

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 EX4C059027 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 EX4C059027 4LBSQLWWLI  
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

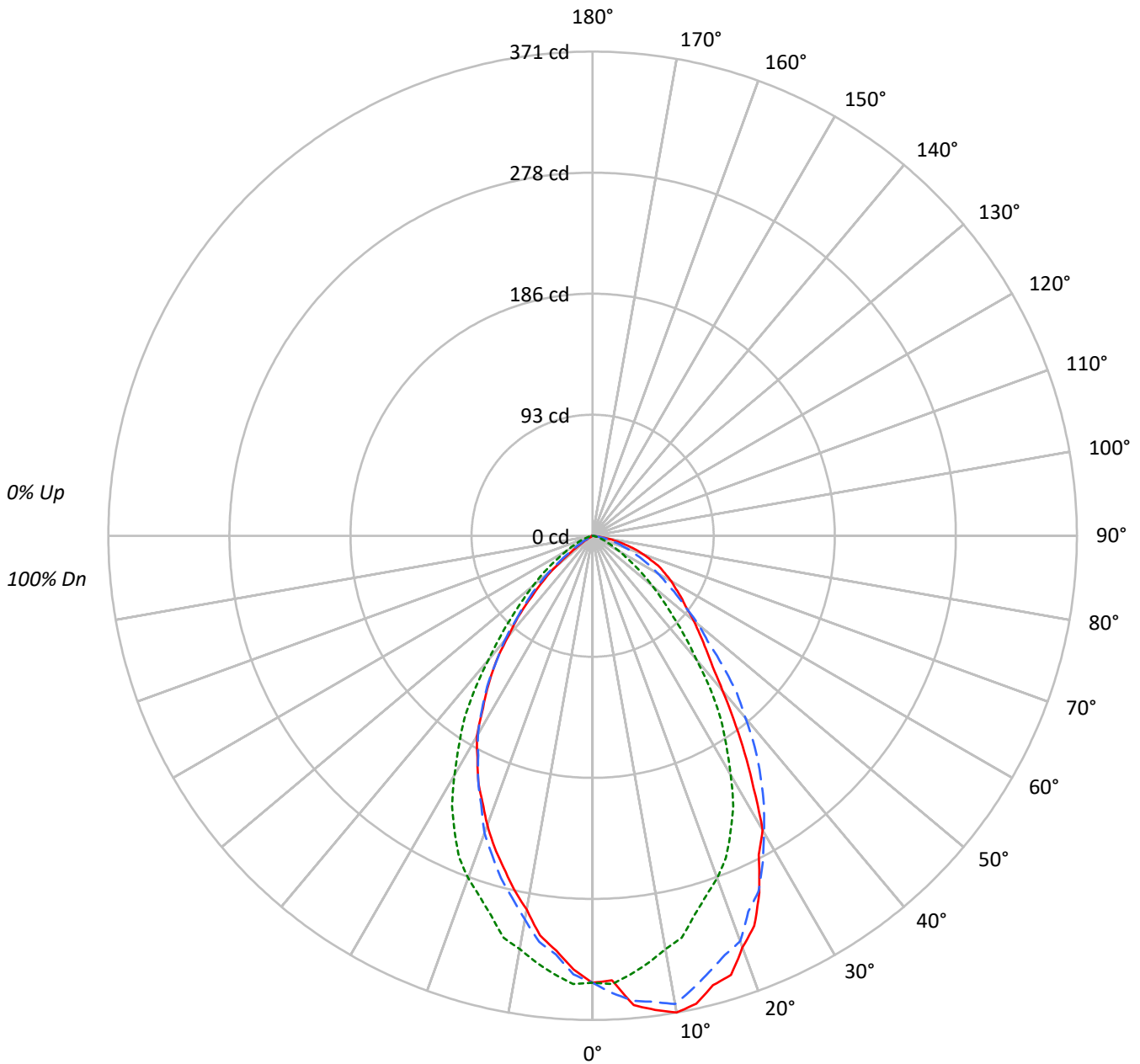
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 491.0 lumens  
Efficiency: N/A  
Efficacy: 68.2 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 (A<sub>in</sub>): 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°	33047	33047	33047
5°	34966	32660	30907
10°	36340	31510	28492
15°	35612	30068	26302
20°	34460	28638	24212
25°	32141	26627	22081
30°	29013	23564	19765
35°	23900	20178	16397
40°	19498	15568	12621
45°	16757	11831	9074
50°	15161	9007	5734
55°	13963	6493	2069
60°	13393	4438	309
65°	12945	2991	91
70°	11595	2088	113
75°	9507	1081	0
80°	5946	445	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.1	6.5
10°-20°	86.5	17.6
20°-30°	115.5	23.5
30°-40°	109.6	22.3
40°-50°	75.8	15.4
50°-60°	41.9	8.5
60°-70°	20.8	4.2
70°-80°	8.2	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°	234.0	47.7
0°-40°	343.6	70.0
0°-60°	461.2	93.9
0°-90°	491.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	491.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	342	342	342	342	342	
5°	361	358	337	322	319	35
15°	356	346	301	272	263	101
25°	302	301	250	207	207	138
35°	203	224	171	141	139	127
45°	123	141	87	71	66	96
55°	83	78	39	20	12	75
65°	57	41	13	0	0	55
75°	26	16	3	0	0	27
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°	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5
2.5°	340.9	350.3	351.2	350.3	351.6	351.2	353.2	351.2	353.6	349.9	350.8
5°	361.0	357.3	365.1	361.0	361.0	360.6	359.4	359.0	360.6	355.3	357.7
7.5°	366.4	371.7	378.7	370.1	370.5	370.5	368.0	367.2	367.2	357.3	360.2
10°	370.9	367.6	371.3	368.0	370.9	370.5	372.1	366.8	370.5	364.7	364.3
12.5°	367.2	365.9	370.9	365.5	363.9	364.3	362.3	361.0	362.3	355.7	355.3
15°	356.5	357.7	365.1	359.4	358.6	357.7	355.3	351.2	354.5	345.4	345.8
17.5°	352.8	350.8	352.0	347.1	348.3	347.5	347.1	343.4	342.5	336.8	336.8
20°	335.6	340.1	340.1	336.8	336.8	336.4	331.0	334.3	330.6	329.0	330.6
22.5°	323.6	324.1	324.1	321.2	321.6	320.0	317.1	315.0	317.1	315.0	311.7
25°	301.9	302.7	307.6	302.3	301.5	303.1	300.6	299.4	299.0	294.1	300.6
27.5°	275.6	283.8	283.4	281.3	283.8	280.5	279.3	279.7	280.9	280.5	282.2
30°	260.4	261.6	262.9	261.2	261.6	260.4	260.4	260.8	264.1	262.9	262.4
