

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: **LD4C08D010 EX4C089030 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: LD4C08D010 EX4C089030 4LBSQLWWLI  
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

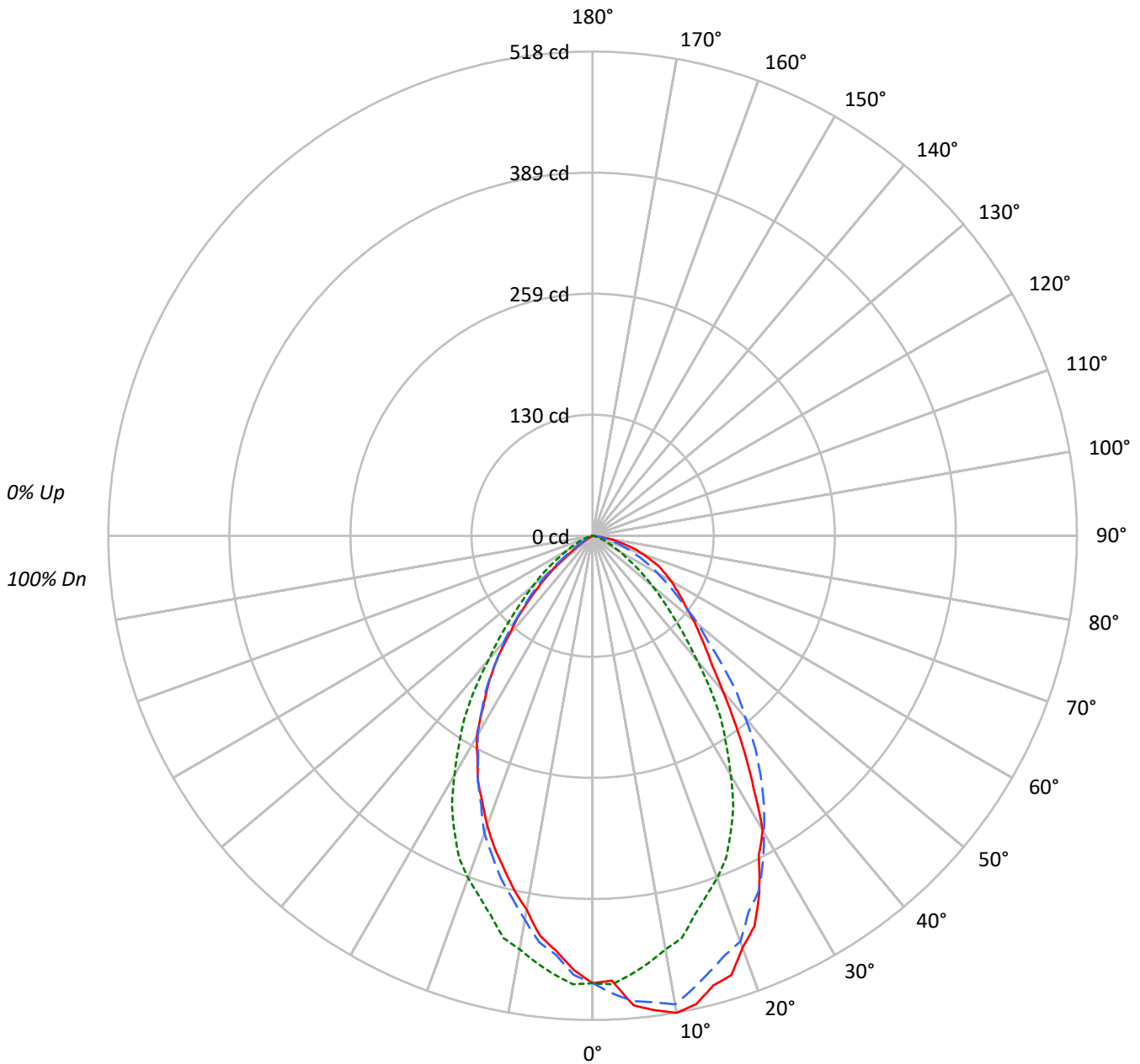
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 686.0 lumens  
Efficiency: N/A  
Efficacy: 69.3 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): 9.9  
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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CATALOG NUMBER: LD4C08D010 EX4C089030 4LBSQLWWLI

### 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°	46180	46180	46180
5°	48855	45630	43189
10°	50772	44021	39808
15°	49757	42015	36741
20°	48137	40005	33823
25°	44906	37209	30853
30°	40533	32923	27620
35°	33394	28187	22910
40°	27245	21753	17634
45°	23416	16525	12690
50°	21196	12579	8016
55°	19497	9067	2893
60°	18719	6195	444
65°	18082	4201	137
70°	16193	2906	169
75°	13272	1491	0
80°	8279	611	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.8	6.5
10°-20°	120.8	17.6
20°-30°	161.3	23.5
30°-40°	153.1	22.3
40°-50°	105.8	15.4
50°-60°	58.5	8.5
60°-70°	29.0	4.2
70°-80°	11.4	1.7
80°-90°	1.1	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°	327.0	47.7
0°-40°	480.1	70.0
0°-60°	644.4	93.9
0°-90°	686.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	686.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	479	479	479	479	479	
5°	504	500	471	450	446	48
15°	498	483	421	379	368	141
25°	422	420	350	290	290	192
35°	284	313	239	197	194	178
45°	172	197	121	99	93	134
55°	116	109	54	28	17	104
65°	79	57	18	1	1	77
75°	36	22	4	0	0	38
85°	0	1	0	0	0	3
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°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6
2.5°	476.3	489.5	490.6	489.5	491.2	490.6	493.5	490.6	494.1	488.9	490.1
5°	504.4	499.2	510.1	504.4	504.4	503.8	502.1	501.5	503.8	496.4	499.8
7.5°	511.9	519.3	529.1	517.0	517.6	517.6	514.2	513.0	513.0	499.2	503.3
10°	518.2	513.6	518.7	514.2	518.2	517.6	519.9	512.4	517.6	509.6	509.0
