

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 EX4C089040 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 EX4C089040 4LBSQLWWLI  
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

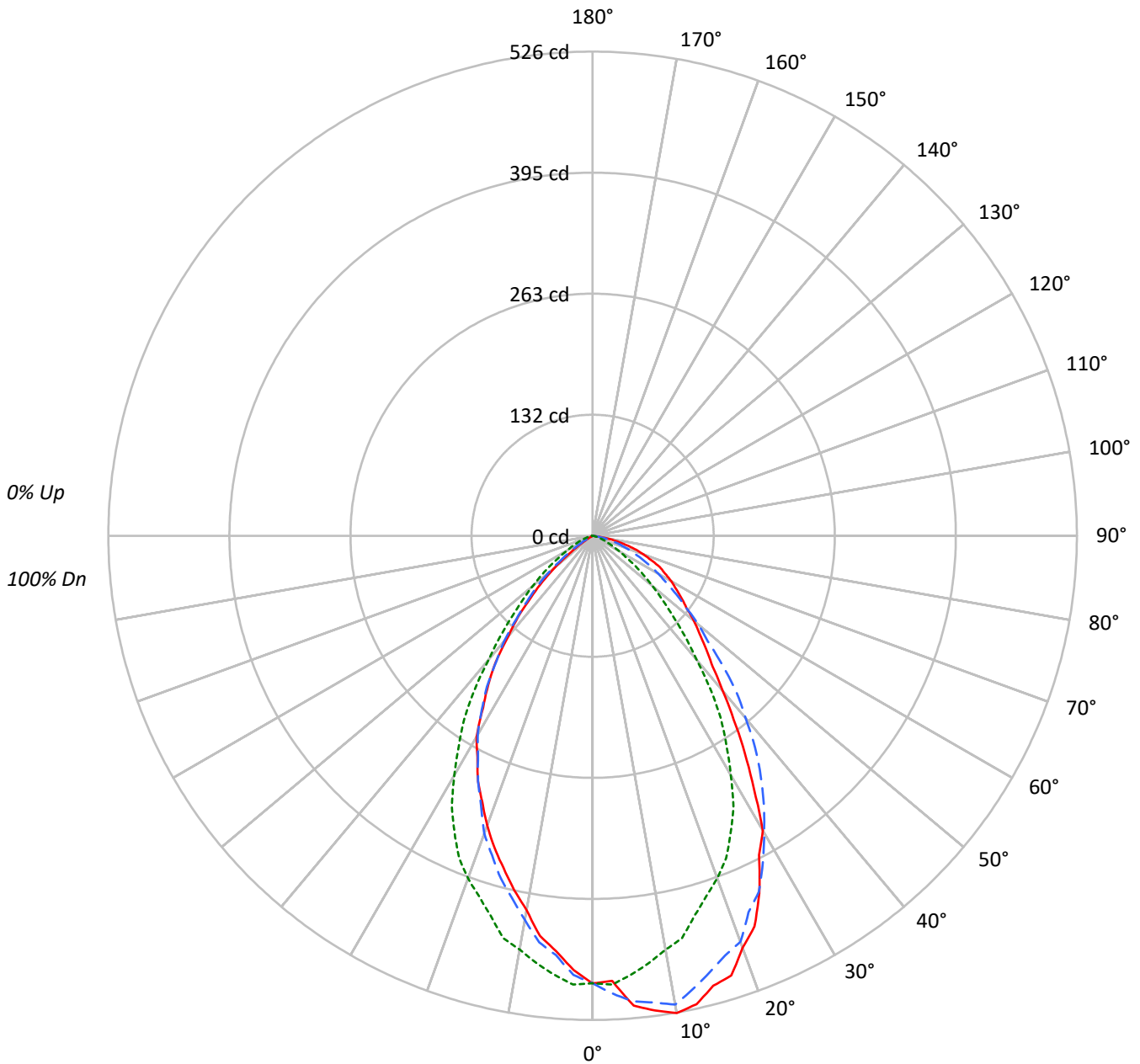
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 697.0 lumens  
Efficiency: N/A  
Efficacy: 70.4 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 (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°	46913	46913	46913
5°	49639	46366	43876
10°	51585	44727	40445
15°	50556	42694	37330
20°	48917	40652	34367
25°	45620	37805	31343
30°	41190	33458	28066
35°	33924	28635	23287
40°	27685	22106	17924
45°	23784	16784	12895
50°	21526	12774	8136
55°	19817	9219	2944
60°	19008	6291	444
65°	18379	4269	137
70°	16447	2962	169
75°	13496	1528	0
80°	8446	667	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.6	6.5
10°-20°	122.7	17.6
20°-30°	163.9	23.5
30°-40°	155.6	22.3
40°-50°	107.5	15.4
50°-60°	59.4	8.5
60°-70°	29.5	4.2
70°-80°	11.6	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°	332.2	47.7
0°-40°	487.8	70.0
0°-60°	654.8	93.9
0°-90°	697.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	697.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	486	486	486	486	486	
5°	512	508	479	457	453	49
15°	506	491	427	385	374	143
25°	428	427	355	294	294	195
35°	288	318	243	200	198	180
45°	174	200	123	101	94	136
55°	118	111	55	28	18	106
65°	80	58	19	1	1	78
75°	36	22	4	0	0	39
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°	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2
2.5°	483.9	497.3	498.5	497.3	499.1	498.5	501.4	498.5	502.0	496.8	497.9
5°	512.5	507.2	518.3	512.5	512.5	511.9	510.2	509.6	511.9	504.3	507.8
7.5°	520.1	527.7	537.6	525.3	525.9	525.9	522.4	521.2	521.2	507.2	511.3
10°	526.5	521.8	527.1	522.4	526.5	525.9	528.2	520.6	525.9	517.7	517.1
12.5°	521.2	519.5	526.5	518.9	516.6	517.1	514.2	512.5	514.2	504.9	504.3
15°	506.1	507.8	518.3	510.2	509.0	507.8	504.3	498.5	503.2	490.3	490.9
17.5°	500.8	497.9	499.7	492.7	494.4	493.3	492.7	487.4	486.2	478.1	478.1
20°	476.4	482.7	482.7	478.1	478.1	477.5	469.9	474.6	469.3	467.0	469.3
22.5°	459.4	460.0	460.0	455.9	456.5	454.2	450.1	447.2	450.1	447.2	442.5
25°	428.5	429.7	436.7	429.1	427.9	430.3	426.8	425.0	424.5	417.5	426.8
27.5°	391.2	402.9	402.3	399.4	402.9	398.2	396.5	397.0	398.8	398.2	400.5
30°	369.7	371.4	373.2	370.8	371.4	369.7	369.7	370.2	374.9	373.2	372.6