32.5°	229.6	233.7	237.0	237.0	237.4	238.6	238.2	246.8	248.9	244.8	244.0
35°	202.9	205.8	208.6	209.1	214.4	214.8	215.2	217.7	223.4	224.7	224.2
37.5°	177.4	180.3	181.1	184.8	187.7	190.6	193.9	197.1	202.1	206.2	204.1
40°	154.8	156.1	158.1	159.8	165.5	165.5	167.2	173.7	179.1	182.4	181.9
42.5°	136.0	136.4	138.0	140.9	146.2	145.0	146.2	150.7	158.5	158.9	163.5
45°	122.8	122.4	123.6	124.0	127.3	129.0	129.8	133.1	139.6	140.5	140.9
47.5°	110.9	110.5	112.5	113.4	114.6	116.2	116.2	116.6	119.1	121.2	119.5
50°	101.0	101.0	101.0	101.9	103.9	103.5	103.9	105.6	106.8	106.0	105.6
52.5°	90.4	92.0	93.2	93.7	94.1	94.1	94.5	93.7	93.2	92.0	89.5
55°	83.0	84.6	84.6	84.6	84.6	86.2	84.2	84.6	84.6	81.3	78.0
57.5°	75.6	77.2	78.4	76.8	78.4	76.8	76.0	75.6	74.7	71.5	66.5
60°	69.4	70.2	69.8	69.4	70.2	69.0	68.2	66.5	65.7	61.2	57.9
62.5°	62.4	62.8	63.3	62.4	61.6	61.2	59.6	57.1	55.5	51.7	48.9
65°	56.7	55.5	55.0	54.6	53.8	52.6	51.3	48.5	47.2	43.9	41.1
67.5°	48.0	47.6	48.5	47.2	45.2	45.2	43.9	41.5	38.6	36.6	33.7
70°	41.1	40.7	39.8	38.6	38.2	36.6	36.6	33.7	32.9	29.2	26.7
72.5°	33.7	33.7	32.4	31.2	30.0	29.2	28.8	26.7	25.5	23.4	21.4
75°	25.5	25.5	25.1	23.8	23.0	22.2	21.8	20.1	18.9	16.8	15.6
77.5°	18.1	18.1	16.4	15.6	16.0	15.2	14.4	14.0	13.5	12.3	10.7
80°	10.7	10.3	9.0	9.4	9.0	9.0	8.6	8.2	7.4	6.6	5.7
82.5°	2.9	3.3	3.3	3.3	3.7	2.9	2.9	2.9	3.3	3.3	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	0.8	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.2	0.8
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°	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5
2.5°	346.7	346.2	346.7	343.8	350.3	345.4	344.6	343.8	346.7	343.8	339.7
5°	354.0	349.9	348.7	347.5	351.2	345.4	344.2	344.6	342.5	337.2	337.6
7.5°	356.5	352.8	349.1	341.3	344.6	343.4	340.1	337.6	334.3	329.8	329.0
10°	357.3	353.2	347.9	345.4	340.5	338.8	337.6	333.5	329.4	321.6	319.5
12.5°	354.9	349.9	343.4	341.3	337.6	332.3	329.4	325.3	321.6	315.4	310.9
15°	344.2	340.1	338.0	331.0	329.4	326.1	320.4	314.6	309.3	301.0	298.6
17.5°	331.9	330.2	328.2	322.8	322.4	319.1	313.8	308.9	301.9	289.1	285.0
20°	319.1	319.1	312.6	310.5	314.6	308.0	303.9	299.4	285.0	278.9	271.5
22.5°	309.7	305.2	301.5	298.2	298.6	294.5	288.7	279.7	274.4	267.0	258.3
25°	291.2	292.8	284.6	283.4	284.6	275.2	272.3	264.9	257.1	250.1	243.6
27.5°	279.7	275.2	269.8	265.3	265.3	261.6	253.4	251.8	239.9	233.3	225.1
30°	262.4	259.2	254.6	248.1	247.3	244.4	237.8	233.7	221.4	211.5	207.0
