

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: P879378

Luminaire Tested: **LD4C20D010 EU4209027 4LBDWWH**

Issue Date: 10/1/2024

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: P879378  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/1/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C20D010 EU4209027 4LBLDWWH  
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

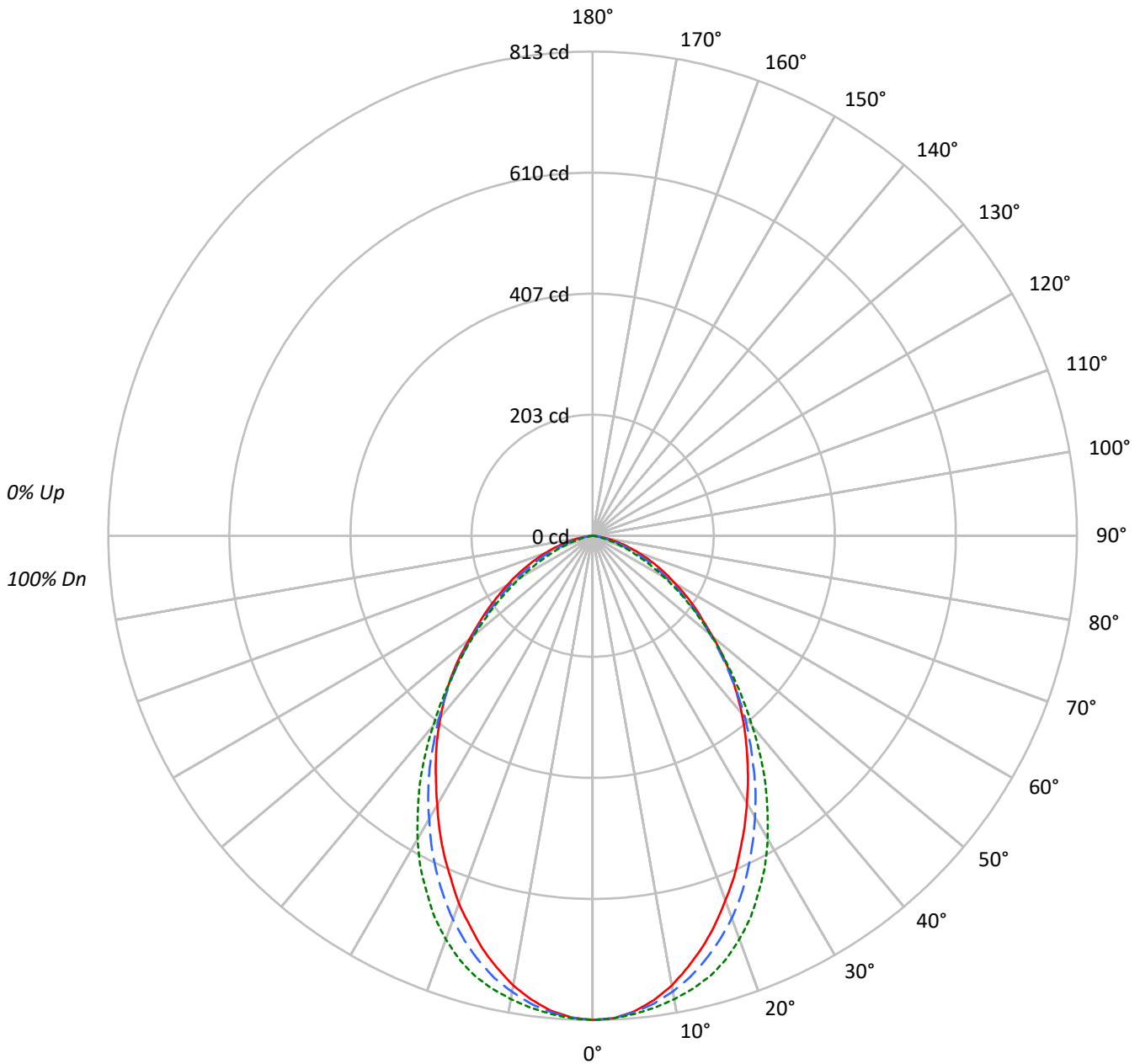
Lumens per Lamp: N/A  
Luminaire Lumens: 1454.0 lumens  
Efficiency: N/A  
Efficacy: 66.7 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.8  
Input Voltage (V): NR  
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

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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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	99868	99868	99868
5°	98856	99398	98745
10°	95632	98539	95670
15°	90863	97273	91168
20°	85163	94223	85869
25°	79313	89398	80045
30°	73483	83385	74022
35°	67789	75798	68809
40°	62530	66796	63668
45°	56640	57891	58342
50°	50209	49578	51470
55°	44765	41745	45772
60°	39166	33883	40640
65°	34273	26221	35494
70°	28844	19181	30352
75°	22547	12484	23828
80°	14786	6580	16272
85°	5075	2960	6766



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.9	5.2
10°-20°	207.3	14.3
20°-30°	285.2	19.6
30°-40°	297.5	20.5
40°-50°	254.5	17.5
50°-60°	182.1	12.5
60°-70°	105.6	7.3
70°-80°	40.7	2.8
80°-90°	5.2	0.4
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°	568.4	39.1
0°-40°	865.9	59.6
0°-60°	1302.5	89.6
0°-90°	1454.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1454.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	813	813	813	813	813	
5°	802	803	806	803	801	75
15°	714	736	765	739	717	200
25°	585	617	660	621	590	269
35°	452	470	505	477	459	283
45°	326	323	333	331	336	251
55°	209	198	195	204	214	187
65°	118	104	90	108	122	118
75°	48	36	26	38	50	51
85°	4	3	2	3	5	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9
2.5°	810.8	810.2	810.5	810.5	810.5	810.2	810.8	810.8	810.5	810.5	810.5
5°	801.6	801.0	801.3	801.6	801.6	801.6	801.9	802.2	802.5	802.8	803.1
7.5°	786.6	785.7	786.6	787.8	787.8	788.1	788.4	788.7	789.6	791.1	792.0
10°	766.6	766.6	766.9	767.8	769.3	769.0	769.9	771.4	773.2	775.3	776.8
