

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: P879386

Luminaire Tested: **LD4C20D010 EU4209050 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: P879386  
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 EU4209050 4LBLDWWH  
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

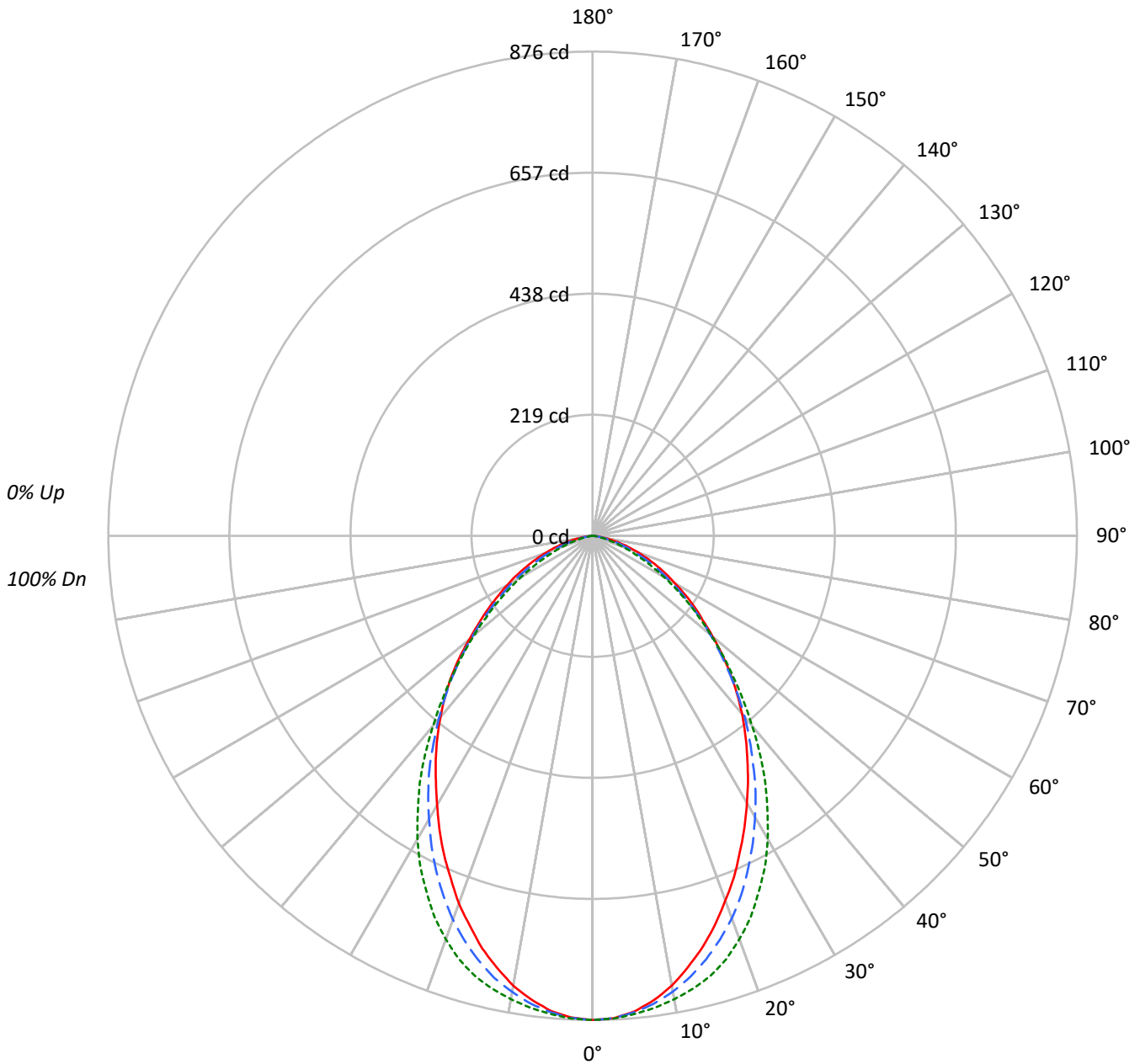
Lumens per Lamp: N/A  
Luminaire Lumens: 1567.0 lumens  
Efficiency: N/A  
Efficacy: 71.9 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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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CATALOG NUMBER: LD4C20D010 EU4209050 4LBLDWWH

