

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: P879384

Luminaire Tested: **LD4C20D010 EU4209040 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: P879384  
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 EU4209040 4LBLDWWH  
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBLDWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

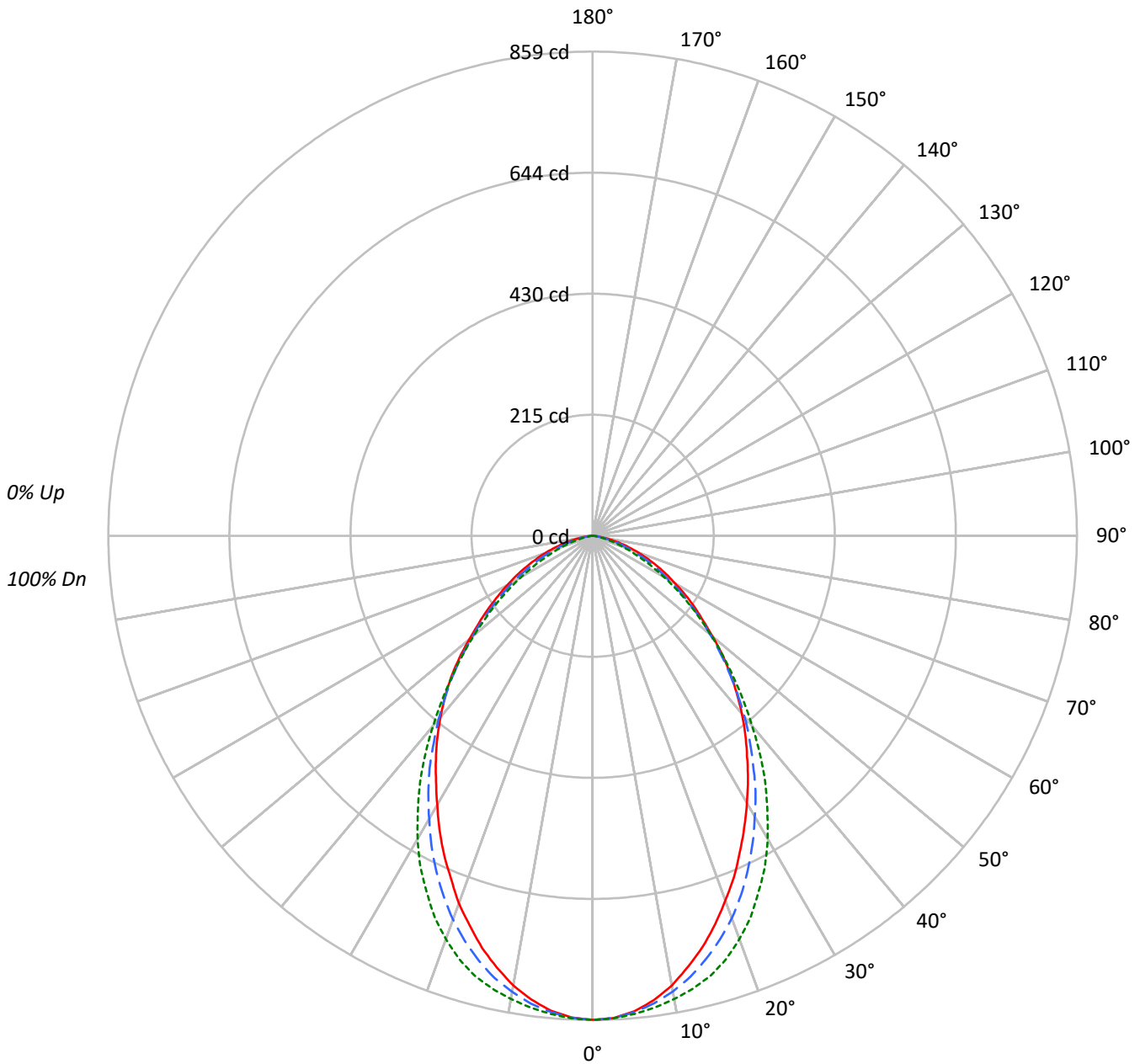
Lumens per Lamp: N/A  
Luminaire Lumens: 1536.0 lumens  
Efficiency: N/A  
Efficacy: 70.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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				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°	105507	105507	105507
5°	104430	105009	104306
10°	101034	104103	101071
15°	95988	102767	96306
20°	89961	99531	90706
25°	83786	94440	84558
30°	77625	88094	78207
35°	71614	80072	72694
40°	66058	70548	67261
45°	59836	61157	61643
50°	53037	52388	54375
55°	47293	44101	48364
60°	41377	35800	42925
65°	36221	27674	37500
70°	30460	20295	32041
75°	23781	13196	25157
80°	15635	6933	17192
85°	5356	3101	7048