32.5°	325.9	331.7	336.4	336.4	337.0	338.8	338.2	350.4	353.3	347.5	346.3
35°	288.0	292.1	296.2	296.8	304.4	304.9	305.5	309.0	317.2	318.9	318.3
37.5°	251.9	255.9	257.1	262.4	266.5	270.5	275.2	279.9	286.9	292.7	289.8
40°	219.8	221.5	224.5	226.8	235.0	235.0	237.3	246.6	254.2	258.9	258.3
42.5°	193.0	193.6	195.9	200.0	207.6	205.8	207.6	214.0	225.0	225.6	232.1
45°	174.3	173.7	175.5	176.1	180.8	183.1	184.2	188.9	198.2	199.4	200.0
47.5°	157.4	156.8	159.8	160.9	162.7	165.0	165.0	165.6	169.1	172.0	169.7
50°	143.4	143.4	143.4	144.6	147.5	146.9	147.5	149.8	151.6	150.4	149.8
52.5°	128.3	130.6	132.3	132.9	133.5	133.5	134.1	132.9	132.3	130.6	127.1
55°	117.8	120.1	120.1	120.1	120.1	122.4	119.5	120.1	120.1	115.4	110.8
57.5°	107.3	109.6	111.4	109.0	111.4	109.0	107.9	107.3	106.1	101.4	94.5
60°	98.5	99.7	99.1	98.5	99.7	97.9	96.8	94.5	93.3	86.9	82.2
62.5°	88.6	89.2	89.8	88.6	87.5	86.9	84.5	81.0	78.7	73.5	69.4
65°	80.5	78.7	78.1	77.5	76.4	74.6	72.9	68.8	67.0	62.4	58.3
67.5°	68.2	67.6	68.8	67.0	64.1	64.1	62.4	58.9	54.8	51.9	47.8
70°	58.3	57.7	56.6	54.8	54.2	51.9	51.9	47.8	46.6	41.4	37.9
72.5°	47.8	47.8	46.0	44.3	42.6	41.4	40.8	37.9	36.2	33.2	30.3
75°	36.2	36.2	35.6	33.8	32.6	31.5	30.9	28.6	26.8	23.9	22.2
77.5°	25.7	25.7	23.3	22.2	22.7	21.6	20.4	19.8	19.2	17.5	15.2
80°	15.2	14.6	12.8	13.4	12.8	12.8	12.2	11.6	10.5	9.3	8.2
82.5°	4.1	4.7	4.7	4.7	5.3	4.1	4.1	4.1	4.7	4.7	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	1.2	2.3	2.3	2.3	2.3	2.3	1.8	1.8	1.8	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2
2.5°	492.1	491.5	492.1	488.0	497.3	490.3	489.2	488.0	492.1	488.0	482.2
5°	502.6	496.8	495.0	493.3	498.5	490.3	488.6	489.2	486.2	478.7	479.3
7.5°	506.1	500.8	495.6	484.5	489.2	487.4	482.7	479.3	474.6	468.2	467.0
10°	507.2	501.4	493.8	490.3	483.3	481.0	479.3	473.4	467.6	456.5	453.6
12.5°	503.7	496.8	487.4	484.5	479.3	471.7	467.6	461.8	456.5	447.8	441.4
15°	488.6	482.7	479.8	469.9	467.6	462.9	454.8	446.6	439.0	427.4	423.9
17.5°	471.1	468.8	465.8	458.3	457.7	453.0	445.4	438.4	428.5	410.5	404.6
20°	453.0	453.0	443.7	440.8	446.6	437.3	431.4	425.0	404.6	395.9	385.4
22.5°	439.6	433.2	427.9	423.3	423.9	418.0	409.9	397.0	389.5	379.0	366.7
25°	413.4	415.7	404.1	402.3	404.1	390.6	386.6	376.1	365.0	355.1	345.7
27.5°	397.0	390.6	383.1	376.6	376.6	371.4	359.7	357.4	340.5	331.2	319.5
30°	372.6	367.9	361.5	352.2	351.0	346.9	337.6	331.7	314.3	300.3	293.8
32.5°	341.7	339.9	334.7	324.2	320.7	316.0	304.4	294.4	286.3	270.5	263.0
