

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

Luminaire Equipment: Sample No.   Condition   Description

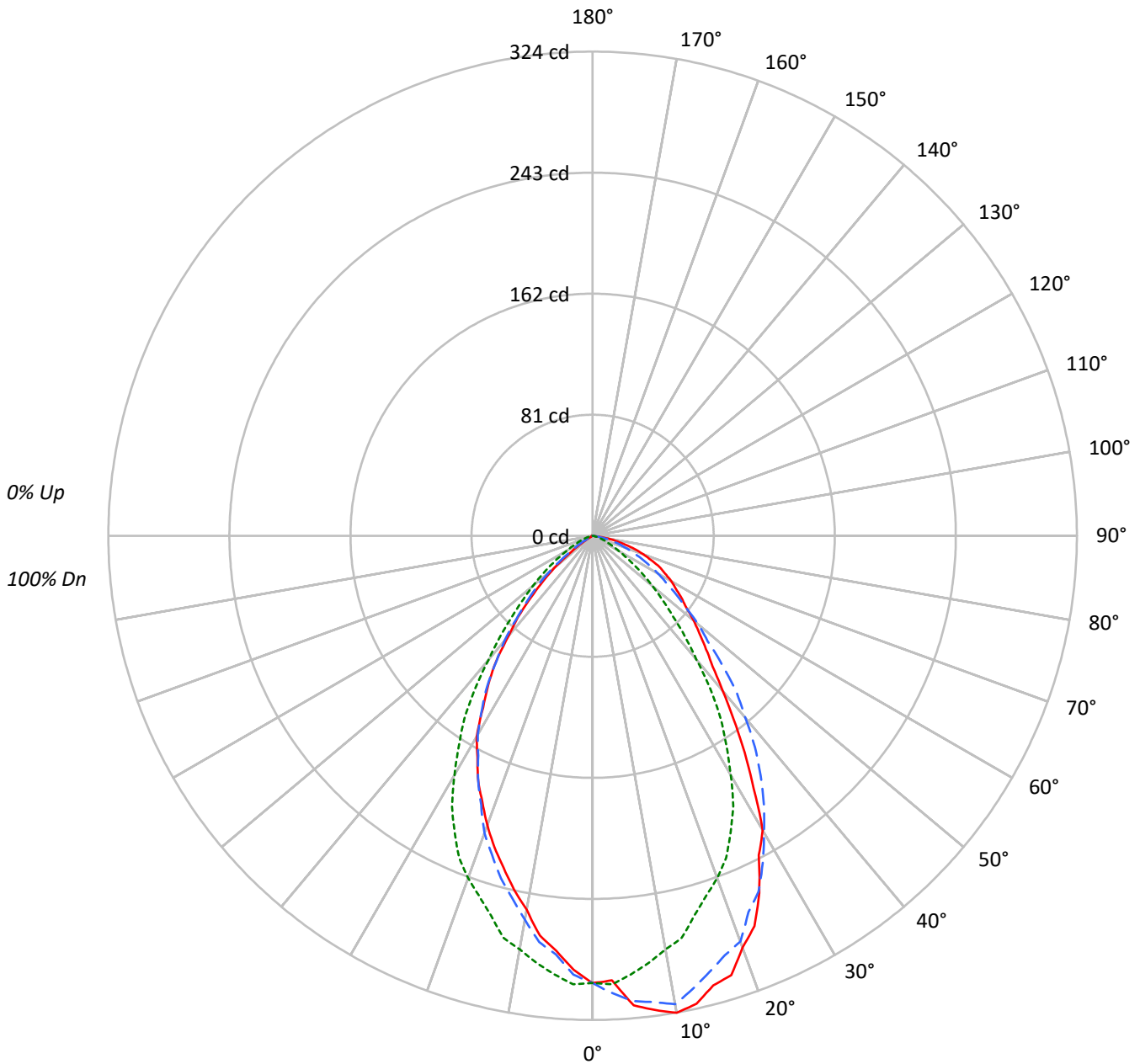
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 429.0 lumens  
Efficiency: N/A  
Efficacy: 59.6 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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CATALOG NUMBER: LD4C05D010 EX4C059030 4LBSQLWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P#

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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°	28879	28879	28879
5°	30549	28534	27004
10°	31754	27532	24896
15°	31117	26272	22975
20°	30106	25023	21152
25°	28085	23262	19291
30°	25347	20590	17269
35°	20884	17622	14335
40°	17042	13603	11034
45°	14642	10330	7928
50°	13255	7866	5014
55°	12196	5669	1817
60°	11714	3879	270
65°	11301	2626	91
70°	10128	1834	113
75°	8314	932	0
80°	5168	389	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.0	6.5
10°-20°	75.5	17.6
20°-30°	100.9	23.5
30°-40°	95.8	22.3
40°-50°	66.2	15.4
50°-60°	36.6	8.5
60°-70°	18.2	4.2
70°-80°	7.2	1.7
80°-90°	0.7	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°	204.5	47.7
0°-40°	300.2	70.0
0°-60°	403.0	93.9
0°-90°	429.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	429.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	299	299	299	299	299	
5°	315	313	295	281	279	30
15°	312	302	263	237	230	88
25°	264	263	218	181	181	120
35°	177	196	150	123	122	111
45°	107	123	76	62	58	84
55°	72	68	34	17	11	65
65°	50	36	12	0	0	48
75°	22	14	2	0	0	24
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059030 4LBSQLWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3
2.5°	297.8	306.1	306.8	306.1	307.2	306.8	308.6	306.8	309.0	305.7	306.5
5°	315.4	312.2	319.0	315.4	315.4	315.1	314.0	313.6	315.1	310.4	312.6
7.5°	320.1	324.8	330.9	323.3	323.7	323.7	321.5	320.8	320.8	312.2	314.7
10°	324.1	321.2	324.4	321.5	324.1	323.7	325.1	320.5	323.7	318.7	318.3
12.5°	320.8	319.7	324.1	319.4	318.0	318.3	316.5	315.4	316.5	310.8	310.4
15°	311.5	312.6	319.0	314.0	313.3	312.6	310.4	306.8	309.7	301.8	302.2
17.5°	308.3	306.5	307.5	303.2	304.3	303.6	303.2	300.0	299.3	294.3	294.3
20°	293.2	297.1	297.1	294.3	294.3	293.9	289.2	292.1	288.9	287.4	288.9
22.5°	282.8	283.1	283.1	280.6	281.0	279.6	277.0	275.2	277.0	275.2	272.4
25°	263.8	264.5	268.8	264.1	263.4	264.8	262.7	261.6	261.2	256.9	262.7
