.8	270.5	270.5	270.9	274.3	273.0	272.6
32.5°	238.5	242.7	246.2	246.2	246.6	247.9	247.4	256.4	258.5	254.3	253.4
35°	210.7	213.7	216.7	217.1	222.7	223.1	223.5	226.1	232.1	233.4	232.9
37.5°	184.3	187.3	188.1	192.0	195.0	197.9	201.4	204.8	209.9	214.2	212.0
40°	160.8	162.1	164.2	166.0	171.9	171.9	173.6	180.5	186.0	189.4	189.0
42.5°	141.2	141.6	143.3	146.3	151.9	150.6	151.9	156.6	164.7	165.1	169.8
45°	127.6	127.1	128.4	128.8	132.3	134.0	134.8	138.2	145.0	145.9	146.3
47.5°	115.2	114.8	116.9	117.7	119.0	120.7	120.7	121.2	123.7	125.9	124.2
50°	104.9	104.9	104.9	105.8	107.9	107.5	107.9	109.6	110.9	110.1	109.6
52.5°	93.8	95.6	96.8	97.3	97.7	97.7	98.1	97.3	96.8	95.6	93.0
55°	86.2	87.9	87.9	87.9	87.9	89.6	87.5	87.9	87.9	84.5	81.1
57.5°	78.5	80.2	81.5	79.8	81.5	79.8	78.9	78.5	77.6	74.2	69.1
60°	72.1	73.0	72.5	72.1	73.0	71.7	70.8	69.1	68.3	63.6	60.2
62.5°	64.8	65.3	65.7	64.8	64.0	63.6	61.9	59.3	57.6	53.8	50.8
65°	58.9	57.6	57.2	56.7	55.9	54.6	53.3	50.3	49.1	45.6	42.7
67.5°	49.9	49.5	50.3	49.1	46.9	46.9	45.6	43.1	40.1	38.0	35.0
70°	42.7	42.2	41.4	40.1	39.7	38.0	38.0	35.0	34.1	30.3	27.7
72.5°	35.0	35.0	33.7	32.4	31.1	30.3	29.9	27.7	26.5	24.3	22.2
75°	26.5	26.5	26.0	24.7	23.9	23.0	22.6	20.9	19.6	17.5	16.2
77.5°	18.8	18.8	17.1	16.2	16.6	15.8	14.9	14.5	14.1	12.8	11.1
80°	11.1	10.7	9.4	9.8	9.4	9.4	9.0	8.5	7.7	6.8	6.0
82.5°	3.0	3.4	3.4	3.4	3.8	3.0	3.0	3.0	3.4	3.4	2.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
87.5°	0.4	0.9	1.7	1.7	1.7	1.7	1.7	1.3	1.3	1.3	0.9
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°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	360.1	359.6	360.1	357.1	363.9	358.8	357.9	357.1	360.1	357.1	352.8
5°	367.7	363.5	362.2	360.9	364.7	358.8	357.5	357.9	355.8	350.3	350.7
7.5°	370.3	366.5	362.6	354.5	357.9	356.7	353.2	350.7	347.3	342.6	341.7
10°	371.1	366.9	361.3	358.8	353.7	352.0	350.7	346.4	342.1	334.0	331.9
12.5°	368.6	363.5	356.7	354.5	350.7	345.1	342.1	337.9	334.0	327.6	322.9
15°	357.5	353.2	351.1	343.9	342.1	338.7	332.8	326.8	321.2	312.7	310.1
17.5°	344.7	343.0	340.9	335.3	334.9	331.5	325.9	320.8	313.6	300.3	296.1
20°	331.5	331.5	324.6	322.5	326.8	320.0	315.7	311.0	296.1	289.7	282.0
22.5°	321.7	317.0	313.1	309.7	310.1	305.9	299.9	290.5	285.0	277.3	268.3
25°	302.5	304.2	295.7	294.4	295.7	285.8	282.8	275.2	267.1	259.8	253.0
27.5°	290.5	285.8	280.3	275.6	275.6	271.8	263.2	261.5	249.1	242.3	233.8
30°	272.6	269.2	264.5	257.7	256.8	253.8	247.0	242.7	229.9	219.7	215.0
32.5°	250.0	248.7	244.9	237.2	234.6	231.2	222.7	215.4	209.5	197.9	192.4
