

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 EX4C059040 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 EX4C059040 4LBSQLWWLI  
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

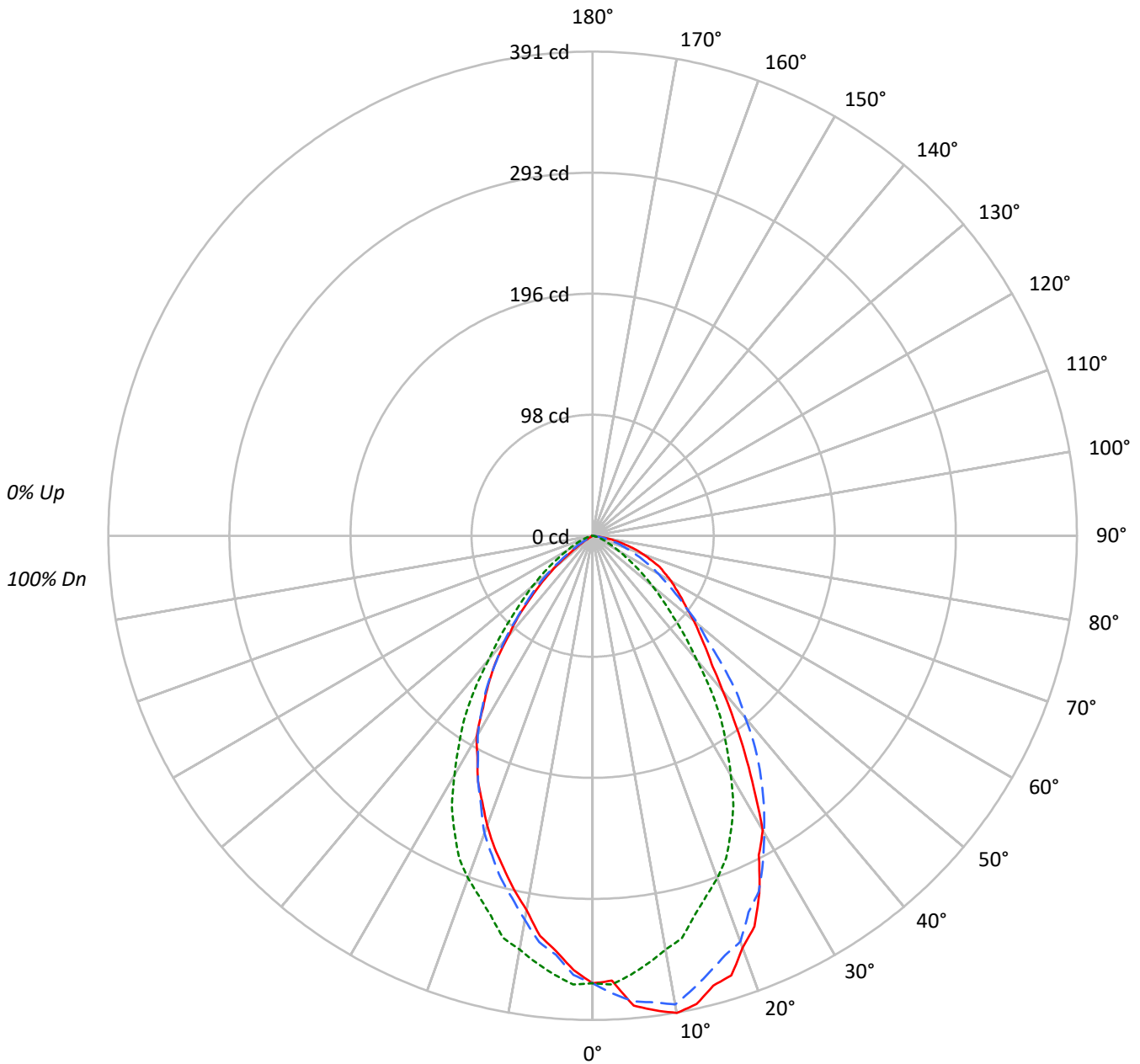
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 518.0 lumens  
Efficiency: N/A  
Efficacy: 71.9 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 (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