12.5°	513.0	511.3	518.2	510.7	508.4	509.0	506.1	504.4	506.1	496.9	496.4
15°	498.1	499.8	510.1	502.1	501.0	499.8	496.4	490.6	495.2	482.6	483.2
17.5°	492.9	490.1	491.8	484.9	486.6	485.5	484.9	479.7	478.6	470.5	470.5
20°	468.8	475.1	475.1	470.5	470.5	470.0	462.5	467.1	461.9	459.6	461.9
22.5°	452.2	452.8	452.8	448.7	449.3	447.0	443.0	440.1	443.0	440.1	435.5
25°	421.8	422.9	429.8	422.3	421.2	423.5	420.0	418.3	417.8	410.9	420.0
27.5°	385.0	396.5	395.9	393.1	396.5	391.9	390.2	390.8	392.5	391.9	394.2
30°	363.8	365.5	367.3	365.0	365.5	363.8	363.8	364.4	369.0	367.3	366.7
32.5°	320.8	326.5	331.1	331.1	331.7	333.4	332.8	344.9	347.7	342.0	340.9
35°	283.5	287.5	291.5	292.1	299.5	300.1	300.7	304.1	312.2	313.9	313.3
37.5°	247.9	251.9	253.1	258.2	262.2	266.3	270.9	275.4	282.3	288.1	285.2
40°	216.3	218.1	220.9	223.2	231.2	231.2	233.5	242.7	250.2	254.8	254.2
42.5°	189.9	190.5	192.8	196.8	204.3	202.6	204.3	210.6	221.5	222.1	228.4
45°	171.6	171.0	172.7	173.3	177.9	180.2	181.3	185.9	195.1	196.2	196.8
47.5°	154.9	154.4	157.2	158.4	160.1	162.4	162.4	163.0	166.4	169.3	167.0
50°	141.2	141.2	141.2	142.3	145.2	144.6	145.2	147.5	149.2	148.0	147.5
52.5°	126.2	128.5	130.3	130.8	131.4	131.4	132.0	130.8	130.3	128.5	125.1
55°	115.9	118.2	118.2	118.2	118.2	120.5	117.6	118.2	118.2	113.6	109.0
57.5°	105.6	107.9	109.6	107.3	109.6	107.3	106.2	105.6	104.4	99.8	93.0
60°	97.0	98.1	97.5	97.0	98.1	96.4	95.3	93.0	91.8	85.5	80.9
62.5°	87.2	87.8	88.4	87.2	86.1	85.5	83.2	79.8	77.5	72.3	68.3
65°	79.2	77.5	76.9	76.3	75.2	73.4	71.7	67.7	66.0	61.4	57.4
67.5°	67.1	66.6	67.7	66.0	63.1	63.1	61.4	58.0	53.9	51.1	47.1
70°	57.4	56.8	55.7	53.9	53.4	51.1	51.1	47.1	45.9	40.7	37.3
72.5°	47.1	47.1	45.3	43.6	41.9	40.7	40.2	37.3	35.6	32.7	29.8
75°	35.6	35.6	35.0	33.3	32.1	31.0	30.4	28.1	26.4	23.5	21.8
77.5°	25.2	25.2	23.0	21.8	22.4	21.2	20.1	19.5	18.9	17.2	14.9
80°	14.9	14.3	12.6	13.2	12.6	12.6	12.1	11.5	10.3	9.2	8.0
82.5°	4.0	4.6	4.6	4.6	5.2	4.0	4.0	4.0	4.6	4.6	2.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