27.5°	240.8	248.0	247.6	245.8	248.0	245.1	244.0	244.4	245.5	245.1	246.5
30°	227.5	228.6	229.7	228.2	228.6	227.5	227.5	227.9	230.7	229.7	229.3
32.5°	200.6	204.2	207.1	207.1	207.4	208.5	208.1	215.7	217.5	213.9	213.2
35°	177.3	179.8	182.3	182.7	187.3	187.7	188.0	190.2	195.2	196.3	195.9
37.5°	155.0	157.5	158.3	161.5	164.0	166.5	169.4	172.3	176.6	180.1	178.4
40°	135.3	136.4	138.2	139.6	144.6	144.6	146.0	151.8	156.5	159.3	159.0
42.5°	118.8	119.1	120.6	123.1	127.8	126.7	127.8	131.7	138.5	138.9	142.8
45°	107.3	106.9	108.0	108.4	111.3	112.7	113.4	116.3	122.0	122.7	123.1
47.5°	96.9	96.5	98.3	99.0	100.1	101.6	101.6	101.9	104.1	105.9	104.4
50°	88.3	88.3	88.3	89.0	90.8	90.4	90.8	92.2	93.3	92.6	92.2
52.5°	78.9	80.4	81.5	81.8	82.2	82.2	82.5	81.8	81.5	80.4	78.2
55°	72.5	73.9	73.9	73.9	73.9	75.4	73.6	73.9	73.9	71.1	68.2
57.5°	66.0	67.5	68.5	67.1	68.5	67.1	66.4	66.0	65.3	62.4	58.1
60°	60.7	61.4	61.0	60.7	61.4	60.3	59.6	58.1	57.4	53.5	50.6
62.5°	54.6	54.9	55.3	54.6	53.8	53.5	52.0	49.9	48.4	45.2	42.7
65°	49.5	48.4	48.1	47.7	47.0	45.9	44.9	42.3	41.3	38.4	35.9
67.5°	42.0	41.6	42.3	41.3	39.5	39.5	38.4	36.2	33.7	31.9	29.4
70°	35.9	35.5	34.8	33.7	33.4	31.9	31.9	29.4	28.7	25.5	23.3
72.5°	29.4	29.4	28.3	27.3	26.2	25.5	25.1	23.3	22.3	20.5	18.7
75°	22.3	22.3	21.9	20.8	20.1	19.4	19.0	17.6	16.5	14.7	13.6
77.5°	15.8	15.8	14.4	13.6	14.0	13.3	12.6	12.2	11.8	10.8	9.3
80°	9.3	9.0	7.9	8.3	7.9	7.9	7.5	7.2	6.5	5.7	5.0
82.5°	2.5	2.9	2.9	2.9	3.2	2.5	2.5	2.5	2.9	2.9	1.8
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	0.7	1.4	1.4	1.4	1.4	1.4	1.1	1.1	1.1	0.7
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°	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3
2.5°	302.9	302.5	302.9	300.4	306.1	301.8	301.1	300.4	302.9	300.4	296.8
5°	309.3	305.7	304.7	303.6	306.8	301.8	300.7	301.1	299.3	294.6	295.0
7.5°	311.5	308.3	305.0	298.2	301.1	300.0	297.1	295.0	292.1	288.2	287.4
10°	312.2	308.6	303.9	301.8	297.5	296.1	295.0	291.4	287.8	281.0	279.2
12.5°	310.0	305.7	300.0	298.2	295.0	290.3	287.8	284.2	281.0	275.6	271.7
15°	300.7	297.1	295.3	289.2	287.8	284.9	279.9	274.9	270.2	263.0	260.9
17.5°	290.0	288.5	286.7	282.1	281.7	278.8	274.2	269.9	263.8	252.6	249.0
20°	278.8	278.8	273.1	271.3	274.9	269.1	265.6	261.6	249.0	243.7	237.2
22.5°	270.6	266.6	263.4	260.5	260.9	257.3	252.3	244.4	239.7	233.3	225.7
25°	254.4	255.9	248.7	247.6	248.7	240.4	237.9	231.5	224.6	218.5	212.8