35°	319.5	313.1	302.0	293.3	290.3	282.2	272.9	265.9	257.1	243.1	233.2
37.5°	286.3	279.9	269.4	258.9	258.9	250.7	237.9	230.9	218.6	210.5	202.3
40°	257.1	249.0	238.5	226.2	224.5	212.8	207.6	195.9	188.3	175.5	174.3
42.5°	224.5	216.9	207.6	198.2	191.2	185.4	172.0	163.3	155.1	148.7	146.9
45°	194.7	184.8	176.7	165.0	158.0	151.0	142.3	136.4	130.0	123.0	118.9
47.5°	169.1	160.9	149.3	138.8	131.8	128.3	118.3	111.9	106.7	102.0	99.1
50°	142.9	132.9	126.5	114.9	113.7	105.5	97.4	92.1	89.2	85.1	81.0
52.5°	123.0	113.7	104.9	96.2	91.5	88.6	81.0	75.8	71.7	68.8	66.5
55°	103.8	95.6	88.6	79.9	77.0	72.9	64.1	63.0	58.9	54.8	51.9
57.5°	89.2	81.6	73.5	67.6	62.4	59.5	52.5	47.8	45.5	42.0	39.1
60°	75.8	67.6	61.2	54.2	51.9	47.8	42.6	38.5	35.6	32.6	29.7
62.5°	63.5	56.6	49.6	43.7	40.2	37.9	33.8	30.3	27.4	25.1	22.7
65°	52.5	46.0	40.2	34.4	32.6	29.7	26.8	23.9	21.6	18.7	16.3
67.5°	43.1	37.3	31.5	27.4	25.7	24.5	21.0	18.1	16.3	14.6	12.2
70°	33.8	29.7	25.1	21.6	19.8	18.1	15.7	14.0	11.6	10.5	8.7
72.5°	26.2	22.7	18.7	15.7	14.6	13.4	11.1	9.3	8.2	7.0	5.8
75°	18.7	15.7	13.4	10.5	9.9	9.3	7.6	6.4	5.3	4.1	3.5
77.5°	12.8	10.5	8.2	7.0	6.4	5.3	4.7	3.5	2.9	2.3	1.8
80°	7.0	5.3	4.1	3.5	2.9	2.3	2.3	1.8	1.2	1.2	0.6
82.5°	2.3	1.8	1.2	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°	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2
2.5°	485.7	479.3	481.0	481.0	479.8	479.8	478.7	476.9	477.5	474.0	466.4
5°	480.4	472.3	471.1	472.3	467.6	466.4	464.1	467.6	457.1	461.2	456.5
7.5°	465.3	457.7	455.9	460.0	454.2	450.7	450.1	454.8	445.4	440.8	435.5
10°	448.3	445.4	440.2	437.3	435.5	436.1	431.4	425.6	423.9	422.7	418.0
12.5°	433.2	426.8	422.1	418.6	417.5	417.5	409.9	408.7	403.5	402.3	395.3
15°	415.1	407.6	404.6	400.0	395.9	398.2	389.5	387.1	385.4	377.8	379.0
17.5°	399.4	391.2	384.2	381.3	377.8	374.3	366.1	367.9	363.8	363.8	353.3
20°	379.0	370.2	365.0	359.1	359.1	354.5	348.7	349.2	344.0	338.8	329.4
22.5°	357.4	348.1	341.7	339.3	333.5	332.3	325.3	323.6	316.6	317.2	309.0
25°	334.7	325.3	316.6	317.2	311.9	309.6	305.5	297.4	294.4	290.9	288.6
27.5°	307.8	301.4	293.8	293.3	283.4	283.9	278.7	276.4	269.4	271.1	265.9
30°	283.4	274.0	267.0	265.3	261.2	260.0	251.9	248.4	249.6	244.9	242.0
32.5°	258.3	244.3	241.4	237.9	235.5	232.6	226.8	229.1	223.9	225.0	220.4
35°	225.0	219.2	211.6	211.6	209.3	207.0	202.9	205.2	200.0	197.7	193.0
37.5°	197.1	191.8	184.2	186.6	182.5	179.0	175.5	176.1	171.4	170.8	166.2
40°	166.7	163.8	158.6	158.6	155.7	155.7	153.9	152.2	149.3	145.8	140.5
