

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 EX4C059050 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 EX4C059050 4LBSQLWWH  
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

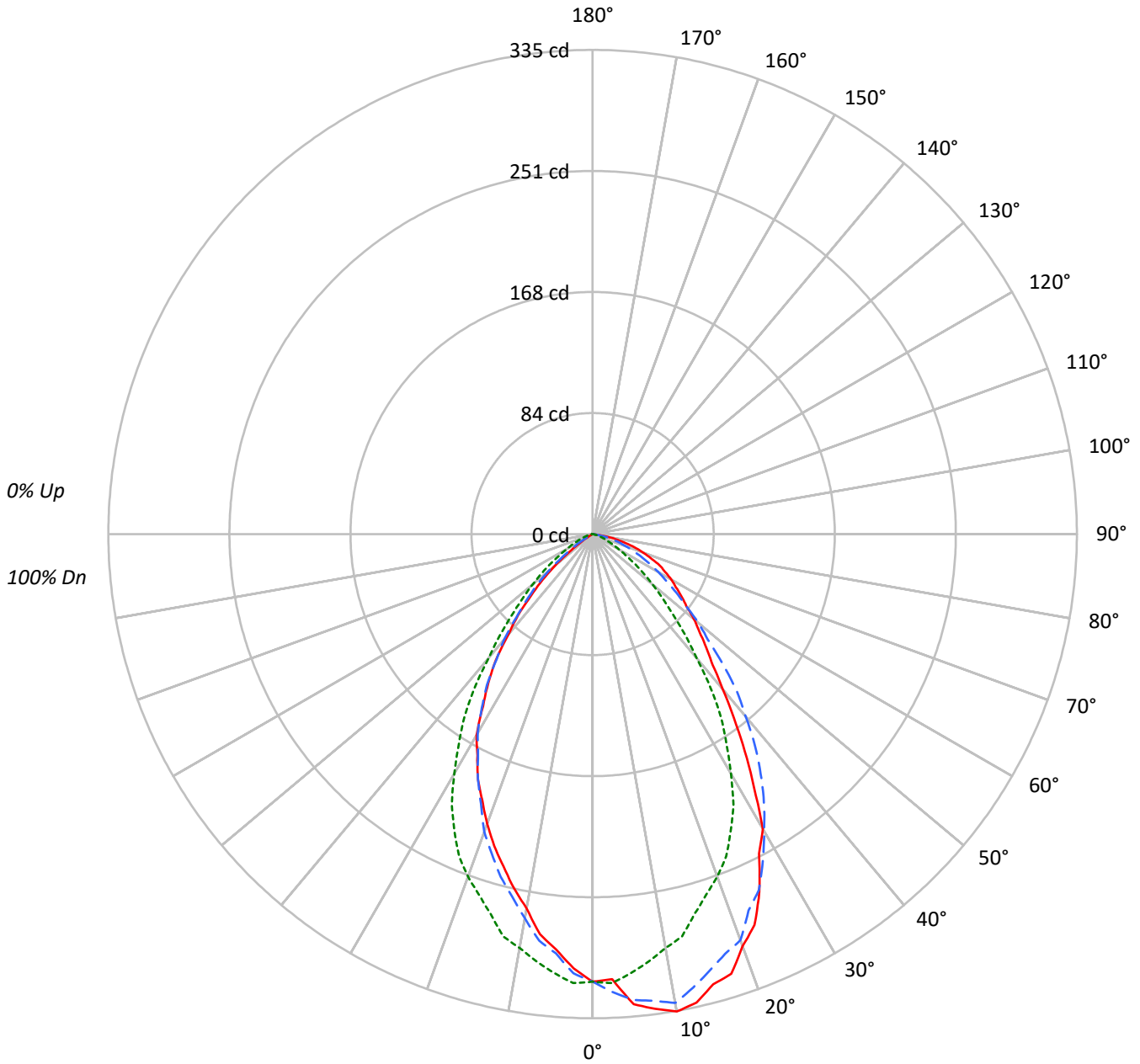
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 444.0 lumens  
Efficiency: N/A  
Efficacy: 61.7 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