87.5°	0.6	1.1	2.3	2.3	2.3	2.3	2.3	1.7	1.7	1.7	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6
2.5°	484.3	483.7	484.3	480.3	489.5	482.6	481.4	480.3	484.3	480.3	474.6
5°	494.6	488.9	487.2	485.5	490.6	482.6	480.9	481.4	478.6	471.1	471.7
7.5°	498.1	492.9	487.8	476.9	481.4	479.7	475.1	471.7	467.1	460.8	459.6
10°	499.2	493.5	486.0	482.6	475.7	473.4	471.7	466.0	460.2	449.3	446.4
12.5°	495.8	488.9	479.7	476.9	471.7	464.2	460.2	454.5	449.3	440.7	434.4
15°	480.9	475.1	472.3	462.5	460.2	455.6	447.6	439.6	432.1	420.6	417.2
17.5°	463.7	461.4	458.5	451.0	450.5	445.9	438.4	431.5	421.8	404.0	398.2
20°	445.9	445.9	436.7	433.8	439.6	430.4	424.6	418.3	398.2	389.6	379.3
22.5°	432.7	426.4	421.2	416.6	417.2	411.4	403.4	390.8	383.3	373.0	360.9
25°	406.9	409.1	397.7	395.9	397.7	384.5	380.5	370.1	359.2	349.5	340.3
27.5°	390.8	384.5	377.0	370.7	370.7	365.5	354.1	351.8	335.1	325.9	314.5
30°	366.7	362.1	355.8	346.6	345.5	341.4	332.3	326.5	309.3	295.5	289.2
32.5°	336.3	334.6	329.4	319.1	315.6	311.0	299.5	289.8	281.8	266.3	258.8
35°	314.5	308.2	297.3	288.6	285.8	277.7	268.5	261.7	253.1	239.3	229.5
37.5°	281.8	275.4	265.1	254.8	254.8	246.8	234.1	227.2	215.2	207.1	199.1
40°	253.1	245.0	234.7	222.7	220.9	209.4	204.3	192.8	185.3	172.7	171.6
42.5°	220.9	213.5	204.3	195.1	188.2	182.5	169.3	160.7	152.7	146.3	144.6
45°	191.7	181.9	173.9	162.4	155.5	148.6	140.0	134.3	128.0	121.1	117.1
47.5°	166.4	158.4	146.9	136.6	129.7	126.2	116.5	110.2	105.0	100.4	97.5
50°	140.6	130.8	124.5	113.0	111.9	103.9	95.8	90.7	87.8	83.8	79.8
52.5°	121.1	111.9	103.3	94.7	90.1	87.2	79.8	74.6	70.6	67.7	65.4
55°	102.1	94.1	87.2	78.6	75.7	71.7	63.1	62.0	58.0	53.9	51.1
57.5°	87.8	80.3	72.3	66.6	61.4	58.5	51.6	47.1	44.8	41.3	38.4
60°	74.6	66.6	60.3	53.4	51.1	47.1	41.9	37.9	35.0	32.1	29.3
62.5°	62.5	55.7	48.8	43.0	39.6	37.3	33.3	29.8	27.0	24.7	22.4
65°	51.6	45.3	39.6	33.9	32.1	29.3	26.4	23.5	21.2	18.4	16.1
67.5°	42.5	36.7	31.0	27.0	25.2	24.1	20.7	17.8	16.1	14.3	12.1
70°	33.3	29.3	24.7	21.2	19.5	17.8	15.5	13.8	11.5	10.3	8.6