TEST NUMBER: P#  
CATALOG NUMBER: LD4C05D010 EX4C059040 4LBSQLWWLI

### Luminous Intensity Polar Plot





TEST NUMBER: P#

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72					72			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58					58			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53					53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41					41			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38					38			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	34871	34871	34871
5°	36893	34452	32612
10°	38339	33244	30059
15°	37570	31726	27740
20°	36349	30209	25537
25°	33909	28096	23294
30°	30606	24857	20857
35°	25219	21285	17304
40°	20581	16425	13314
45°	17685	12472	9579
50°	16002	9502	6049
55°	14720	6847	2187
60°	14126	4689	328
65°	13653	3174	91
70°	12216	2200	113
75°	10028	1118	0
80°	6279	500	0
85°	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059040 4LBSQLWWLI

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.9	6.5
10°-20°	91.2	17.6
20°-30°	121.8	23.5
30°-40°	115.6	22.3
40°-50°	79.9	15.4
50°-60°	44.2	8.5
60°-70°	21.9	4.2
70°-80°	8.6	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°	246.9	47.7
0°-40°	362.5	70.0
0°-60°	486.6	93.9
0°-90°	518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	518.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	361	361	361	361	361	
5°	381	377	356	340	337	36
15°	376	365	318	286	278	106
25°	318	317	264	219	219	145
35°	214	237	181	149	147	134
45°	130	149	91	75	70	101
55°	88	82	41	21	13	79
65°	60	43	14	0	0	58
75°	27	16	3	0	0	29
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059040 4LBSQLWWLI