TEST NUMBER: P#  
CATALOG NUMBER: LD4C05D010 EX4C059050 4LBSQLWWH

### Luminous Intensity Polar Plot





TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059050 4LBSQLWWH

**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°	29883	29883	29883
5°	31624	29532	27953
10°	32862	28492	25758
15°	32205	27191	23784
20°	31154	25896	21892
25°	29065	24082	19973
30°	26238	21314	17882
35°	21615	18246	14830
40°	17634	14082	11412
45°	15160	10698	8215
50°	13720	8136	5179
55°	12617	5871	1867
60°	12119	4014	289
65°	11690	2717	91
70°	10466	1890	113
75°	8575	969	0
80°	5390	389	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059050 4LBSQLWWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.0	6.5
10°-20°	78.2	17.6
20°-30°	104.4	23.5
30°-40°	99.1	22.3
40°-50°	68.5	15.4
50°-60°	37.9	8.5
60°-70°	18.8	4.2
70°-80°	7.4	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°	211.6	47.7
0°-40°	310.7	70.0
0°-60°	417.1	93.9
0°-90°	444.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	444.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	310	310	310	310	310	
5°	326	324	305	291	289	31
15°	322	313	272	246	238	91
25°	273	272	226	188	188	124
35°	184	203	155	127	126	115
45°	111	127	78	64	60	87
55°	75	71	35	18	11	68
65°	51	37	12	0	0	50
75°	23	14	3	0	0	25
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059050 4LBSQLWWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7
2.5°	308.3	316.8	317.5	316.8	317.9	317.5	319.4	317.5	319.8	316.4	317.2
5°	326.5	323.1	330.2	326.5	326.5	326.1	325.0	324.6	326.1	321.3	323.5
7.5°	331.3	336.1	342.4	334.6	335.0	335.0	332.8	332.0	332.0	323.1	325.7
10°	335.4	332.4	335.7	332.8	335.4	335.0	336.5	331.7	335.0	329.8	329.4
12.5°	332.0	330.9	335.4	330.6	329.1	329.4	327.6	326.5	327.6	321.6	321.3
15°	322.4	323.5	330.2	325.0	324.2	323.5	321.3	317.5	320.5	312.3	312.7
17.5°	319.0	317.2	318.3	313.8	315.0	314.2	313.8	310.5	309.7	304.5	304.5
20°	303.4	307.5	307.5	304.5	304.5	304.2	299.4	302.3	299.0	297.5	299.0
22.5°	292.7	293.0	293.0	290.4	290.8	289.3	286.7	284.9	286.7	284.9	281.9
25°	273.0	273.7	278.2	273.4	272.6	274.1	271.9	270.7	270.4	265.9	271.9
27.5°	249.2	256.6	256.3	254.4	256.6	253.7	252.6	252.9	254.0	253.7	255.1
30°	235.5	236.6	237.7	236.2	236.6	235.5	235.5	235.8	238.8	237.7	237.3
32.5°	207.6	211.3	214.3	214.3	214.7	215.8	215.4	223.2	225.1	221.4	220.6
35°	183.5	186.1	188.7	189.0	193.9	194.2	194.6	196.8	202.0	203.2	202.8
37.5°	160.5	163.0	163.8	167.1	169.7	172.3	175.3	178.3	182.7	186.4	184.6
40°	140.0	141.1	143.0	144.5	149.7	149.7	151.2	157.1	161.9	164.9	164.5
42.5°	122.9	123.3	124.8	127.4	132.2	131.1	132.2	136.3	143.4	143.7	147.8
45°	111.1	110.7	111.8	112.2	115.1	116.6	117.4	120.3	126.3	127.0	127.4
47.5°	100.3	99.9	101.8	102.5	103.6	105.1	105.1	105.5	107.7	109.6	108.1
50°	91.4	91.4	91.4	92.1	94.0	93.6	94.0	95.5	96.6	95.8	95.5
52.5°	81.7	83.2	84.3	84.7	85.0	85.0	85.4	84.7	84.3	83.2	81.0
55°	75.0	76.5	76.5	76.5	76.5	78.0	76.1	76.5	76.5	73.5	70.6
57.5°	68.3	69.8	70.9	69.5	70.9	69.5	68.7	68.3	67.6	64.6	60.2
60°	62.8	63.5	63.1	62.8	63.5	62.4	61.7	60.2	59.4	55.3	52.4
62.5°	56.5	56.8	57.2	56.5	55.7	55.3	53.9	51.6	50.1	46.8	44.2
65°	51.2	50.1	49.8	49.4	48.7	47.5	46.4	43.8	42.7	39.7	37.1
67.5°	43.4	43.1	43.8	42.7	40.9	40.9	39.7	37.5	34.9	33.1	30.5
70°	37.1	36.8	36.0	34.9	34.5	33.1	33.1	30.5	29.7	26.4	24.1
72.5°	30.5	30.5	29.3	28.2	27.1	26.4	26.0	24.1	23.0	21.2	19.3
75°	23.0	23.0	22.7	21.5	20.8	20.1	19.7	18.2	17.1	15.2	14.1
77.5°	16.3	16.3	14.9	14.1	14.5	13.7	13.0	12.6	12.3	11.1	9.7
80°	9.7	9.3	8.2	8.5	8.2	8.2	7.8	7.4	6.7	5.9	5.2
82.5°	2.6	3.0	3.0	3.0	3.3	2.6	2.6	2.6	3.0	3.0	1.9
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	1.5	1.5	1.5	1.5	1.5	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