12.5°	741.3	741.9	742.8	743.6	745.1	746.0	747.5	749.3	752.3	755.3	758.6
15°	714.4	714.7	715.0	717.1	718.6	720.7	721.9	725.4	728.1	732.3	735.9
17.5°	684.2	683.9	684.8	686.6	690.2	691.1	692.6	696.5	700.4	706.0	710.8
20°	651.4	653.2	654.4	656.8	658.9	661.3	662.4	667.2	671.7	677.1	683.3
22.5°	620.4	618.9	620.9	623.6	625.4	627.2	629.3	634.4	639.2	645.7	652.0
25°	585.1	586.0	587.5	589.6	592.0	594.4	596.8	602.1	604.8	611.7	617.4
27.5°	551.7	553.2	553.8	556.5	558.6	560.3	561.5	567.8	570.2	576.2	581.8
30°	518.0	519.4	519.4	522.4	523.9	525.7	528.7	532.9	536.5	540.6	544.8
32.5°	485.4	485.4	486.6	489.3	490.8	492.9	493.8	496.8	500.3	504.5	509.0
35°	452.0	452.9	454.1	454.1	456.8	457.9	459.1	462.1	464.5	466.3	469.9
37.5°	421.2	421.2	420.3	421.8	423.6	423.3	425.1	426.6	428.1	430.2	433.2
40°	389.9	389.9	388.7	389.6	390.8	390.5	389.9	391.4	392.6	394.1	397.0
42.5°	357.9	357.3	357.0	357.0	357.6	357.0	357.6	357.9	357.9	357.9	359.7
45°	326.0	327.5	325.7	325.1	324.2	323.3	323.0	323.3	324.5	323.0	323.3
47.5°	294.7	295.2	294.1	293.2	292.3	291.7	292.3	290.5	291.1	291.4	290.2
50°	262.7	261.5	261.5	260.6	260.9	260.6	260.0	259.4	259.4	257.9	257.0
52.5°	233.2	233.8	234.3	232.3	232.6	231.1	231.4	229.9	229.9	228.1	228.7
55°	209.0	208.1	208.1	207.2	206.9	205.4	205.1	204.2	202.1	200.9	198.5
57.5°	183.9	183.6	182.4	182.7	180.9	180.6	180.0	178.5	177.0	175.5	172.9
60°	159.4	159.7	159.7	159.1	158.2	156.7	157.0	154.9	152.8	150.2	147.8
62.5°	139.1	138.2	137.9	137.3	135.5	135.5	134.0	132.5	130.5	127.8	125.7
65°	117.9	118.2	117.3	116.4	114.6	114.3	113.1	111.9	109.9	107.2	104.2
67.5°	98.8	98.2	97.9	97.0	95.2	94.9	94.0	91.4	89.6	86.9	84.5
70°	80.3	79.7	80.0	78.5	76.7	75.8	75.5	73.4	70.8	68.7	66.3
72.5°	63.0	63.0	62.7	61.2	60.3	59.7	58.5	56.1	54.6	52.2	50.5
75°	47.5	47.2	46.6	45.7	44.5	43.9	43.3	41.8	39.7	37.0	35.5
77.5°	32.8	33.1	32.5	32.2	30.7	29.9	29.6	28.7	26.9	25.1	23.6
80°	20.9	20.6	20.3	19.7	19.4	19.1	18.2	17.6	15.8	14.9	14.0
82.5°	11.3	10.7	10.7	10.4	9.9	9.6	9.3	8.7	8.4	7.8	7.2
85°	3.6	3.9	3.6	3.6	3.6	3.3	3.3	3.3	3.0	3.0	2.7
87.5°	0.3	0.6	0.3	0.3	0.6	0.3	0.3	0.6	0.3	0.3	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9
2.5°	810.5	810.8	810.8	811.1	811.1	811.1	811.1	811.1	811.1	811.1	811.1
