

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: P880545

Luminaire Tested: **LD4C10D010 EU4109040 4LBDWNH**

Issue Date: 10/4/2024

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: P880545  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/4/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C10D010 EU4109040 4LBDWNH  
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBDWN TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

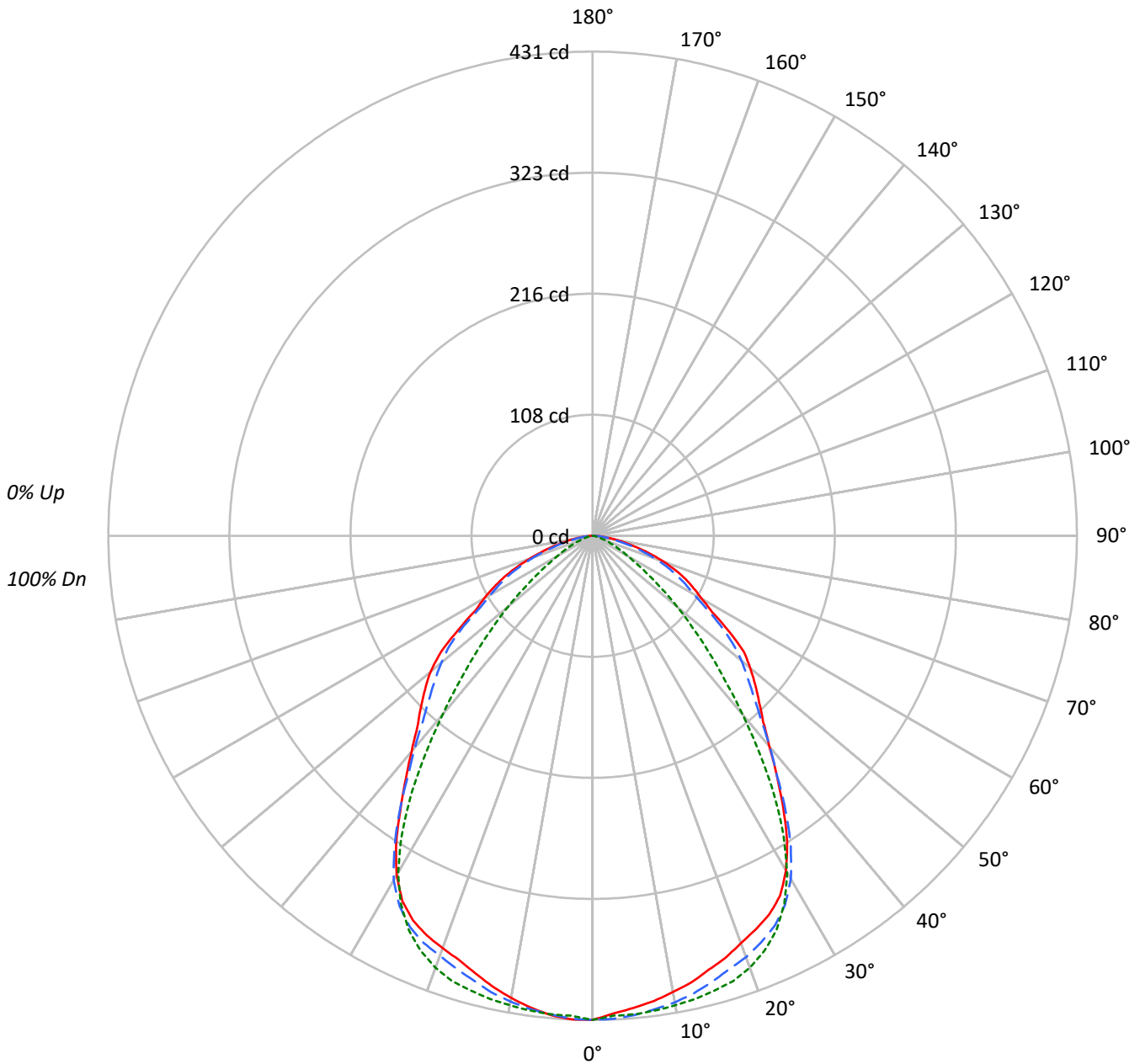
Lumens per Lamp: N/A  
Luminaire Lumens: 877.0 lumens  
Efficiency: N/A  
Efficacy: 89.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.75  
Input Voltage (V): NR  
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: P880545