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7
2.5°	313.5	313.1	313.5	310.9	316.8	312.3	311.6	310.9	313.5	310.9	307.2
5°	320.1	316.4	315.3	314.2	317.5	312.3	311.2	311.6	309.7	304.9	305.3
7.5°	322.4	319.0	315.7	308.6	311.6	310.5	307.5	305.3	302.3	298.2	297.5
10°	323.1	319.4	314.6	312.3	307.9	306.4	305.3	301.6	297.9	290.8	289.0
12.5°	320.9	316.4	310.5	308.6	305.3	300.5	297.9	294.1	290.8	285.2	281.2
15°	311.2	307.5	305.7	299.4	297.9	294.9	289.7	284.5	279.7	272.2	270.0
17.5°	300.1	298.6	296.8	291.9	291.6	288.6	283.8	279.3	273.0	261.5	257.8
20°	288.6	288.6	282.6	280.8	284.5	278.5	274.8	270.7	257.8	252.2	245.5
22.5°	280.0	276.0	272.6	269.6	270.0	266.3	261.1	252.9	248.1	241.4	233.6
25°	263.3	264.8	257.4	256.3	257.4	248.8	246.2	239.6	232.5	226.2	220.2
27.5°	252.9	248.8	244.0	239.9	239.9	236.6	229.2	227.7	216.9	211.0	203.5
30°	237.3	234.4	230.3	224.3	223.6	221.0	215.0	211.3	200.2	191.3	187.2
32.5°	217.6	216.5	213.2	206.5	204.3	201.3	193.9	187.6	182.4	172.3	167.5
35°	203.5	199.4	192.4	186.8	185.0	179.8	173.8	169.4	163.8	154.9	148.6
37.5°	182.4	178.3	171.6	164.9	164.9	159.7	151.5	147.1	139.3	134.1	128.9
40°	163.8	158.6	151.9	144.1	143.0	135.6	132.2	124.8	120.0	111.8	111.1
42.5°	143.0	138.2	132.2	126.3	121.8	118.1	109.6	104.0	98.8	94.7	93.6
45°	124.0	117.7	112.5	105.1	100.6	96.2	90.6	86.9	82.8	78.4	75.8
47.5°	107.7	102.5	95.1	88.4	83.9	81.7	75.4	71.3	68.0	65.0	63.1
50°	91.0	84.7	80.6	73.2	72.4	67.2	62.0	58.7	56.8	54.2	51.6
52.5°	78.4	72.4	66.8	61.3	58.3	56.5	51.6	48.3	45.7	43.8	42.3
55°	66.1	60.9	56.5	50.9	49.0	46.4	40.9	40.1	37.5	34.9	33.1
57.5°	56.8	52.0	46.8	43.1	39.7	37.9	33.4	30.5	29.0	26.7	24.9
60°	48.3	43.1	39.0	34.5	33.1	30.5	27.1	24.5	22.7	20.8	18.9
62.5°	40.5	36.0	31.6	27.9	25.6	24.1	21.5	19.3	17.5	16.0	14.5
65°	33.4	29.3	25.6	21.9	20.8	18.9	17.1	15.2	13.7	11.9	10.4
67.5°	27.5	23.8	20.1	17.5	16.3	15.6	13.4	11.5	10.4	9.3	7.8
70°	21.5	18.9	16.0	13.7	12.6	11.5	10.0	8.9	7.4	6.7	5.6
72.5°	16.7	14.5	11.9	10.0	9.3	8.5	7.1	5.9	5.2	4.5	3.7
75°	11.9	10.0	8.5	6.7	6.3	5.9	4.8	4.1	3.3	2.6	2.2
77.5°	8.2	6.7	5.2	4.5	4.1	3.3	3.0	2.2	1.9	1.5	1.1
80°	4.5	3.3	2.6	2.2	1.9	1.5	1.5	1.1	0.7	0.7	0.4
82.5°	1.5	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 EX4C059050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7
2.5°	309.4	305.3	306.4	306.4	305.7	305.7	304.9	303.8	304.2	301.9	297.1
5°	306.0	300.8	300.1	300.8	297.9	297.1	295.6	297.9	291.2	293.8	290.8
7.5°	296.4	291.6	290.4	293.0	289.3	287.1	286.7	289.7	283.8	280.8	277.4
10°	285.6	283.8	280.4	278.5	277.4	277.8	274.8	271.1	270.0	269.3	266.3
12.5°	276.0	271.9	268.9	266.7	265.9	265.9	261.1	260.4	257.0	256.3	251.8
15°	264.4	259.6	257.8	254.8	252.2	253.7	248.1	246.6	245.5	240.7	241.4
17.5°	254.4	249.2	244.8	242.9	240.7	238.4	233.2	234.4	231.8	231.8	225.1