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4
2.5°	359.6	369.6	370.5	369.6	370.9	370.5	372.6	370.5	373.1	369.2	370.0
5°	380.9	377.0	385.2	380.9	380.9	380.4	379.1	378.7	380.4	374.8	377.4
7.5°	386.5	392.1	399.5	390.4	390.8	390.8	388.2	387.4	387.4	377.0	380.0
10°	391.3	387.8	391.7	388.2	391.3	390.8	392.6	386.9	390.8	384.8	384.3
12.5°	387.4	386.1	391.3	385.6	383.9	384.3	382.2	380.9	382.2	375.2	374.8
15°	376.1	377.4	385.2	379.1	378.3	377.4	374.8	370.5	373.9	364.4	364.8
17.5°	372.2	370.0	371.4	366.1	367.4	366.6	366.1	362.3	361.4	355.3	355.3
20°	354.0	358.8	358.8	355.3	355.3	354.9	349.2	352.7	348.8	347.1	348.8
22.5°	341.4	341.9	341.9	338.8	339.3	337.6	334.5	332.3	334.5	332.3	328.9
25°	318.5	319.4	324.5	318.9	318.0	319.8	317.2	315.9	315.4	310.3	317.2
27.5°	290.7	299.4	299.0	296.8	299.4	295.9	294.7	295.1	296.4	295.9	297.7
30°	274.7	276.0	277.3	275.6	276.0	274.7	274.7	275.1	278.6	277.3	276.9
32.5°	242.2	246.5	250.0	250.0	250.4	251.8	251.3	260.4	262.6	258.3	257.4
35°	214.1	217.1	220.1	220.6	226.2	226.6	227.1	229.7	235.7	237.0	236.6
37.5°	187.2	190.2	191.1	195.0	198.0	201.0	204.5	208.0	213.2	217.5	215.4
40°	163.4	164.7	166.8	168.6	174.6	174.6	176.3	183.3	188.9	192.4	191.9
42.5°	143.4	143.9	145.6	148.6	154.3	153.0	154.3	159.0	167.2	167.7	172.5
45°	129.6	129.1	130.4	130.9	134.3	136.1	136.9	140.4	147.3	148.2	148.6
47.5°	117.0	116.6	118.7	119.6	120.9	122.6	122.6	123.1	125.7	127.8	126.1
50°	106.6	106.6	106.6	107.5	109.6	109.2	109.6	111.4	112.7	111.8	111.4
52.5°	95.3	97.1	98.4	98.8	99.2	99.2	99.7	98.8	98.4	97.1	94.5
55°	87.5	89.3	89.3	89.3	89.3	91.0	88.8	89.3	89.3	85.8	82.3
57.5°	79.7	81.5	82.8	81.0	82.8	81.0	80.2	79.7	78.9	75.4	70.2
60°	73.2	74.1	73.7	73.2	74.1	72.8	71.9	70.2	69.3	64.6	61.1
62.5°	65.9	66.3	66.7	65.9	65.0	64.6	62.8	60.2	58.5	54.6	51.6
65°	59.8	58.5	58.1	57.6	56.8	55.5	54.2	51.1	49.8	46.4	43.3
67.5°	50.7	50.3	51.1	49.8	47.7	47.7	46.4	43.8	40.7	38.6	35.5
70°	43.3	42.9	42.0	40.7	40.3	38.6	38.6	35.5	34.7	30.8	28.2
72.5°	35.5	35.5	34.2	32.9	31.6	30.8	30.3	28.2	26.9	24.7	22.5
75°	26.9	26.9	26.4	25.1	24.3	23.4	23.0	21.2	19.9	17.8	16.5
77.5°	19.1	19.1	17.3	16.5	16.9	16.0	15.2	14.7	14.3	13.0	11.3
80°	11.3	10.8	9.5	10.0	9.5	9.5	9.1	8.7	7.8	6.9	6.1
82.5°	3.0	3.5	3.5	3.5	3.9	3.0	3.0	3.0	3.5	3.5	2.2
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	0.9	1.7	1.7	1.7	1.7	1.7	1.3	1.3	1.3	0.9
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 EX4C059040 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4
2.5°	365.7	365.3	365.7	362.7	369.6	364.4	363.5	362.7	365.7	362.7	358.3
5°	373.5	369.2	367.9	366.6	370.5	364.4	363.1	363.5	361.4	355.7	356.2
7.5°	376.1	372.2	368.3	360.1	363.5	362.3	358.8	356.2	352.7	347.9	347.1
10°	377.0	372.6	367.0	364.4	359.2	357.5	356.2	351.8	347.5	339.3	337.1