### Luminous Intensity Polar Plot





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

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

	0°	90°	180°
0°	107632	107632	107632
5°	106539	107130	106415
10°	103067	106199	103105
15°	97921	104840	98252
20°	91778	101544	92536
25°	85480	96338	86266
30°	79186	89868	79781
35°	73054	81692	74163
40°	67389	71976	68624
45°	61035	62390	62894
50°	54108	53439	55465
55°	48235	45001	49349
60°	42212	36512	43785
65°	36947	28256	38256
70°	31071	20690	32723
75°	24303	13433	25680
80°	15918	7075	17546
85°	5497	3242	7189



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.8	5.2
10°-20°	223.5	14.3
20°-30°	307.3	19.6
30°-40°	320.6	20.5
40°-50°	274.3	17.5
50°-60°	196.2	12.5
60°-70°	113.8	7.3
70°-80°	43.9	2.8
80°-90°	5.6	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°	612.6	39.1
0°-40°	933.2	59.6
0°-60°	1403.7	89.6
0°-90°	1567.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1567.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	876	876	876	876	876	
5°	864	866	869	866	863	81
15°	770	793	824	796	772	216
25°	631	665	711	670	636	290
35°	487	506	545	514	494	305
45°	351	348	359	357	362	271
55°	225	214	210	220	230	201
65°	127	112	97	116	132	127
75°	51	38	28	40	54	55
85°	4	3	2	3	5	8
90°	0	0	0	0	0	