35°	233.8	229.1	221.0	214.6	212.4	206.5	199.6	194.5	188.1	177.9	170.6
37.5°	209.5	204.8	197.1	189.4	189.4	183.5	174.1	168.9	160.0	154.0	148.0
40°	188.1	182.2	174.5	165.5	164.2	155.7	151.9	143.3	137.8	128.4	127.6
42.5°	164.2	158.7	151.9	145.0	139.9	135.7	125.9	119.5	113.5	108.8	107.5
45°	142.5	135.2	129.3	120.7	115.6	110.5	104.1	99.8	95.1	90.0	87.0
47.5°	123.7	117.7	109.2	101.5	96.4	93.8	86.6	81.9	78.1	74.7	72.5
50°	104.5	97.3	92.6	84.0	83.2	77.2	71.3	67.4	65.3	62.3	59.3
52.5°	90.0	83.2	76.8	70.4	67.0	64.8	59.3	55.5	52.5	50.3	48.6
55°	75.9	70.0	64.8	58.4	56.3	53.3	46.9	46.1	43.1	40.1	38.0
57.5°	65.3	59.7	53.8	49.5	45.6	43.5	38.4	35.0	33.3	30.7	28.6
60°	55.5	49.5	44.8	39.7	38.0	35.0	31.1	28.2	26.0	23.9	21.8
62.5°	46.5	41.4	36.3	32.0	29.4	27.7	24.7	22.2	20.1	18.4	16.6
65°	38.4	33.7	29.4	25.2	23.9	21.8	19.6	17.5	15.8	13.7	12.0
67.5°	31.6	27.3	23.0	20.1	18.8	17.9	15.4	13.2	12.0	10.7	9.0
70°	24.7	21.8	18.4	15.8	14.5	13.2	11.5	10.2	8.5	7.7	6.4
72.5°	19.2	16.6	13.7	11.5	10.7	9.8	8.1	6.8	6.0	5.1	4.3
75°	13.7	11.5	9.8	7.7	7.3	6.8	5.5	4.7	3.8	3.0	2.6
77.5°	9.4	7.7	6.0	5.1	4.7	3.8	3.4	2.6	2.1	1.7	1.3
80°	5.1	3.8	3.0	2.6	2.1	1.7	1.7	1.3	0.9	0.9	0.4
82.5°	1.7	1.3	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4
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°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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#

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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	355.4	350.7	352.0	352.0	351.1	351.1	350.3	349.0	349.4	346.8	341.3
5°	351.5	345.6	344.7	345.6	342.1	341.3	339.6	342.1	334.5	337.5	334.0
7.5°	340.4	334.9	333.6	336.6	332.3	329.8	329.3	332.8	325.9	322.5	318.7
10°	328.1	325.9	322.1	320.0	318.7	319.1	315.7	311.4	310.1	309.3	305.9
12.5°	317.0	312.3	308.9	306.3	305.5	305.5	299.9	299.1	295.2	294.4	289.2
15°	303.7	298.2	296.1	292.7	289.7	291.4	285.0	283.3	282.0	276.4	277.3
17.5°	292.2	286.3	281.1	279.0	276.4	273.9	267.9	269.2	266.2	266.2	258.5
20°	277.3	270.9	267.1	262.8	262.8	259.4	255.1	255.5	251.7	247.9	241.0
22.5°	261.5	254.7	250.0	248.3	244.0	243.2	238.1	236.8	231.7	232.1	226.1
25°	244.9	238.1	231.7	232.1	228.2	226.5	223.5	217.6	215.4	212.9	211.2
27.5°	225.3	220.6	215.0	214.6	207.3	207.8	203.9	202.2	197.1	198.4	194.5
30°	207.3	200.5	195.4	194.1	191.1	190.3	184.3	181.7	182.6	179.2	177.0
32.5°	189.0	178.8	176.6	174.1	172.4	170.2	166.0	167.7	163.8	164.7	161.3
35°	164.7	160.4	154.9	154.9	153.1	151.4	148.5	150.2	146.3	144.6	141.2