12.5°	374.4	369.2	362.3	360.1	356.2	350.5	347.5	343.2	339.3	332.8	328.0
15°	363.1	358.8	356.6	349.2	347.5	344.0	338.0	331.9	326.3	317.6	315.0
17.5°	350.1	348.4	346.2	340.6	340.1	336.7	331.0	325.8	318.5	305.0	300.7
20°	336.7	336.7	329.7	327.6	331.9	325.0	320.6	315.9	300.7	294.2	286.4
22.5°	326.7	322.0	318.0	314.6	315.0	310.7	304.6	295.1	289.4	281.6	272.6
25°	307.2	308.9	300.3	299.0	300.3	290.3	287.3	279.5	271.2	263.9	256.9
27.5°	295.1	290.3	284.7	279.9	279.9	276.0	267.4	265.6	253.0	246.1	237.4
30°	276.9	273.4	268.6	261.7	260.9	257.8	250.9	246.5	233.6	223.1	218.4
32.5°	253.9	252.6	248.7	240.9	238.3	234.8	226.2	218.8	212.8	201.0	195.4
35°	237.4	232.7	224.5	218.0	215.8	209.7	202.8	197.6	191.1	180.7	173.3
37.5°	212.8	208.0	200.2	192.4	192.4	186.3	176.8	171.6	162.5	156.4	150.4
40°	191.1	185.0	177.2	168.1	166.8	158.1	154.3	145.6	140.0	130.4	129.6
42.5°	166.8	161.2	154.3	147.3	142.1	137.8	127.8	121.3	115.3	110.5	109.2
45°	144.7	137.4	131.3	122.6	117.4	112.2	105.7	101.4	96.6	91.4	88.4
47.5°	125.7	119.6	110.9	103.1	97.9	95.3	88.0	83.2	79.3	75.8	73.7
50°	106.2	98.8	94.0	85.4	84.5	78.4	72.4	68.5	66.3	63.3	60.2
52.5°	91.4	84.5	78.0	71.5	68.0	65.9	60.2	56.3	53.3	51.1	49.4
55°	77.1	71.1	65.9	59.4	57.2	54.2	47.7	46.8	43.8	40.7	38.6
57.5°	66.3	60.7	54.6	50.3	46.4	44.2	39.0	35.5	33.8	31.2	29.0
60°	56.3	50.3	45.5	40.3	38.6	35.5	31.6	28.6	26.4	24.3	22.1
62.5°	47.2	42.0	36.8	32.5	29.9	28.2	25.1	22.5	20.4	18.6	16.9
65°	39.0	34.2	29.9	25.6	24.3	22.1	19.9	17.8	16.0	13.9	12.1
67.5°	32.1	27.7	23.4	20.4	19.1	18.2	15.6	13.4	12.1	10.8	9.1
70°	25.1	22.1	18.6	16.0	14.7	13.4	11.7	10.4	8.7	7.8	6.5
72.5°	19.5	16.9	13.9	11.7	10.8	10.0	8.2	6.9	6.1	5.2	4.3
75°	13.9	11.7	10.0	7.8	7.4	6.9	5.6	4.8	3.9	3.0	2.6
77.5°	9.5	7.8	6.1	5.2	4.8	3.9	3.5	2.6	2.2	1.7	1.3
80°	5.2	3.9	3.0	2.6	2.2	1.7	1.7	1.3	0.9	0.9	0.4
82.5°	1.7	1.3	0.9	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 EX4C059040 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4
2.5°	360.9	356.2	357.5	357.5	356.6	356.6	355.7	354.4	354.9	352.3	346.7
5°	357.0	351.0	350.1	351.0	347.5	346.7	344.9	347.5	339.7	342.7	339.3
7.5°	345.8	340.1	338.8	341.9	337.6	334.9	334.5	338.0	331.0	327.6	323.7
10°	333.2	331.0	327.1	325.0	323.7	324.1	320.6	316.3	315.0	314.1	310.7
12.5°	322.0	317.2	313.7	311.1	310.3	310.3	304.6	303.8	299.8	299.0	293.8
15°	308.5	302.9	300.7	297.3	294.2	295.9	289.4	287.7	286.4	280.8	281.6
17.5°	296.8	290.7	285.6	283.4	280.8	278.2	272.1	273.4	270.4	270.4	262.6
20°	281.6	275.1	271.2	266.9	266.9	263.5	259.1	259.5	255.6	251.8	244.8
22.5°	265.6	258.7	253.9	252.2	247.8	247.0	241.8	240.5	235.3	235.7	229.7
25°	248.7	241.8	235.3	235.7	231.8	230.1	227.1	221.0	218.8	216.2	214.5
27.5°	228.8	224.0	218.4	218.0	210.6	211.0	207.1	205.4	200.2	201.5	197.6