TEST NUMBER: P879386

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1
2.5°	873.8	873.2	873.5	873.5	873.5	873.2	873.8	873.8	873.5	873.5	873.5
5°	863.9	863.2	863.5	863.9	863.9	863.9	864.2	864.5	864.8	865.1	865.5
7.5°	847.8	846.8	847.8	849.1	849.1	849.4	849.7	850.0	851.0	852.6	853.6
10°	826.2	826.2	826.5	827.5	829.1	828.8	829.8	831.4	833.3	835.5	837.2
12.5°	798.9	799.5	800.5	801.4	803.0	804.0	805.6	807.6	810.8	814.0	817.5
15°	769.9	770.2	770.6	772.8	774.4	776.7	778.0	781.8	784.7	789.2	793.1
17.5°	737.4	737.1	738.1	740.0	743.8	744.8	746.4	750.6	754.8	760.9	766.0
20°	702.0	704.0	705.2	707.8	710.1	712.6	713.9	719.1	723.9	729.7	736.4
22.5°	668.6	667.0	669.2	672.1	674.0	676.0	678.2	683.7	688.8	695.9	702.7
25°	630.6	631.6	633.2	635.4	638.0	640.6	643.1	648.9	651.8	659.2	665.3
27.5°	594.6	596.2	596.8	599.7	602.0	603.9	605.2	611.9	614.5	620.9	627.1
30°	558.2	559.8	559.8	563.0	564.6	566.6	569.8	574.3	578.2	582.7	587.2
32.5°	523.1	523.1	524.4	527.3	528.9	531.2	532.1	535.4	539.2	543.7	548.6
35°	487.1	488.1	489.4	489.4	492.3	493.5	494.8	498.0	500.6	502.5	506.4
37.5°	454.0	454.0	453.0	454.6	456.5	456.2	458.1	459.8	461.4	463.6	466.8
40°	420.2	420.2	418.9	419.9	421.1	420.8	420.2	421.8	423.1	424.7	427.9
42.5°	385.8	385.1	384.8	384.8	385.4	384.8	385.4	385.8	385.8	385.8	387.7
45°	351.3	352.9	351.0	350.4	349.4	348.4	348.1	348.4	349.7	348.1	348.4
47.5°	317.6	318.2	316.9	315.9	315.0	314.3	315.0	313.0	313.7	314.0	312.7
50°	283.1	281.8	281.8	280.9	281.2	280.9	280.2	279.6	279.6	278.0	277.0
52.5°	251.3	251.9	252.6	250.3	250.6	249.0	249.3	247.7	247.7	245.8	246.4
55°	225.2	224.2	224.2	223.3	223.0	221.4	221.0	220.1	217.8	216.5	214.0
57.5°	198.2	197.9	196.6	196.9	195.0	194.6	194.0	192.4	190.8	189.2	186.3
60°	171.8	172.1	172.1	171.5	170.5	168.9	169.2	167.0	164.7	161.8	159.3
62.5°	149.9	149.0	148.6	148.0	146.1	146.1	144.5	142.8	140.6	137.7	135.5
65°	127.1	127.4	126.4	125.5	123.5	123.2	121.9	120.7	118.4	115.5	112.3
67.5°	106.5	105.9	105.5	104.6	102.6	102.3	101.3	98.5	96.5	93.6	91.1
70°	86.5	85.9	86.2	84.6	82.7	81.7	81.4	79.1	76.3	74.0	71.4
72.5°	67.9	67.9	67.6	66.0	65.0	64.3	63.1	60.5	58.9	56.3	54.4
75°	51.2	50.8	50.2	49.2	47.9	47.3	46.7	45.0	42.8	39.9	38.3
77.5°	35.4	35.7	35.1	34.7	33.1	32.2	31.9	30.9	29.0	27.0	25.4
80°	22.5	22.2	21.9	21.2	20.9	20.6	19.6	19.0	17.1	16.1	15.1
82.5°	12.2	11.6	11.6	11.3	10.6	10.3	10.0	9.3	9.0	8.4	7.7
85°	3.9	4.2	3.9	3.9	3.9	3.5	3.5	3.5	3.2	3.2	2.9
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°	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1
2.5°	873.5	873.8	873.8	874.2	874.2	874.2	874.2	874.2	874.2	874.2	874.2
5°	866.4	866.4	867.1	867.7	867.7	867.7	868.0	868.7	868.7	868.7	868.4
7.5°	854.8	856.1	857.4	858.7	859.0	859.4	860.0	861.3	861.3	861.3	861.3
10°	839.7	842.6	844.2	846.2	847.1	847.8	849.7	850.0	851.0	851.3	851.0
12.5°	820.4	824.3	827.8	831.0	832.3	833.6	835.5	837.5	838.4	839.4	839.1
15°	798.9	803.0	808.5	812.1	814.6	816.6	819.5	822.0	823.6	824.3	824.3
17.5°	772.8	778.0	783.7	789.5	791.1	794.4	797.6	801.1	803.0	803.4	803.0
20°	743.8	749.6	754.5	760.3	763.8	765.4	769.9	774.4	776.3	776.7	776.3
22.5°	709.4	714.9	721.3	727.4	730.3	733.2	738.1	742.6	745.1	747.1	745.1
25°	671.1	678.9	685.0	690.1	694.3	697.2	703.3	706.8	711.0	710.7	711.0
27.5°	633.5	639.9	646.7	652.8	655.4	658.6	663.4	669.2	672.7	675.0	674.7
30°	594.9	600.0	605.8	611.3	615.5	618.1	625.1	627.7	632.2	633.5	632.5
32.5°	554.0	557.6	563.4	570.8	572.4	574.9	579.4	585.9	587.5	588.1	588.5
35°	510.6	517.3	522.2	526.7	528.0	530.2	535.4	540.2	541.8	544.7	543.4
37.5°	470.4	474.2	476.5	481.0	484.9	486.8	489.4	492.6	495.8	497.1	496.8
40°	430.2	432.1	434.0	438.8	439.2	439.2	443.0	447.5	447.5	448.8	448.8