20°	241.4	235.8	232.5	228.8	228.8	225.8	222.1	222.5	219.1	215.8	209.8
22.5°	227.7	221.7	217.6	216.2	212.4	211.7	207.2	206.1	201.7	202.0	196.8
25°	213.2	207.2	201.7	202.0	198.7	197.2	194.6	189.4	187.6	185.3	183.9
27.5°	196.1	192.0	187.2	186.8	180.5	180.9	177.5	176.1	171.6	172.7	169.4
30°	180.5	174.6	170.1	169.0	166.4	165.6	160.5	158.2	159.0	156.0	154.1
32.5°	164.5	155.6	153.8	151.5	150.0	148.2	144.5	146.0	142.6	143.4	140.4
35°	143.4	139.6	134.8	134.8	133.3	131.8	129.3	130.7	127.4	125.9	122.9
37.5°	125.5	122.2	117.4	118.9	116.2	114.0	111.8	112.2	109.2	108.8	105.8
40°	106.2	104.4	101.0	101.0	99.2	99.2	98.0	96.9	95.1	92.8	89.5
42.5°	88.0	86.5	85.0	85.4	82.8	85.0	82.1	83.9	78.0	77.6	75.4
45°	74.6	71.3	71.7	70.2	68.7	69.5	66.8	67.6	64.3	63.5	61.3
47.5°	60.5	59.4	57.2	56.5	56.5	55.3	54.2	53.9	52.4	50.5	47.5
50°	49.8	45.7	44.9	43.8	43.1	43.1	41.6	39.4	39.7	37.9	34.9
52.5°	39.0	35.6	34.2	33.8	32.3	31.6	29.7	28.2	27.1	26.4	24.5
55°	30.1	27.1	25.3	25.3	23.0	23.0	20.4	19.3	17.8	16.3	15.2
57.5°	22.7	21.2	19.3	17.8	17.1	15.2	13.7	11.9	10.8	8.5	7.1
60°	17.1	15.6	13.7	12.6	11.9	10.0	8.2	6.7	4.1	3.3	3.0
62.5°	12.6	11.1	9.3	8.5	7.8	6.3	4.5	2.2	1.1	1.1	1.1
65°	9.3	7.4	5.9	5.2	4.5	3.3	1.5	0.7	0.4	0.4	0.4
67.5°	6.3	4.8	3.3	3.0	2.2	1.1	0.4	0.4	0.4	0.4	0.4
70°	4.1	3.0	1.5	1.1	0.7	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	2.6	1.5	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.5	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 EX4C059050 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	309.7	309.7	309.7	309.7	309.7	309.7	309.7	309.7
2.5°	302.3	299.7	301.2	297.9	299.4	301.9	300.1	300.8
5°	291.9	290.4	288.6	283.8	287.5	290.4	289.0	288.6
7.5°	280.8	275.6	278.2	276.7	276.0	278.9	275.6	279.3
10°	269.3	265.6	265.2	262.6	262.6	264.8	265.2	262.9
12.5°	252.2	250.3	250.3	250.0	249.6	251.8	252.2	251.1
15°	239.9	239.2	237.3	237.0	234.7	238.1	238.4	238.1
17.5°	225.1	225.4	223.6	223.6	225.1	226.2	223.2	226.2
20°	215.0	213.2	212.4	209.1	211.0	212.8	212.8	213.2
22.5°	200.6	197.6	198.7	196.8	195.7	198.3	198.3	199.4
25°	184.2	184.2	185.0	183.9	184.6	186.1	185.0	187.6
27.5°	168.6	170.1	170.1	168.6	169.4	173.8	175.7	172.7
30°	154.1	154.5	155.6	154.9	157.1	158.6	158.2	160.5
32.5°	137.8	139.6	140.4	139.3	140.0	143.4	141.5	141.1
35°	125.2	121.8	121.5	121.8	123.3	124.0	123.3	125.9
37.5°	107.0	105.8	104.4	104.7	105.8	107.3	108.1	109.9
40°	89.5	88.0	88.0	87.7	86.5	90.6	90.6	90.6
42.5°	74.3	73.9	72.1	72.1	73.5	74.6	73.9	76.5
45°	60.9	59.4	58.3	58.3	59.4	59.4	60.5	60.2
47.5°	47.9	46.4	46.8	45.7	46.8	48.3	46.4	46.8
50°	36.0	36.0	35.3	36.0	35.6	36.0	35.3	34.5
52.5°	24.5	27.9	28.2	26.7	23.4	20.4	18.6	20.1
55°	14.1	12.6	12.6	12.3	11.5	11.1	10.0	11.1
57.5°	7.1	6.3	6.3	6.3	5.9	5.6	4.8	4.8
60°	3.0	2.6	2.6	2.2	1.9	1.5	1.1	1.5
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)