27.5°	244.4	240.4	235.8	231.8	231.8	228.6	221.4	220.0	209.6	203.8	196.6
30°	229.3	226.4	222.5	216.8	216.0	213.5	207.8	204.2	193.4	184.8	180.9
32.5°	210.3	209.2	206.0	199.5	197.4	194.5	187.3	181.2	176.2	166.5	161.9
35°	196.6	192.7	185.9	180.5	178.7	173.7	167.9	163.6	158.3	149.6	143.5
37.5°	176.2	172.3	165.8	159.3	159.3	154.3	146.4	142.1	134.6	129.5	124.5
40°	158.3	153.2	146.8	139.2	138.2	131.0	127.8	120.6	115.9	108.0	107.3
42.5°	138.2	133.5	127.8	122.0	117.7	114.1	105.9	100.5	95.5	91.5	90.4
45°	119.9	113.8	108.7	101.6	97.2	92.9	87.6	84.0	80.0	75.7	73.2
47.5°	104.1	99.0	91.9	85.4	81.1	78.9	72.8	68.9	65.7	62.8	61.0
50°	87.9	81.8	77.9	70.7	70.0	65.0	59.9	56.7	54.9	52.4	49.9
52.5°	75.7	70.0	64.6	59.2	56.3	54.6	49.9	46.6	44.1	42.3	40.9
55°	63.9	58.9	54.6	49.2	47.4	44.9	39.5	38.8	36.2	33.7	31.9
57.5°	54.9	50.2	45.2	41.6	38.4	36.6	32.3	29.4	28.0	25.8	24.0
60°	46.6	41.6	37.7	33.4	31.9	29.4	26.2	23.7	21.9	20.1	18.3
62.5°	39.1	34.8	30.5	26.9	24.8	23.3	20.8	18.7	16.9	15.4	14.0
65°	32.3	28.3	24.8	21.2	20.1	18.3	16.5	14.7	13.3	11.5	10.1
67.5°	26.6	23.0	19.4	16.9	15.8	15.1	12.9	11.1	10.1	9.0	7.5
70°	20.8	18.3	15.4	13.3	12.2	11.1	9.7	8.6	7.2	6.5	5.4
72.5°	16.2	14.0	11.5	9.7	9.0	8.3	6.8	5.7	5.0	4.3	3.6
75°	11.5	9.7	8.3	6.5	6.1	5.7	4.7	4.0	3.2	2.5	2.2
77.5°	7.9	6.5	5.0	4.3	4.0	3.2	2.9	2.2	1.8	1.4	1.1
80°	4.3	3.2	2.5	2.2	1.8	1.4	1.4	1.1	0.7	0.7	0.4
82.5°	1.4	1.1	0.7	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 EX4C059030 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3
2.5°	298.9	295.0	296.1	296.1	295.3	295.3	294.6	293.5	293.9	291.7	287.1
5°	295.7	290.7	290.0	290.7	287.8	287.1	285.7	287.8	281.3	283.9	281.0
7.5°	286.4	281.7	280.6	283.1	279.6	277.4	277.0	279.9	274.2	271.3	268.1
10°	276.0	274.2	270.9	269.1	268.1	268.4	265.6	262.0	260.9	260.2	257.3
12.5°	266.6	262.7	259.8	257.7	256.9	256.9	252.3	251.6	248.3	247.6	243.3
15°	255.5	250.8	249.0	246.2	243.7	245.1	239.7	238.3	237.2	232.5	233.3
17.5°	245.8	240.8	236.5	234.7	232.5	230.4	225.4	226.4	223.9	223.9	217.5
20°	233.3	227.9	224.6	221.1	221.1	218.2	214.6	215.0	211.7	208.5	202.7
22.5°	220.0	214.2	210.3	208.9	205.3	204.5	200.2	199.2	194.9	195.2	190.2
25°	206.0	200.2	194.9	195.2	192.0	190.6	188.0	183.0	181.2	179.1	177.6
27.5°	189.5	185.5	180.9	180.5	174.4	174.8	171.5	170.1	165.8	166.9	163.6
30°	174.4	168.7	164.4	163.3	160.8	160.1	155.0	152.9	153.6	150.7	148.9
32.5°	159.0	150.4	148.6	146.4	145.0	143.2	139.6	141.0	137.8	138.5	135.6