42.5°	389.0	389.3	391.9	394.4	395.1	395.7	399.6	400.2	402.2	403.1	404.4
45°	349.1	351.0	352.6	352.9	354.6	354.9	355.8	356.8	359.7	359.1	359.7
47.5°	312.7	313.7	314.7	314.7	315.6	315.3	316.9	315.9	317.9	318.5	319.5
50°	277.0	278.6	277.7	278.3	278.0	278.9	278.3	278.3	278.3	279.6	280.6
52.5°	244.2	244.5	243.6	243.9	243.9	243.2	243.9	243.6	243.2	243.2	243.6
55°	214.0	212.7	212.0	210.7	209.1	211.1	210.1	209.4	210.7	210.1	210.7
57.5°	184.7	183.1	181.8	181.1	178.9	180.2	178.9	178.2	178.2	178.2	179.8
60°	157.0	155.4	153.8	151.9	151.5	150.9	150.2	148.6	149.0	148.6	149.3
62.5°	132.9	129.7	127.4	125.8	125.5	124.5	123.5	121.9	122.3	122.3	122.6
65°	110.7	107.1	103.9	101.7	101.7	100.1	98.5	98.5	96.5	97.2	97.5
67.5°	88.5	85.6	82.4	80.8	79.8	78.5	77.5	76.9	75.9	75.9	76.6
70°	68.5	65.6	64.0	61.5	61.1	60.2	58.9	57.9	57.6	57.6	57.3
72.5°	51.8	49.2	47.3	45.7	44.7	43.8	42.5	42.1	41.5	41.5	42.1
75°	36.0	34.4	32.8	31.2	30.6	30.2	29.3	28.6	28.6	28.3	28.6
77.5°	24.1	22.5	20.9	20.3	19.6	19.0	18.7	18.3	17.4	17.4	17.4
80°	13.8	13.2	12.5	11.6	11.6	11.3	10.6	10.3	10.0	10.0	10.0
82.5°	7.1	6.8	6.1	5.8	5.8	5.8	5.5	5.5	5.1	5.1	5.1
85°	2.9	2.6	2.3	2.3	2.3	2.3	2.3	2.3	2.6	2.3	2.6
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°	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1
2.5°	874.2	873.8	873.8	873.8	873.8	873.8	873.5	873.5	873.2	873.2	873.2
5°	868.7	868.4	868.0	867.7	867.4	867.1	866.8	866.4	865.5	865.1	864.5
7.5°	861.0	860.3	859.4	859.0	858.4	857.4	856.1	855.5	854.2	852.6	852.0
10°	850.7	849.4	848.4	846.8	846.5	845.2	842.0	840.4	838.1	836.2	833.9
12.5°	838.1	836.8	834.6	832.3	831.0	828.1	825.2	822.7	819.8	815.6	812.4
15°	822.7	820.7	816.2	815.6	813.7	809.2	805.3	800.5	796.0	791.5	787.6
17.5°	802.1	797.9	795.6	792.8	790.5	784.7	780.5	775.1	768.9	763.8	758.3
20°	775.1	770.6	766.7	765.1	762.2	757.0	751.9	745.1	739.0	732.6	727.8
22.5°	742.9	740.0	734.2	732.3	728.7	723.6	717.5	711.0	705.2	698.2	691.7
25°	708.5	704.3	699.8	695.9	693.3	688.5	680.8	676.0	669.5	661.8	657.0
27.5°	671.8	667.0	660.5	657.9	655.7	649.3	642.8	636.7	631.6	624.8	620.6
30°	629.3	625.8	621.6	618.4	615.2	610.0	604.2	597.1	591.7	588.5	582.7
32.5°	586.2	583.3	577.8	576.2	572.7	568.5	564.3	559.2	553.4	548.6	544.1
35°	540.2	537.3	533.4	530.5	529.3	526.4	521.9	517.3	514.5	509.0	506.7
37.5°	494.2	493.2	489.4	486.5	485.5	482.0	479.7	476.5	472.3	471.0	468.4
40°	446.9	446.2	444.0	443.7	441.7	440.8	437.6	435.0	433.1	432.1	430.5
42.5°	403.5	402.8	400.9	401.2	399.3	398.6	398.3	396.1	394.4	392.5	392.8
45°	360.7	360.0	358.7	358.1	359.1	358.7	358.1	357.1	357.1	357.4	356.5
47.5°	319.5	320.1	318.8	319.5	319.5	318.5	318.5	319.8	320.1	320.8	321.4
50°	280.6	282.5	281.8	282.8	283.1	283.4	282.5	284.1	283.8	286.7	286.0
52.5°	245.2	245.5	246.8	247.1	247.4	247.7	249.3	250.6	251.0	252.2	254.5
55°	211.1	211.4	214.0	214.0	215.6	215.9	218.1	218.8	219.7	223.3	223.9
57.5°	178.9	180.8	182.1	182.7	183.7	185.3	186.6	189.5	191.1	193.4	195.6
60°	149.9	152.2	153.8	154.4	155.7	157.6	159.3	162.5	165.4	167.9	169.6
62.5°	123.2	125.2	126.4	128.7	128.7	130.3	134.2	136.1	139.3	141.6	144.5
65°	99.4	100.7	103.0	103.0	104.2	106.8	110.0	112.9	116.1	119.4	122.3
67.5°	77.9	78.8	80.1	81.4	82.0	85.3	87.8	92.0	94.9	97.2	100.7
70°	58.9	59.5	61.1	62.4	63.4	65.6	68.5	71.4	74.3	76.9	80.4
72.5°	42.1	43.4	45.0	46.0	46.7	48.3	51.2	54.1	56.6	59.2	61.1
75°	29.0	29.9	30.6	31.5	32.5	33.8	35.7	37.6	40.5	43.1	45.4
77.5°	18.0	19.0	19.9	20.3	20.6	21.9	23.2	25.1	27.0	29.0	30.6
80°	10.6	10.9	11.3	11.6	12.2	13.2	13.8	15.1	16.4	17.7	19.3
82.5°	5.5	5.8	6.1	6.1	6.1	6.4	7.4	8.0	8.4	9.0	10.0
85°	2.3	2.3	2.3	2.6	2.6	2.9	2.9	3.2	3.2	3.5	3.9
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