32.5°	240.7	239.5	235.8	228.4	225.9	222.6	214.4	207.4	201.7	190.6	185.2
35°	225.1	220.6	212.8	206.6	204.5	198.8	192.2	187.3	181.1	171.3	164.3
37.5°	201.7	197.1	189.7	182.4	182.4	176.6	167.6	162.6	154.0	148.3	142.5
40°	181.1	175.4	168.0	159.4	158.1	149.9	146.2	138.0	132.7	123.6	122.8
42.5°	158.1	152.8	146.2	139.6	134.7	130.6	121.2	115.0	109.3	104.7	103.5
45°	137.2	130.2	124.4	116.2	111.3	106.4	100.2	96.1	91.6	86.7	83.8
47.5°	119.1	113.4	105.1	97.8	92.8	90.4	83.4	78.9	75.2	71.9	69.8
50°	100.6	93.7	89.1	80.9	80.1	74.3	68.6	64.9	62.8	60.0	57.1
52.5°	86.7	80.1	73.9	67.8	64.5	62.4	57.1	53.4	50.5	48.5	46.8
55°	73.1	67.4	62.4	56.3	54.2	51.3	45.2	44.4	41.5	38.6	36.6
57.5°	62.8	57.5	51.7	47.6	43.9	41.9	37.0	33.7	32.0	29.6	27.5
60°	53.4	47.6	43.1	38.2	36.6	33.7	30.0	27.1	25.1	23.0	21.0
62.5°	44.8	39.8	34.9	30.8	28.3	26.7	23.8	21.4	19.3	17.7	16.0
65°	37.0	32.4	28.3	24.2	23.0	21.0	18.9	16.8	15.2	13.1	11.5
67.5°	30.4	26.3	22.2	19.3	18.1	17.2	14.8	12.7	11.5	10.3	8.6
70°	23.8	21.0	17.7	15.2	14.0	12.7	11.1	9.9	8.2	7.4	6.2
72.5°	18.5	16.0	13.1	11.1	10.3	9.4	7.8	6.6	5.7	4.9	4.1
75°	13.1	11.1	9.4	7.4	7.0	6.6	5.3	4.5	3.7	2.9	2.5
77.5°	9.0	7.4	5.7	4.9	4.5	3.7	3.3	2.5	2.1	1.6	1.2
80°	4.9	3.7	2.9	2.5	2.1	1.6	1.6	1.2	0.8	0.8	0.4
82.5°	1.6	1.2	0.8	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#

CATALOG NUMBER: LD4C05D010 EX4C059027 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5
2.5°	342.1	337.6	338.8	338.8	338.0	338.0	337.2	336.0	336.4	333.9	328.6
5°	338.4	332.7	331.9	332.7	329.4	328.6	326.9	329.4	322.0	324.9	321.6
7.5°	327.8	322.4	321.2	324.1	320.0	317.5	317.1	320.4	313.8	310.5	306.8
10°	315.8	313.8	310.1	308.0	306.8	307.2	303.9	299.8	298.6	297.8	294.5
12.5°	305.2	300.6	297.4	294.9	294.1	294.1	288.7	287.9	284.2	283.4	278.5
15°	292.4	287.1	285.0	281.8	278.9	280.5	274.4	272.7	271.5	266.1	267.0
17.5°	281.3	275.6	270.7	268.6	266.1	263.7	257.9	259.2	256.3	256.3	248.9
20°	267.0	260.8	257.1	253.0	253.0	249.7	245.6	246.0	242.3	238.6	232.1
22.5°	251.8	245.2	240.7	239.0	234.9	234.1	229.2	227.9	223.0	223.4	217.7
25°	235.8	229.2	223.0	223.4	219.7	218.1	215.2	209.5	207.4	205.0	203.3
27.5°	216.9	212.3	207.0	206.6	199.6	200.0	196.3	194.7	189.7	191.0	187.3
30°	199.6	193.0	188.1	186.9	184.0	183.2	177.4	175.0	175.8	172.5	170.5
32.5°	181.9	172.1	170.0	167.6	165.9	163.9	159.8	161.4	157.7	158.5	155.2
35°	158.5	154.4	149.1	149.1	147.4	145.8	142.9	144.6	140.9	139.2	136.0