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.2	5.2
10°-20°	219.0	14.3
20°-30°	301.2	19.6
30°-40°	314.3	20.5
40°-50°	268.9	17.5
50°-60°	192.3	12.5
60°-70°	111.6	7.3
70°-80°	43.0	2.8
80°-90°	5.5	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°	600.4	39.1
0°-40°	914.7	59.6
0°-60°	1375.9	89.6
0°-90°	1536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1536.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	859	859	859	859	859	
5°	847	848	852	848	846	80
15°	755	777	808	780	757	212
25°	618	652	697	656	624	284
35°	478	496	534	504	485	299
45°	344	342	352	350	355	265
55°	221	210	206	215	226	197
65°	125	110	95	114	129	124
75°	50	38	28	40	53	54
85°	4	3	2	3	5	7
90°	0	0	0	0	0	



TEST NUMBER: P879384

CATALOG NUMBER: LD4C20D010 EU4209040 4LBDWVWH

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8
2.5°	856.5	855.9	856.2	856.2	856.2	855.9	856.5	856.5	856.2	856.2	856.2
5°	846.8	846.1	846.5	846.8	846.8	846.8	847.1	847.4	847.7	848.0	848.3
7.5°	831.0	830.1	831.0	832.3	832.3	832.6	832.9	833.2	834.2	835.7	836.7
10°	809.9	809.9	810.2	811.1	812.7	812.4	813.3	814.9	816.8	819.0	820.6
12.5°	783.1	783.7	784.6	785.6	787.2	788.1	789.7	791.6	794.7	797.9	801.4
15°	754.7	755.0	755.3	757.5	759.1	761.3	762.6	766.3	769.2	773.6	777.4
17.5°	722.8	722.5	723.5	725.3	729.1	730.1	731.7	735.8	739.9	745.8	750.9
20°	688.1	690.0	691.3	693.8	696.0	698.5	699.8	704.9	709.6	715.3	721.9
22.5°	655.3	653.8	656.0	658.8	660.7	662.6	664.8	670.2	675.2	682.1	688.8
25°	618.1	619.1	620.6	622.9	625.4	627.9	630.4	636.1	638.9	646.2	652.2
27.5°	582.8	584.4	585.0	587.8	590.1	591.9	593.2	599.8	602.4	608.7	614.7
30°	547.2	548.7	548.7	551.9	553.5	555.4	558.5	562.9	566.7	571.1	575.5
32.5°	512.8	512.8	514.1	516.9	518.5	520.7	521.6	524.8	528.6	533.0	537.7
35°	477.5	478.4	479.7	479.7	482.5	483.8	485.0	488.2	490.7	492.6	496.4
37.5°	445.0	445.0	444.0	445.6	447.5	447.2	449.1	450.7	452.2	454.4	457.6
40°	411.9	411.9	410.6	411.6	412.8	412.5	411.9	413.4	414.7	416.3	419.4
42.5°	378.1	377.5	377.2	377.2	377.8	377.2	377.8	378.1	378.1	378.1	380.0
45°	344.4	346.0	344.1	343.4	342.5	341.5	341.2	341.5	342.8	341.2	341.5
47.5°	311.3	311.9	310.6	309.7	308.7	308.1	308.7	306.9	307.5	307.8	306.5
50°	277.5	276.3	276.3	275.3	275.6	275.3	274.7	274.1	274.1	272.5	271.5
52.5°	246.3	246.9	247.6	245.4	245.7	244.1	244.4	242.8	242.8	240.9	241.6
55°	220.8	219.8	219.8	218.9	218.6	217.0	216.7	215.7	213.5	212.2	209.7
57.5°	194.3	194.0	192.7	193.0	191.1	190.8	190.2	188.6	187.0	185.4	182.6
60°	168.4	168.7	168.7	168.1	167.1	165.6	165.9	163.7	161.5	158.6	156.1
62.5°	147.0	146.0	145.7	145.1	143.2	143.2	141.6	140.0	137.8	135.0	132.8