CATALOG NUMBER: LD4C10D010 EU4109040 4LBDWNH

### 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			100																
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88			88																
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			76																
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66			66																
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58			58																
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51			51																
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46			46																
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41			41																
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37			37																
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34			34																
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			31																

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

	0°	90°	180°
0°	52938	52938	52938
5°	52005	52733	52819
10°	51446	52931	52108
15°	50849	53291	51269
20°	50439	53485	51053
25°	50412	52486	51226
30°	48814	49097	49466
35°	44348	42263	44738
40°	39227	33278	40190
45°	36399	25331	37545
50°	34976	18749	35989
55°	31657	12916	31229
60°	27519	8796	27372
65°	26599	6366	25232
70°	24030	4274	21408
75°	19841	2848	16993
80°	15918	1910	12664
85°	13109	987	8458



TEST NUMBER: P880545

CATALOG NUMBER: LD4C10D010 EU4109040 4LBDWNH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.7	4.6
10°-20°	116.3	13.3
20°-30°	175.7	20.0
30°-40°	183.9	21.0
40°-50°	148.9	17.0
50°-60°	108.3	12.4
60°-70°	66.8	7.6
70°-80°	30.2	3.4
80°-90°	6.1	0.7
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°	332.7	37.9
0°-40°	516.6	58.9
0°-60°	773.9	88.2
0°-90°	877.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	877.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	431	431	431	431	431	
5°	422	428	428	428	428	40
15°	400	411	419	410	403	113
25°	372	383	387	384	378	170
35°	296	300	282	300	298	184
45°	210	203	146	206	216	163
55°	148	138	60	140	146	132
65°	92	82	22	81	87	90
75°	42	36	6	31	36	45
85°	9	7	1	5	6	11
90°	0	0	0	0	0	



TEST NUMBER: P880545

CATALOG NUMBER: LD4C10D010 EU4109040 4LBDWNH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9
2.5°	425.6	425.6	429.6	434.2	430.3	426.3	428.9	427.6	432.3	432.3	430.3
5°	421.7	423.0	426.3	430.3	427.0	423.0	426.3	425.0	429.6	429.6	428.3
7.5°	417.7	418.3	422.3	427.0	423.6	419.7	422.3	421.7	425.6	426.3	425.0
10°	412.4	413.0	417.0	421.7	418.3	415.0	417.7	417.0	422.3	422.3	421.7
12.5°	407.1	407.7	411.7	415.7	412.4	409.1	411.7	411.7	417.0	417.7	417.0
15°	399.8	401.1	404.4	408.4	406.4	402.4	405.1	405.1	409.7	411.0	411.0
17.5°	393.8	394.5	397.8	401.8	399.1	395.8	398.4	398.4	403.1	404.4	404.4
20°	385.8	387.2	390.5	394.5	392.5	389.8	391.8	391.8	397.1	398.4	399.1
22.5°	379.2	380.5	383.2	388.5	385.2	383.2	385.8	385.2	391.2	391.8	391.8
25°	371.9	373.3	376.6	379.9	377.9	375.9	377.9	377.9	382.5	383.2	383.2
27.5°	361.3	362.0	365.3	368.6	366.6	364.0	366.6	366.0	370.6	371.3	370.6
30°	344.1	345.4	346.7	351.4	349.4	347.4	350.0	348.7	353.4	353.4	352.7
32.5°	322.2	322.2	324.9	328.2	325.5	324.2	326.2	326.8	330.2	330.2	328.2
35°	295.7	297.0	299.0	301.0	299.0	297.7	299.7	299.0	303.0	301.6	299.7
37.5°	269.2	269.8	271.8	274.5	271.8	269.8	270.5	269.8	273.1	273.1	269.8
40°	244.6	246.0	247.3	249.9	247.3	246.0	246.6	244.6	248.6	247.3	245.3
42.5°	224.7	225.4	227.4	228.7	226.1	225.4	226.1	224.7	226.7	225.4	221.4
45°	209.5	209.5	210.2	212.1	209.5	208.8	208.8	207.5	209.5	206.8	202.9
47.5°	196.2	196.9	197.6	198.9	196.9	194.9	195.6	192.9	194.2	192.2	186.9
50°	183.0	184.3	185.0	186.3	184.3	183.0	183.6	181.0	181.0	177.7	173.0
52.5°	169.7	170.4	169.7	171.0	169.7	167.7	168.4	165.7	165.7	161.8	157.1
55°	147.8	148.5	149.2	150.5	149.2	147.2	148.5	146.5	146.5	143.8	138.5
57.5°	125.9	126.6	127.3	127.9	127.9	126.6	127.3	125.9	125.3	123.3	119.3
60°	112.0	112.0	112.0	112.7	112.0	111.4	111.4	110.0	110.0	107.4	103.4
62.5°	101.4	102.1	102.1	102.7	102.1	101.4	100.8	99.4	98.8	96.1	92.8
65°	91.5	91.5	90.8	92.1	91.5	90.8	90.8	89.5	88.2	85.5	82.2
67.5°	79.5	80.2	79.5	80.2	80.2	79.5	78.9	77.5	76.9	74.9	70.9
70°	66.9	66.9	66.9	67.6	66.9	66.9	67.6	65.6	65.0	62.3	59.0
72.5°	54.3	55.0	55.0	54.3	55.0	53.7	53.7	53.7	53.0	50.4	47.1
75°	41.8	42.4	42.4	43.1	42.4	41.8	41.8	41.1	40.4	38.4	35.8
77.5°	31.1	31.1	31.8	31.8	31.8	31.1	31.1	29.8	29.8	28.5	25.8
80°	22.5	22.5	21.9	22.5	22.5	21.9	21.9	21.2	21.2	19.9	17.9
82.5°	14.6	15.2	15.2	15.2	15.2	14.6	14.6	14.6	13.9	13.3	11.9
85°	9.3	9.3	9.3	9.3	9.9	9.3	9.9	9.3	9.3	8.0	7.3
87.5°	4.0	4.0	4.0	4.6	4.6	4.0	4.0	4.0	4.0	4.0	3.3
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: P880545