5°	803.9	803.9	804.5	805.1	805.1	805.1	805.4	806.0	806.0	806.0	805.7
7.5°	793.2	794.4	795.6	796.8	797.1	797.4	798.0	799.2	799.2	799.2	799.2
10°	779.2	781.9	783.4	785.1	786.0	786.6	788.4	788.7	789.6	789.9	789.6
12.5°	761.3	764.8	768.1	771.1	772.3	773.5	775.3	777.1	778.0	778.9	778.6
15°	741.3	745.1	750.2	753.5	755.9	757.7	760.4	762.8	764.2	764.8	764.8
17.5°	717.1	721.9	727.2	732.6	734.1	737.1	740.1	743.3	745.1	745.4	745.1
20°	690.2	695.6	700.1	705.4	708.7	710.2	714.4	718.6	720.4	720.7	720.4
22.5°	658.3	663.3	669.3	675.0	677.7	680.4	684.8	689.0	691.4	693.2	691.4
25°	622.7	629.9	635.6	640.4	644.2	646.9	652.6	655.9	659.8	659.5	659.8
27.5°	587.8	593.8	600.1	605.7	608.1	611.1	615.6	620.9	624.2	626.3	626.0
30°	552.0	556.8	562.1	567.2	571.1	573.5	580.0	582.4	586.6	587.8	586.9
32.5°	514.1	517.4	522.7	529.6	531.1	533.5	537.7	543.6	545.1	545.7	546.0
35°	473.8	480.0	484.5	488.7	489.9	492.0	496.8	501.2	502.7	505.4	504.2
37.5°	436.5	440.0	442.1	446.3	449.9	451.7	454.1	457.1	460.0	461.2	460.9
40°	399.1	400.9	402.7	407.2	407.5	407.5	411.1	415.3	415.3	416.5	416.5
42.5°	360.9	361.2	363.6	366.0	366.6	367.2	370.8	371.4	373.2	374.1	375.3
45°	323.9	325.7	327.2	327.5	329.0	329.3	330.2	331.1	333.8	333.2	333.8
47.5°	290.2	291.1	292.0	292.0	292.9	292.6	294.1	293.2	295.0	295.5	296.4
50°	257.0	258.5	257.6	258.2	257.9	258.8	258.2	258.2	258.2	259.4	260.3
52.5°	226.6	226.9	226.0	226.3	226.3	225.7	226.3	226.0	225.7	225.7	226.0
55°	198.5	197.3	196.7	195.5	194.0	195.8	194.9	194.3	195.5	194.9	195.5
57.5°	171.4	169.9	168.7	168.1	166.0	167.2	166.0	165.4	165.4	165.4	166.9
60°	145.7	144.2	142.7	140.9	140.6	140.0	139.4	137.9	138.2	137.9	138.5
62.5°	123.3	120.3	118.2	116.7	116.4	115.5	114.6	113.1	113.4	113.4	113.7
65°	102.7	99.4	96.4	94.3	94.3	92.8	91.4	91.4	89.6	90.2	90.5
67.5°	82.1	79.4	76.4	74.9	74.0	72.8	71.9	71.3	70.5	70.5	71.1
70°	63.6	60.9	59.4	57.0	56.7	55.8	54.6	53.7	53.4	53.4	53.1
72.5°	48.1	45.7	43.9	42.4	41.5	40.6	39.4	39.1	38.5	38.5	39.1
75°	33.4	31.9	30.5	29.0	28.4	28.1	27.2	26.6	26.6	26.3	26.6
77.5°	22.4	20.9	19.4	18.8	18.2	17.6	17.3	17.0	16.1	16.1	16.1
80°	12.8	12.2	11.6	10.7	10.7	10.4	9.9	9.6	9.3	9.3	9.3
82.5°	6.6	6.3	5.7	5.4	5.4	5.4	5.1	5.1	4.8	4.8	4.8
85°	2.7	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.1	2.4