35°	138.5	134.9	130.3	130.3	128.8	127.4	124.9	126.3	123.1	121.7	118.8
37.5°	121.3	118.1	113.4	114.8	112.3	110.2	108.0	108.4	105.5	105.1	102.3
40°	102.6	100.8	97.6	97.6	95.8	95.8	94.7	93.7	91.9	89.7	86.5
42.5°	85.0	83.6	82.2	82.5	80.0	82.2	79.3	81.1	75.4	75.0	72.8
45°	72.1	68.9	69.3	67.8	66.4	67.1	64.6	65.3	62.1	61.4	59.2
47.5°	58.5	57.4	55.3	54.6	54.6	53.5	52.4	52.0	50.6	48.8	45.9
50°	48.1	44.1	43.4	42.3	41.6	41.6	40.2	38.0	38.4	36.6	33.7
52.5°	37.7	34.4	33.0	32.7	31.2	30.5	28.7	27.3	26.2	25.5	23.7
55°	29.1	26.2	24.4	24.4	22.3	22.3	19.7	18.7	17.2	15.8	14.7
57.5°	21.9	20.5	18.7	17.2	16.5	14.7	13.3	11.5	10.4	8.3	6.8
60°	16.5	15.1	13.3	12.2	11.5	9.7	7.9	6.5	4.0	3.2	2.9
62.5°	12.2	10.8	9.0	8.3	7.5	6.1	4.3	2.2	1.1	1.1	1.1
65°	9.0	7.2	5.7	5.0	4.3	3.2	1.4	0.7	0.4	0.4	0.4
67.5°	6.1	4.7	3.2	2.9	2.2	1.1	0.4	0.4	0.4	0.4	0.4
70°	4.0	2.9	1.4	1.1	0.7	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	2.5	1.4	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.7	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 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	299.3	299.3	299.3	299.3	299.3	299.3	299.3	299.3
2.5°	292.1	289.6	291.0	287.8	289.2	291.7	290.0	290.7
5°	282.1	280.6	278.8	274.2	277.8	280.6	279.2	278.8
7.5°	271.3	266.3	268.8	267.4	266.6	269.5	266.3	269.9
10°	260.2	256.6	256.2	253.7	253.7	255.9	256.2	254.1
12.5°	243.7	241.9	241.9	241.5	241.1	243.3	243.7	242.6
15°	231.8	231.1	229.3	229.0	226.8	230.0	230.4	230.0
17.5°	217.5	217.8	216.0	216.0	217.5	218.5	215.7	218.5
20°	207.8	206.0	205.3	202.0	203.8	205.6	205.6	206.0
22.5°	193.8	190.9	192.0	190.2	189.1	191.6	191.6	192.7
25°	178.0	178.0	178.7	177.6	178.4	179.8	178.7	181.2
27.5°	162.9	164.4	164.4	162.9	163.6	167.9	169.7	166.9
30°	148.9	149.3	150.4	149.6	151.8	153.2	152.9	155.0
32.5°	133.1	134.9	135.6	134.6	135.3	138.5	136.7	136.4
35°	120.9	117.7	117.4	117.7	119.1	119.9	119.1	121.7
37.5°	103.3	102.3	100.8	101.2	102.3	103.7	104.4	106.2
40°	86.5	85.0	85.0	84.7	83.6	87.6	87.6	87.6
42.5°	71.8	71.4	69.6	69.6	71.1	72.1	71.4	73.9
45°	58.9	57.4	56.3	56.3	57.4	57.4	58.5	58.1
47.5°	46.3	44.9	45.2	44.1	45.2	46.6	44.9	45.2
50°	34.8	34.8	34.1	34.8	34.4	34.8	34.1	33.4
52.5°	23.7	26.9	27.3	25.8	22.6	19.7	17.9	19.4
55°	13.6	12.2	12.2	11.8	11.1	10.8	9.7	10.8
57.5°	6.8	6.1	6.1	6.1	5.7	5.4	4.7	4.7
60°	2.9	2.5	2.5	2.2	1.8	1.4	1.1	1.4
62.5°	1.1	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)