72.5°	25.8	22.4	18.4	15.5	14.3	13.2	10.9	9.2	8.0	6.9	5.7
75°	18.4	15.5	13.2	10.3	9.8	9.2	7.5	6.3	5.2	4.0	3.4
77.5°	12.6	10.3	8.0	6.9	6.3	5.2	4.6	3.4	2.9	2.3	1.7
80°	6.9	5.2	4.0	3.4	2.9	2.3	2.3	1.7	1.1	1.1	0.6
82.5°	2.3	1.7	1.1	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
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°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6
2.5°	478.0	471.7	473.4	473.4	472.3	472.3	471.1	469.4	470.0	466.5	459.1
5°	472.8	464.8	463.7	464.8	460.2	459.1	456.8	460.2	449.9	453.9	449.3
7.5°	457.9	450.5	448.7	452.8	447.0	443.6	443.0	447.6	438.4	433.8	428.7
10°	441.3	438.4	433.2	430.4	428.7	429.2	424.6	418.9	417.2	416.0	411.4
12.5°	426.4	420.0	415.5	412.0	410.9	410.9	403.4	402.3	397.1	395.9	389.1
15°	408.6	401.1	398.2	393.7	389.6	391.9	383.3	381.0	379.3	371.8	373.0
17.5°	393.1	385.0	378.2	375.3	371.8	368.4	360.4	362.1	358.1	358.1	347.7
20°	373.0	364.4	359.2	353.5	353.5	348.9	343.2	343.7	338.6	333.4	324.2
22.5°	351.8	342.6	336.3	334.0	328.2	327.1	320.2	318.5	311.6	312.2	304.1
25°	329.4	320.2	311.6	312.2	307.0	304.7	300.7	292.7	289.8	286.4	284.1
27.5°	303.0	296.7	289.2	288.6	278.9	279.4	274.3	272.0	265.1	266.8	261.7
30°	278.9	269.7	262.8	261.1	257.1	255.9	247.9	244.4	245.6	241.0	238.1
32.5°	254.2	240.4	237.6	234.1	231.8	229.0	223.2	225.5	220.3	221.5	216.9
35°	221.5	215.8	208.3	208.3	206.0	203.7	199.7	202.0	196.8	194.5	189.9
37.5°	194.0	188.8	181.3	183.6	179.6	176.2	172.7	173.3	168.7	168.1	163.5
40°	164.1	161.2	156.1	156.1	153.2	153.2	151.5	149.8	146.9	143.5	138.3
42.5°	136.0	133.7	131.4	132.0	128.0	131.4	126.8	129.7	120.5	119.9	116.5
45°	115.3	110.2	110.7	108.5	106.2	107.3	103.3	104.4	99.3	98.1	94.7
47.5°	93.5	91.8	88.4	87.2	87.2	85.5	83.8	83.2	80.9	78.0	73.4
50°	76.9	70.6	69.4	67.7	66.6	66.6	64.3	60.8	61.4	58.5	53.9
52.5°	60.3	55.1	52.8	52.2	49.9	48.8	45.9	43.6	41.9	40.7	37.9
55°	46.5	41.9	39.0	39.0	35.6	35.6	31.6	29.8	27.5	25.2	23.5
57.5°	35.0	32.7	29.8	27.5	26.4	23.5	21.2	18.4	16.6	13.2	10.9
60°	26.4	24.1	21.2	19.5	18.4	15.5	12.6	10.3	6.3	5.2	4.6