CATALOG NUMBER: LD4C10D010 EU4109040 4LBDWNH

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9
2.5°	430.3	430.9	428.9	431.6	429.6	430.3	430.9	430.3	427.6	427.6	434.9
5°	427.6	428.9	427.0	430.3	428.9	428.9	430.3	429.6	427.0	427.6	434.2
7.5°	425.0	427.0	425.6	428.9	427.0	427.0	428.3	428.3	425.6	426.3	432.3
10°	421.0	423.6	423.0	426.3	424.3	424.3	426.3	426.3	423.6	424.3	430.3
12.5°	417.7	420.3	419.7	423.0	421.7	422.3	423.0	424.3	421.0	422.3	427.6
15°	412.4	415.0	415.0	418.3	417.0	418.3	419.7	421.7	419.0	419.0	424.3
17.5°	406.4	409.7	409.7	412.4	412.4	413.0	415.7	417.7	415.0	415.7	420.3
20°	399.8	403.8	403.8	407.1	406.4	407.7	409.7	411.7	409.1	409.1	414.4
22.5°	393.1	396.5	397.1	399.1	399.1	399.8	401.8	403.1	399.8	399.8	405.1
25°	383.9	387.2	387.8	389.2	387.8	387.8	389.2	390.5	387.2	387.2	391.8
27.5°	371.3	374.6	374.6	373.9	372.6	373.3	372.6	373.3	369.9	369.3	373.9
30°	352.7	354.7	354.7	354.0	352.0	352.0	350.0	350.7	346.1	346.1	350.0
32.5°	327.5	329.5	328.2	326.8	324.2	322.9	321.5	320.9	316.2	316.2	320.9
35°	297.7	299.0	297.0	294.4	291.0	289.0	287.1	284.4	281.1	281.8	284.4
37.5°	267.2	267.2	264.5	259.2	256.6	253.2	249.9	249.9	244.6	244.0	246.0
40°	241.3	238.7	234.0	226.7	222.1	218.8	214.1	211.5	207.5	207.5	210.8
42.5°	218.1	212.8	206.8	196.9	192.2	188.3	182.3	179.7	175.0	174.3	176.3
45°	197.6	192.2	183.6	173.0	167.1	162.4	153.8	150.5	146.5	145.8	147.2
47.5°	181.0	175.0	164.4	150.5	144.5	138.5	129.9	125.3	122.0	120.0	122.0
50°	166.4	158.4	147.2	132.6	124.6	119.3	108.7	104.1	99.4	98.1	98.8
52.5°	150.5	142.5	130.6	115.3	108.0	100.1	90.1	83.5	79.5	77.5	79.5
55°	133.2	125.3	113.4	98.1	90.1	82.9	72.2	66.9	62.3	60.3	62.3
57.5°	114.7	107.4	96.8	81.5	74.2	67.6	57.7	52.4	47.7	46.4	47.7
60°	98.8	92.8	82.2	67.6	61.6	54.3	45.7	40.4	36.4	35.8	36.4
62.5°	88.2	81.5	71.6	57.7	51.7	45.7	37.8	32.5	29.2	28.5	29.2
65°	77.5	70.3	61.0	49.0	43.1	38.4	30.5	25.8	22.5	21.9	22.5
67.5°	65.6	59.0	51.0	40.4	35.8	31.1	24.5	19.9	17.2	16.6	17.2
70°	54.3	48.4	40.4	32.5	27.8	24.5	18.6	15.2	12.6	11.9	12.6
72.5°	43.1	37.8	31.1	24.5	21.9	18.6	14.6	11.3	9.3	8.6	9.3
75°	33.1	29.2	23.9	17.9	15.9	13.9	9.9	8.0	6.6	6.0	6.6
77.5°	23.2	20.5	16.6	13.3	11.3	9.9	7.3	5.3	4.6	4.0	4.6
80°	15.9	13.9	11.3	8.6	7.3	6.0	4.6	3.3	2.7	2.7	2.7
82.5°	10.6	8.6	6.6	5.3	4.6	4.0	2.7	2.0	2.0	1.3	1.3
85°	6.0	5.3	4.0	3.3	2.7	2.0	1.3	1.3	0.7	0.7	0.7
87.5°	2.7	2.0	1.3	1.3	0.7	0.7	0.7	0.7	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: P880545