37.5°	138.8	135.1	129.8	131.4	128.6	126.1	123.6	124.0	120.7	120.3	117.0
40°	117.5	115.4	111.7	111.7	109.7	109.7	108.4	107.2	105.1	102.7	99.0
42.5°	97.3	95.7	94.1	94.5	91.6	94.1	90.8	92.8	86.2	85.8	83.4
45°	82.5	78.9	79.3	77.6	76.0	76.8	73.9	74.7	71.1	70.2	67.8
47.5°	67.0	65.7	63.3	62.4	62.4	61.2	60.0	59.6	57.9	55.9	52.6
50°	55.0	50.5	49.7	48.5	47.6	47.6	46.0	43.5	43.9	41.9	38.6
52.5°	43.1	39.4	37.8	37.4	35.7	34.9	32.9	31.2	30.0	29.2	27.1
55°	33.3	30.0	27.9	27.9	25.5	25.5	22.6	21.4	19.7	18.1	16.8
57.5°	25.1	23.4	21.4	19.7	18.9	16.8	15.2	13.1	11.9	9.4	7.8
60°	18.9	17.2	15.2	14.0	13.1	11.1	9.0	7.4	4.5	3.7	3.3
62.5°	14.0	12.3	10.3	9.4	8.6	7.0	4.9	2.5	1.2	1.2	1.2
65°	10.3	8.2	6.6	5.7	4.9	3.7	1.6	0.8	0.4	0.4	0.4
67.5°	7.0	5.3	3.7	3.3	2.5	1.2	0.4	0.4	0.4	0.4	0.4
70°	4.5	3.3	1.6	1.2	0.8	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	2.9	1.6	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.8	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 EX4C059027 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	342.5	342.5	342.5	342.5	342.5	342.5	342.5	342.5
2.5°	334.3	331.4	333.1	329.4	331.0	333.9	331.9	332.7
5°	322.8	321.2	319.1	313.8	317.9	321.2	319.5	319.1
7.5°	310.5	304.8	307.6	306.0	305.2	308.5	304.8	308.9
10°	297.8	293.7	293.3	290.4	290.4	292.8	293.3	290.8
12.5°	278.9	276.8	276.8	276.4	276.0	278.5	278.9	277.7
15°	265.3	264.5	262.4	262.0	259.6	263.3	263.7	263.3
17.5°	248.9	249.3	247.3	247.3	248.9	250.1	246.8	250.1
20°	237.8	235.8	234.9	231.2	233.3	235.3	235.3	235.8
22.5°	221.8	218.5	219.7	217.7	216.4	219.3	219.3	220.6
25°	203.7	203.7	204.5	203.3	204.1	205.8	204.5	207.4
27.5°	186.5	188.1	188.1	186.5	187.3	192.2	194.3	191.0
30°	170.5	170.9	172.1	171.3	173.7	175.4	175.0	177.4
32.5°	152.4	154.4	155.2	154.0	154.8	158.5	156.5	156.1
35°	138.4	134.7	134.3	134.7	136.4	137.2	136.4	139.2
37.5°	118.3	117.0	115.4	115.8	117.0	118.7	119.5	121.6
40°	99.0	97.3	97.3	96.9	95.7	100.2	100.2	100.2
42.5°	82.1	81.7	79.7	79.7	81.3	82.5	81.7	84.6
45°	67.4	65.7	64.5	64.5	65.7	65.7	67.0	66.5
47.5°	53.0	51.3	51.7	50.5	51.7	53.4	51.3	51.7
50°	39.8	39.8	39.0	39.8	39.4	39.8	39.0	38.2
52.5°	27.1	30.8	31.2	29.6	25.9	22.6	20.5	22.2
55°	15.6	14.0	14.0	13.5	12.7	12.3	11.1	12.3
57.5°	7.8	7.0	7.0	7.0	6.6	6.2	5.3	5.3
60°	3.3	2.9	2.9	2.5	2.1	1.6	1.2	1.6
62.5°	1.2	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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)