37.5°	144.2	140.4	134.8	136.5	133.5	131.0	128.4	128.8	125.4	125.0	121.6
40°	122.0	119.9	116.0	116.0	113.9	113.9	112.6	111.3	109.2	106.7	102.8
42.5°	101.1	99.4	97.7	98.1	95.1	97.7	94.3	96.4	89.6	89.2	86.6
45°	85.7	81.9	82.3	80.6	78.9	79.8	76.8	77.6	73.8	73.0	70.4
47.5°	69.5	68.3	65.7	64.8	64.8	63.6	62.3	61.9	60.2	58.0	54.6
50°	57.2	52.5	51.6	50.3	49.5	49.5	47.8	45.2	45.6	43.5	40.1
52.5°	44.8	40.9	39.2	38.8	37.1	36.3	34.1	32.4	31.1	30.3	28.2
55°	34.5	31.1	29.0	29.0	26.5	26.5	23.5	22.2	20.5	18.8	17.5
57.5°	26.0	24.3	22.2	20.5	19.6	17.5	15.8	13.7	12.4	9.8	8.1
60°	19.6	17.9	15.8	14.5	13.7	11.5	9.4	7.7	4.7	3.8	3.4
62.5°	14.5	12.8	10.7	9.8	9.0	7.3	5.1	2.6	1.3	1.3	1.3
65°	10.7	8.5	6.8	6.0	5.1	3.8	1.7	0.9	0.4	0.4	0.4
67.5°	7.3	5.5	3.8	3.4	2.6	1.3	0.4	0.4	0.4	0.4	0.4
70°	4.7	3.4	1.7	1.3	0.9	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	3.0	1.7	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.4	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	0.4	0.4	0.4
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: P#

CATALOG NUMBER: LD4C05D010 EX4C059030 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	347.3	344.3	346.0	342.1	343.9	346.8	344.7	345.6
5°	335.3	333.6	331.5	325.9	330.2	333.6	331.9	331.5
7.5°	322.5	316.5	319.5	317.8	317.0	320.4	316.5	320.8
10°	309.3	305.0	304.6	301.6	301.6	304.2	304.6	302.0
12.5°	289.7	287.5	287.5	287.1	286.7	289.2	289.7	288.4
15°	275.6	274.7	272.6	272.2	269.6	273.5	273.9	273.5
17.5°	258.5	258.9	256.8	256.8	258.5	259.8	256.4	259.8
20°	247.0	244.9	244.0	240.2	242.3	244.5	244.5	244.9
22.5°	230.4	227.0	228.2	226.1	224.8	227.8	227.8	229.1
25°	211.6	211.6	212.4	211.2	212.0	213.7	212.4	215.4
27.5°	193.7	195.4	195.4	193.7	194.5	199.6	201.8	198.4
30°	177.0	177.5	178.8	177.9	180.5	182.2	181.7	184.3
32.5°	158.3	160.4	161.3	160.0	160.8	164.7	162.5	162.1
35°	143.8	139.9	139.5	139.9	141.6	142.5	141.6	144.6
37.5°	122.9	121.6	119.9	120.3	121.6	123.3	124.2	126.3
40°	102.8	101.1	101.1	100.7	99.4	104.1	104.1	104.1
42.5°	85.3	84.9	82.8	82.8	84.5	85.7	84.9	87.9
45°	70.0	68.3	67.0	67.0	68.3	68.3	69.5	69.1
47.5°	55.0	53.3	53.8	52.5	53.8	55.5	53.3	53.8
50°	41.4	41.4	40.5	41.4	40.9	41.4	40.5	39.7
52.5°	28.2	32.0	32.4	30.7	26.9	23.5	21.3	23.0
55°	16.2	14.5	14.5	14.1	13.2	12.8	11.5	12.8
57.5°	8.1	7.3	7.3	7.3	6.8	6.4	5.5	5.5
60°	3.4	3.0	3.0	2.6	2.1	1.7	1.3	1.7
62.5°	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
65°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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)