CATALOG NUMBER: LD4C10D010 EU4109040 4LBDWNH

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9
2.5°	432.9	430.9	433.6	430.9	429.6	430.9	429.6	433.6	430.3	427.6	430.3
5°	432.3	429.6	432.3	430.3	428.3	428.9	427.6	431.6	427.6	425.6	427.0
7.5°	430.9	428.9	430.3	428.3	426.3	427.0	425.6	428.9	425.0	423.0	424.3
10°	428.9	427.0	427.6	426.3	424.3	424.3	423.0	425.6	421.0	418.3	419.7
12.5°	426.3	423.6	425.0	423.0	420.3	420.3	419.0	421.0	416.3	413.7	414.4
15°	423.0	420.3	420.3	418.3	415.7	415.7	413.0	415.0	409.7	407.1	407.1
17.5°	419.0	415.7	415.7	413.7	410.4	409.7	407.7	409.7	403.8	401.1	401.1
20°	413.0	410.4	409.7	408.4	405.1	404.4	401.8	402.4	397.8	395.8	395.1
22.5°	405.1	402.4	403.1	401.1	398.4	397.8	395.1	397.1	392.5	390.5	391.2
25°	391.2	389.8	391.2	390.5	388.5	388.5	387.2	388.5	384.5	383.2	383.9
27.5°	375.2	374.6	375.2	375.2	373.9	373.9	373.9	375.9	371.9	371.3	371.3
30°	352.0	352.0	352.7	353.4	353.4	354.7	354.0	356.7	354.0	352.7	354.0
32.5°	321.5	324.2	326.2	326.2	326.2	327.5	328.8	330.8	328.2	328.8	328.8
35°	287.1	289.0	290.4	293.7	291.7	296.3	297.7	300.3	299.7	301.0	300.3
37.5°	248.6	251.3	253.9	258.6	257.9	263.2	265.8	271.1	269.8	272.5	273.8
40°	212.8	216.8	220.8	224.1	226.7	232.0	237.3	244.0	246.0	247.9	248.6
42.5°	178.3	182.3	188.9	193.6	197.6	206.2	213.5	221.4	223.4	227.4	228.7
45°	150.5	153.8	161.8	167.7	171.0	183.6	192.2	202.2	205.5	210.2	212.1
47.5°	124.6	130.6	138.5	145.8	150.5	163.7	175.0	185.6	190.3	195.6	198.2
50°	102.1	108.7	119.3	125.9	132.6	147.2	159.8	171.0	175.7	181.6	184.3
52.5°	83.5	90.8	100.8	108.0	115.3	130.6	143.8	154.5	160.4	164.4	168.4
55°	65.6	73.6	83.5	91.5	97.4	114.0	125.3	135.9	139.9	143.2	145.2
57.5°	51.0	57.0	66.9	73.6	80.9	95.4	106.7	114.7	118.0	122.0	123.3
60°	39.8	45.7	55.0	61.6	68.3	82.2	93.5	101.4	104.7	108.0	110.0
62.5°	31.8	37.8	46.4	52.4	58.3	70.9	80.9	88.8	92.8	96.1	98.1
65°	25.2	30.5	37.8	43.7	48.4	59.6	69.6	76.9	80.9	84.2	86.2
67.5°	19.9	24.5	31.1	35.1	39.8	49.0	57.7	64.3	67.6	71.6	73.6
70°	15.2	18.6	24.5	27.8	31.1	39.1	45.7	52.4	55.7	58.3	59.6
72.5°	11.3	13.9	18.6	21.2	23.2	29.8	35.1	39.8	42.4	45.1	46.4
75°	8.0	9.9	13.3	15.2	16.6	21.2	25.8	29.2	31.1	33.1	35.1
77.5°	5.3	6.6	8.6	9.9	11.3	14.6	17.2	19.9	21.9	23.9	24.5
80°	3.3	4.6	6.0	6.6	7.3	9.3	11.9	13.3	14.6	15.9	16.6
82.5°	2.0	2.7	3.3	4.0	4.6	6.0	7.3	8.6	9.3	10.6	11.3
85°	0.7	1.3	1.3	2.0	2.0	3.3	4.0	4.6	5.3	6.0	6.6
87.5°	0.0	0.0	0.7	0.7	0.7	0.7	1.3	1.3	1.3	1.3	1.3
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: P880545