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CATALOG NUMBER: LD4C20D010 EU4209050 4LBLDWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	876.1	876.1	876.1	876.1	876.1	876.1	876.1	876.1
2.5°	872.9	872.9	872.9	872.5	872.9	872.9	872.9	872.5
5°	864.5	863.9	863.9	863.5	863.2	863.2	863.5	862.9
7.5°	850.7	849.7	849.1	849.1	848.7	848.4	848.4	846.8
10°	832.6	830.7	830.7	830.1	827.5	827.2	826.5	826.5
12.5°	810.1	807.9	806.6	805.0	803.4	802.1	801.8	800.5
15°	783.4	780.5	778.3	777.6	775.1	773.1	773.1	772.5
17.5°	754.5	750.0	748.4	746.7	743.2	742.9	742.2	739.3
20°	721.6	717.5	715.2	713.6	711.4	708.1	707.5	707.8
22.5°	687.2	681.4	679.5	677.9	675.6	672.7	672.7	670.5
25°	651.5	646.4	644.4	642.5	639.0	637.7	636.1	636.4
27.5°	615.2	610.3	608.7	605.2	602.9	601.3	599.7	599.7
30°	577.2	574.6	572.0	571.7	567.2	565.3	563.7	562.4
32.5°	540.5	537.3	536.0	534.7	532.5	529.9	529.6	527.3
35°	504.5	501.3	499.7	498.4	495.8	494.8	493.9	494.5
37.5°	466.5	465.9	464.9	463.3	461.7	461.4	460.1	461.7
40°	429.2	428.9	427.6	427.9	427.9	427.3	427.9	427.9
42.5°	393.2	393.2	391.9	392.5	392.8	393.5	394.4	395.1
45°	358.1	357.8	358.1	358.7	358.1	359.7	361.0	362.0
47.5°	322.1	322.4	323.7	324.0	324.6	326.9	326.9	326.9
50°	287.6	289.2	288.6	290.5	290.2	291.5	290.2	290.2
52.5°	254.8	256.4	256.7	257.1	259.0	259.3	259.3	259.0
55°	225.5	227.8	226.8	228.4	229.4	230.0	231.0	230.4
57.5°	198.5	199.5	200.4	200.8	202.0	202.7	203.3	202.7
60°	171.8	173.7	175.3	175.7	176.3	177.0	177.3	178.2
62.5°	146.7	149.9	150.6	150.9	152.5	153.5	154.1	154.8
65°	124.5	126.8	128.4	129.3	130.6	130.6	131.6	131.6
67.5°	103.0	105.2	106.2	106.8	108.7	109.1	110.7	110.7
70°	83.3	84.9	85.6	86.5	88.5	89.8	90.4	91.1
72.5°	64.3	66.3	67.2	68.5	69.8	70.8	71.1	72.1
75°	47.0	49.9	50.2	51.5	52.4	53.7	54.4	54.1
77.5°	32.8	33.8	35.1	35.7	36.7	37.6	38.6	38.6
80°	20.3	21.6	21.9	22.2	23.5	24.1	24.8	24.8
82.5°	10.6	11.3	11.9	12.2	12.9	12.9	13.2	13.5
85°	4.2	4.5	4.5	4.5	4.8	5.1	5.1	5.1
87.5°	0.6	1.0	0.6	0.6	1.0	1.0	1.0	1.0
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)