42.5°	138.2	135.8	133.5	134.1	130.0	133.5	128.9	131.8	122.4	121.9	118.3
45°	117.2	111.9	112.5	110.2	107.9	109.0	104.9	106.1	100.9	99.7	96.2
47.5°	95.0	93.3	89.8	88.6	88.6	86.9	85.1	84.5	82.2	79.3	74.6
50°	78.1	71.7	70.5	68.8	67.6	67.6	65.3	61.8	62.4	59.5	54.8
52.5°	61.2	56.0	53.6	53.1	50.7	49.6	46.6	44.3	42.6	41.4	38.5
55°	47.2	42.6	39.7	39.7	36.2	36.2	32.1	30.3	28.0	25.7	23.9
57.5°	35.6	33.2	30.3	28.0	26.8	23.9	21.6	18.7	16.9	13.4	11.1
60°	26.8	24.5	21.6	19.8	18.7	15.7	12.8	10.5	6.4	5.3	4.7
62.5°	19.8	17.5	14.6	13.4	12.2	9.9	7.0	3.5	1.8	1.8	1.8
65°	14.6	11.6	9.3	8.2	7.0	5.3	2.3	1.2	0.6	0.6	0.6
67.5°	9.9	7.6	5.3	4.7	3.5	1.8	0.6	0.6	0.6	0.6	0.6
70°	6.4	4.7	2.3	1.8	1.2	0.6	0.6	0.6	0.6	0.6	0.6
72.5°	4.1	2.3	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.2	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 EX4C089040 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	486.2	486.2	486.2	486.2	486.2	486.2	486.2	486.2
2.5°	474.6	470.5	472.8	467.6	469.9	474.0	471.1	472.3
5°	458.3	455.9	453.0	445.4	451.3	455.9	453.6	453.0
7.5°	440.8	432.6	436.7	434.4	433.2	437.9	432.6	438.4
10°	422.7	416.9	416.3	412.2	412.2	415.7	416.3	412.8
12.5°	395.9	393.0	393.0	392.4	391.8	395.3	395.9	394.1
15°	376.6	375.5	372.6	372.0	368.5	373.7	374.3	373.7
17.5°	353.3	353.9	351.0	351.0	353.3	355.1	350.4	355.1
20°	337.6	334.7	333.5	328.2	331.2	334.1	334.1	334.7
22.5°	314.8	310.2	311.9	309.0	307.3	311.3	311.3	313.1
25°	289.2	289.2	290.3	288.6	289.8	292.1	290.3	294.4
27.5°	264.7	267.0	267.0	264.7	265.9	272.9	275.8	271.1
30°	242.0	242.5	244.3	243.1	246.6	249.0	248.4	251.9
32.5°	216.3	219.2	220.4	218.6	219.8	225.0	222.1	221.5
35°	196.5	191.2	190.7	191.2	193.6	194.7	193.6	197.7
37.5°	167.9	166.2	163.8	164.4	166.2	168.5	169.7	172.6
40°	140.5	138.2	138.2	137.6	135.8	142.3	142.3	142.3
42.5°	116.6	116.0	113.1	113.1	115.4	117.2	116.0	120.1
45°	95.6	93.3	91.5	91.5	93.3	93.3	95.0	94.5
47.5°	75.2	72.9	73.5	71.7	73.5	75.8	72.9	73.5
50°	56.6	56.6	55.4	56.6	56.0	56.6	55.4	54.2
52.5°	38.5	43.7	44.3	42.0	36.7	32.1	29.1	31.5
55°	22.2	19.8	19.8	19.2	18.1	17.5	15.7	17.5
57.5°	11.1	9.9	9.9	9.9	9.3	8.7	7.6	7.6
60°	4.7	4.1	4.1	3.5	2.9	2.3	1.8	2.3
62.5°	1.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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



Report Generated By 670246072 / DESKTOP-50001EG





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















(END OF REPORT)