CATALOG NUMBER: LD4C10D010 EU4109040 4LBDWNH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	430.9	430.9	430.9	430.9	430.9	430.9	430.9	430.9
2.5°	432.9	430.9	429.6	428.9	433.6	427.6	430.3	430.9
5°	430.3	428.3	427.0	426.3	430.3	425.0	427.0	428.3
7.5°	426.3	425.0	423.0	422.3	426.3	420.3	423.0	423.6
10°	421.7	419.7	418.3	417.7	421.0	415.0	417.7	417.7
12.5°	415.7	414.4	411.7	411.7	414.4	409.1	411.0	411.0
15°	407.7	406.4	403.8	403.8	406.4	401.1	403.1	403.1
17.5°	401.1	399.8	397.8	397.1	399.8	394.5	396.5	395.8
20°	395.8	394.5	391.8	391.8	393.8	388.5	390.5	390.5
22.5°	391.2	390.5	387.8	387.8	390.5	385.2	386.5	385.2
25°	383.9	383.2	380.5	381.2	382.5	377.2	379.2	377.9
27.5°	371.9	371.9	369.3	368.6	370.6	366.0	367.3	366.6
30°	353.4	354.0	350.7	350.7	351.4	347.4	349.4	348.7
32.5°	328.2	328.8	326.2	325.5	327.5	324.2	325.5	325.5
35°	300.3	301.0	299.0	299.0	301.0	299.0	299.0	298.3
37.5°	272.5	273.8	272.5	273.1	274.5	272.5	273.8	273.1
40°	249.9	251.3	249.3	250.6	251.9	249.9	251.9	250.6
42.5°	229.4	231.4	230.0	231.4	232.7	231.4	232.7	230.7
45°	214.1	215.5	214.8	215.5	216.8	216.1	216.8	216.1
47.5°	199.5	202.2	200.9	202.2	204.2	202.9	204.2	202.2
50°	186.3	188.3	187.6	188.9	189.6	188.9	190.3	188.3
52.5°	169.0	171.0	170.4	170.4	171.7	170.4	171.7	170.4
55°	146.5	147.2	147.2	147.8	147.2	146.5	147.2	145.8
57.5°	124.6	125.9	124.0	125.9	125.3	124.6	124.6	123.3
60°	110.7	112.7	111.4	112.7	112.0	112.0	112.0	111.4
62.5°	99.4	100.8	99.4	100.1	100.1	100.1	99.4	98.8
65°	86.8	88.8	87.5	88.2	87.5	86.8	87.5	86.8
67.5°	74.2	74.9	74.9	74.2	74.2	74.2	74.2	72.9
70°	60.3	61.0	60.3	61.6	61.0	60.3	61.0	59.6
72.5°	47.1	47.7	47.1	47.7	47.1	47.1	47.1	47.1
75°	35.1	35.8	35.8	35.8	35.8	35.8	34.5	35.8
77.5°	25.2	25.2	25.2	25.8	25.2	25.2	25.2	25.2
80°	17.2	17.2	17.2	17.9	17.2	17.9	17.2	17.9
82.5°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
85°	6.0	6.6	6.6	6.0	6.0	6.0	6.0	6.0
87.5°	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)