87.5°	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9
2.5°	811.1	810.8	810.8	810.8	810.8	810.8	810.5	810.5	810.2	810.2	810.2
5°	806.0	805.7	805.4	805.1	804.8	804.5	804.2	803.9	803.1	802.8	802.2
7.5°	798.9	798.3	797.4	797.1	796.5	795.6	794.4	793.8	792.6	791.1	790.5
10°	789.3	788.1	787.2	785.7	785.4	784.2	781.3	779.8	777.7	775.9	773.8
12.5°	777.7	776.5	774.4	772.3	771.1	768.4	765.7	763.3	760.7	756.8	753.8
15°	763.3	761.6	757.4	756.8	755.0	750.8	747.2	742.8	738.6	734.4	730.8
17.5°	744.2	740.4	738.3	735.6	733.5	728.1	724.2	719.2	713.5	708.7	703.6
20°	719.2	715.0	711.4	709.9	707.2	702.4	697.7	691.4	685.7	679.8	675.3
22.5°	689.3	686.6	681.3	679.5	676.2	671.4	665.7	659.8	654.4	647.8	641.8
25°	657.4	653.5	649.3	645.7	643.3	638.9	631.7	627.2	621.2	614.1	609.6
27.5°	623.3	618.9	612.9	610.5	608.4	602.4	596.5	590.8	586.0	579.8	575.9
30°	583.9	580.6	576.8	573.8	570.8	566.0	560.6	554.1	549.0	546.0	540.6
32.5°	543.9	541.2	536.2	534.7	531.4	527.5	523.6	518.9	513.5	509.0	504.8
35°	501.2	498.6	495.0	492.3	491.1	488.4	484.2	480.0	477.4	472.3	470.2
37.5°	458.5	457.7	454.1	451.4	450.5	447.2	445.1	442.1	438.2	437.1	434.7
40°	414.7	414.1	412.0	411.7	409.9	409.0	406.0	403.6	401.8	400.9	399.4
42.5°	374.4	373.8	372.0	372.3	370.5	369.9	369.6	367.5	366.0	364.2	364.5
45°	334.7	334.1	332.9	332.3	333.2	332.9	332.3	331.4	331.4	331.7	330.8
47.5°	296.4	297.0	295.8	296.4	296.4	295.5	295.5	296.7	297.0	297.6	298.2
50°	260.3	262.1	261.5	262.4	262.7	263.0	262.1	263.6	263.3	266.0	265.4
52.5°	227.5	227.8	229.0	229.3	229.6	229.9	231.4	232.6	232.9	234.0	236.1
55°	195.8	196.1	198.5	198.5	200.0	200.3	202.4	203.0	203.9	207.2	207.8
57.5°	166.0	167.8	169.0	169.6	170.5	172.0	173.1	175.8	177.3	179.4	181.5
60°	139.1	141.2	142.7	143.3	144.5	146.3	147.8	150.8	153.4	155.8	157.3
62.5°	114.3	116.1	117.3	119.4	119.4	120.9	124.5	126.3	129.3	131.4	134.0
65°	92.2	93.4	95.5	95.5	96.7	99.1	102.1	104.8	107.8	110.8	113.4
67.5°	72.2	73.1	74.3	75.5	76.1	79.1	81.5	85.4	88.1	90.2	93.4
70°	54.6	55.2	56.7	57.9	58.8	60.9	63.6	66.3	69.0	71.3	74.6
72.5°	39.1	40.3	41.8	42.7	43.3	44.8	47.5	50.2	52.5	54.9	56.7
75°	26.9	27.8	28.4	29.3	30.2	31.3	33.1	34.9	37.6	40.0	42.1
77.5°	16.7	17.6	18.5	18.8	19.1	20.3	21.5	23.3	25.1	26.9	28.4