30°	210.6	203.7	198.4	197.2	194.1	193.3	187.2	184.6	185.5	182.0	179.8
32.5°	191.9	181.6	179.4	176.8	175.1	172.9	168.6	170.3	166.4	167.2	163.8
35°	167.2	162.9	157.3	157.3	155.6	153.8	150.8	152.5	148.6	146.9	143.4
37.5°	146.5	142.6	136.9	138.7	135.6	133.0	130.4	130.9	127.4	127.0	123.5
40°	123.9	121.8	117.9	117.9	115.7	115.7	114.4	113.1	110.9	108.3	104.4
42.5°	102.7	101.0	99.2	99.7	96.6	99.2	95.8	97.9	91.0	90.6	88.0
45°	87.1	83.2	83.6	81.9	80.2	81.0	78.0	78.9	75.0	74.1	71.5
47.5°	70.6	69.3	66.7	65.9	65.9	64.6	63.3	62.8	61.1	58.9	55.5
50°	58.1	53.3	52.4	51.1	50.3	50.3	48.5	45.9	46.4	44.2	40.7
52.5°	45.5	41.6	39.9	39.4	37.7	36.8	34.7	32.9	31.6	30.8	28.6
55°	35.1	31.6	29.5	29.5	26.9	26.9	23.8	22.5	20.8	19.1	17.8
57.5°	26.4	24.7	22.5	20.8	19.9	17.8	16.0	13.9	12.6	10.0	8.2
60°	19.9	18.2	16.0	14.7	13.9	11.7	9.5	7.8	4.8	3.9	3.5
62.5°	14.7	13.0	10.8	10.0	9.1	7.4	5.2	2.6	1.3	1.3	1.3
65°	10.8	8.7	6.9	6.1	5.2	3.9	1.7	0.9	0.4	0.4	0.4
67.5°	7.4	5.6	3.9	3.5	2.6	1.3	0.4	0.4	0.4	0.4	0.4
70°	4.8	3.5	1.7	1.3	0.9	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	3.0	1.7	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.9	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 EX4C059040 4LBSQLWWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	361.4	361.4	361.4	361.4	361.4	361.4	361.4	361.4
2.5°	352.7	349.7	351.4	347.5	349.2	352.3	350.1	351.0
5°	340.6	338.8	336.7	331.0	335.4	338.8	337.1	336.7
7.5°	327.6	321.5	324.5	322.8	322.0	325.4	321.5	325.8
10°	314.1	309.8	309.4	306.3	306.3	308.9	309.4	306.8
12.5°	294.2	292.1	292.1	291.6	291.2	293.8	294.2	292.9
15°	279.9	279.1	276.9	276.5	273.9	277.7	278.2	277.7
17.5°	262.6	263.0	260.9	260.9	262.6	263.9	260.4	263.9
20°	250.9	248.7	247.8	243.9	246.1	248.3	248.3	248.7
22.5°	234.0	230.5	231.8	229.7	228.3	231.4	231.4	232.7
25°	214.9	214.9	215.8	214.5	215.4	217.1	215.8	218.8
27.5°	196.7	198.4	198.4	196.7	197.6	202.8	205.0	201.5
30°	179.8	180.3	181.6	180.7	183.3	185.0	184.6	187.2
32.5°	160.8	162.9	163.8	162.5	163.4	167.2	165.1	164.7
35°	146.0	142.1	141.7	142.1	143.9	144.7	143.9	146.9
37.5°	124.8	123.5	121.8	122.2	123.5	125.2	126.1	128.3
40°	104.4	102.7	102.7	102.3	101.0	105.7	105.7	105.7
42.5°	86.7	86.2	84.1	84.1	85.8	87.1	86.2	89.3
45°	71.1	69.3	68.0	68.0	69.3	69.3	70.6	70.2
47.5°	55.9	54.2	54.6	53.3	54.6	56.3	54.2	54.6
50°	42.0	42.0	41.2	42.0	41.6	42.0	41.2	40.3
52.5°	28.6	32.5	32.9	31.2	27.3	23.8	21.7	23.4
55°	16.5	14.7	14.7	14.3	13.4	13.0	11.7	13.0
57.5°	8.2	7.4	7.4	7.4	6.9	6.5	5.6	5.6
60°	3.5	3.0	3.0	2.6	2.2	1.7	1.3	1.7
62.5°	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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



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















(END OF REPORT)