62.5°	19.5	17.2	14.3	13.2	12.1	9.8	6.9	3.4	1.7	1.7	1.7
65°	14.3	11.5	9.2	8.0	6.9	5.2	2.3	1.1	0.6	0.6	0.6
67.5°	9.8	7.5	5.2	4.6	3.4	1.7	0.6	0.6	0.6	0.6	0.6
70°	6.3	4.6	2.3	1.7	1.1	0.6	0.6	0.6	0.6	0.6	0.6
72.5°	4.0	2.3	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.6	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	0.6	0.6	0.6
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: P#

CATALOG NUMBER: LD4C08D010 EX4C089030 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6
2.5°	467.1	463.1	465.4	460.2	462.5	466.5	463.7	464.8
5°	451.0	448.7	445.9	438.4	444.1	448.7	446.4	445.9
7.5°	433.8	425.8	429.8	427.5	426.4	431.0	425.8	431.5
10°	416.0	410.3	409.7	405.7	405.7	409.1	409.7	406.3
12.5°	389.6	386.8	386.8	386.2	385.6	389.1	389.6	387.9
15°	370.7	369.6	366.7	366.1	362.7	367.8	368.4	367.8
17.5°	347.7	348.3	345.5	345.5	347.7	349.5	344.9	349.5
20°	332.3	329.4	328.2	323.1	325.9	328.8	328.8	329.4
22.5°	309.9	305.3	307.0	304.1	302.4	306.4	306.4	308.2
25°	284.6	284.6	285.8	284.1	285.2	287.5	285.8	289.8
27.5°	260.5	262.8	262.8	260.5	261.7	268.5	271.4	266.8
30°	238.1	238.7	240.4	239.3	242.7	245.0	244.4	247.9
32.5°	212.9	215.8	216.9	215.2	216.3	221.5	218.6	218.1
35°	193.4	188.2	187.7	188.2	190.5	191.7	190.5	194.5
37.5°	165.3	163.5	161.2	161.8	163.5	165.8	167.0	169.8
40°	138.3	136.0	136.0	135.4	133.7	140.0	140.0	140.0
42.5°	114.8	114.2	111.3	111.3	113.6	115.3	114.2	118.2
45°	94.1	91.8	90.1	90.1	91.8	91.8	93.5	93.0
47.5°	74.0	71.7	72.3	70.6	72.3	74.6	71.7	72.3
50°	55.7	55.7	54.5	55.7	55.1	55.7	54.5	53.4
52.5°	37.9	43.0	43.6	41.3	36.2	31.6	28.7	31.0
55°	21.8	19.5	19.5	18.9	17.8	17.2	15.5	17.2
57.5°	10.9	9.8	9.8	9.8	9.2	8.6	7.5	7.5
60°	4.6	4.0	4.0	3.4	2.9	2.3	1.7	2.3
62.5°	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1
65°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
70°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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



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















(END OF REPORT)