80°	9.9	10.2	10.4	10.7	11.3	12.2	12.8	14.0	15.2	16.4	17.9
82.5°	5.1	5.4	5.7	5.7	5.7	6.0	6.9	7.5	7.8	8.4	9.3
85°	2.1	2.1	2.1	2.4	2.4	2.7	2.7	3.0	3.0	3.3	3.6
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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: P879378

CATALOG NUMBER: LD4C20D010 EU4209027 4LBLDWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	812.9	812.9	812.9	812.9	812.9	812.9	812.9	812.9
2.5°	809.9	809.9	809.9	809.6	809.9	809.9	809.9	809.6
5°	802.2	801.6	801.6	801.3	801.0	801.0	801.3	800.7
7.5°	789.3	788.4	787.8	787.8	787.5	787.2	787.2	785.7
10°	772.6	770.8	770.8	770.2	767.8	767.5	766.9	766.9
12.5°	751.7	749.6	748.4	746.9	745.4	744.2	743.9	742.8
15°	726.9	724.2	722.2	721.6	719.2	717.4	717.4	716.8
17.5°	700.1	695.9	694.4	692.9	689.6	689.3	688.7	686.0
20°	669.6	665.7	663.6	662.1	660.1	657.1	656.5	656.8
22.5°	637.7	632.3	630.5	629.0	626.9	624.2	624.2	622.1
25°	604.5	599.8	598.0	596.2	592.9	591.7	590.2	590.5
27.5°	570.8	566.3	564.8	561.5	559.5	558.0	556.5	556.5
30°	535.6	533.2	530.8	530.5	526.3	524.5	523.0	521.8
32.5°	501.5	498.6	497.4	496.2	494.1	491.7	491.4	489.3
35°	468.1	465.1	463.6	462.4	460.0	459.1	458.2	458.8
37.5°	432.9	432.3	431.4	429.9	428.4	428.1	426.9	428.4
40°	398.2	397.9	396.8	397.0	397.0	396.5	397.0	397.0
42.5°	364.8	364.8	363.6	364.2	364.5	365.1	366.0	366.6
45°	332.3	332.0	332.3	332.9	332.3	333.8	335.0	335.8
47.5°	298.8	299.1	300.3	300.6	301.2	303.3	303.3	303.3
50°	266.9	268.4	267.8	269.6	269.3	270.5	269.3	269.3
52.5°	236.4	237.9	238.2	238.5	240.3	240.6	240.6	240.3
55°	209.3	211.4	210.5	212.0	212.9	213.5	214.3	213.7
57.5°	184.2	185.1	186.0	186.3	187.5	188.1	188.7	188.1
60°	159.4	161.2	162.7	163.0	163.6	164.2	164.5	165.4
62.5°	136.1	139.1	139.7	140.0	141.5	142.4	143.0	143.6
65°	115.5	117.6	119.1	120.0	121.2	121.2	122.1	122.1
67.5°	95.5	97.6	98.5	99.1	100.9	101.2	102.7	102.7
70°	77.3	78.8	79.4	80.3	82.1	83.3	83.9	84.5
72.5°	59.7	61.5	62.4	63.6	64.8	65.7	66.0	66.9
75°	43.6	46.3	46.6	47.8	48.7	49.9	50.5	50.2
77.5°	30.5	31.3	32.5	33.1	34.0	34.9	35.8	35.8
80°	18.8	20.0	20.3	20.6	21.8	22.4	23.0	23.0
82.5°	9.9	10.4	11.0	11.3	11.9	11.9	12.2	12.5
85°	3.9	4.2	4.2	4.2	4.5	4.8	4.8	4.8
87.5°	0.6	0.9	0.6	0.6	0.9	0.9	0.9	0.9
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)