65°	124.6	124.9	123.9	123.0	121.1	120.8	119.5	118.3	116.1	113.2	110.1
67.5°	104.4	103.8	103.4	102.5	100.6	100.3	99.3	96.5	94.6	91.8	89.2
70°	84.8	84.2	84.5	82.9	81.0	80.1	79.8	77.6	74.7	72.5	70.0
72.5°	66.5	66.5	66.2	64.7	63.7	63.1	61.8	59.3	57.7	55.2	53.3
75°	50.1	49.8	49.2	48.3	47.0	46.4	45.7	44.2	41.9	39.1	37.5
77.5°	34.7	35.0	34.4	34.1	32.5	31.5	31.2	30.3	28.4	26.5	24.9
80°	22.1	21.8	21.4	20.8	20.5	20.2	19.2	18.6	16.7	15.8	14.8
82.5°	12.0	11.4	11.4	11.0	10.4	10.1	9.8	9.1	8.8	8.2	7.6
85°	3.8	4.1	3.8	3.8	3.8	3.5	3.5	3.5	3.2	3.2	2.8
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°	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8
2.5°	856.2	856.5	856.5	856.9	856.9	856.9	856.9	856.9	856.9	856.9	856.9
5°	849.3	849.3	849.9	850.6	850.6	850.6	850.9	851.5	851.5	851.5	851.2
7.5°	837.9	839.2	840.5	841.7	842.0	842.4	843.0	844.2	844.2	844.2	844.2
10°	823.1	826.0	827.5	829.4	830.4	831.0	832.9	833.2	834.2	834.5	834.2
12.5°	804.2	808.0	811.4	814.6	815.9	817.1	819.0	820.9	821.9	822.8	822.5
15°	783.1	787.2	792.5	796.0	798.5	800.4	803.2	805.8	807.3	808.0	808.0
17.5°	757.5	762.6	768.2	773.9	775.5	778.6	781.8	785.3	787.2	787.5	787.2
20°	729.1	734.8	739.5	745.2	748.7	750.3	754.7	759.1	761.0	761.3	761.0
22.5°	695.4	700.8	707.1	713.0	715.9	718.7	723.5	727.9	730.4	732.3	730.4
25°	657.9	665.4	671.4	676.5	680.6	683.4	689.4	692.9	697.0	696.7	697.0
27.5°	621.0	627.3	633.9	639.9	642.4	645.6	650.3	656.0	659.4	661.6	661.3
30°	583.1	588.2	593.8	599.2	603.3	605.8	612.8	615.3	619.7	621.0	620.0
32.5°	543.1	546.5	552.2	559.5	561.0	563.6	568.0	574.3	575.9	576.5	576.8
35°	500.5	507.1	511.8	516.3	517.5	519.7	524.8	529.5	531.1	533.9	532.7
37.5°	461.1	464.9	467.1	471.5	475.3	477.2	479.7	482.8	486.0	487.2	486.9
40°	421.6	423.5	425.4	430.2	430.5	430.5	434.3	438.7	438.7	439.9	439.9
42.5°	381.3	381.6	384.1	386.6	387.3	387.9	391.7	392.3	394.2	395.2	396.4
45°	342.2	344.1	345.6	346.0	347.5	347.9	348.8	349.7	352.6	352.0	352.6
47.5°	306.5	307.5	308.4	308.4	309.4	309.1	310.6	309.7	311.6	312.2	313.2
50°	271.5	273.1	272.2	272.8	272.5	273.4	272.8	272.8	272.8	274.1	275.0
52.5°	239.4	239.7	238.7	239.0	239.0	238.4	239.0	238.7	238.4	238.4	238.7
55°	209.7	208.5	207.8	206.6	205.0	206.9	205.9	205.3	206.6	205.9	206.6
57.5°	181.0	179.4	178.2	177.6	175.3	176.6	175.3	174.7	174.7	174.7	176.3
60°	153.9	152.3	150.7	148.9	148.5	147.9	147.3	145.7	146.0	145.7	146.3
62.5°	130.2	127.1	124.9	123.3	123.0	122.0	121.1	119.5	119.8	119.8	120.2
65°	108.5	105.0	101.9	99.7	99.7	98.1	96.5	96.5	94.6	95.2	95.6
67.5°	86.7	83.9	80.7	79.2	78.2	77.0	76.0	75.4	74.4	74.4	75.1
70°	67.2	64.3	62.8	60.2	59.9	59.0	57.7	56.8	56.5	56.5	56.1
72.5°	50.8	48.3	46.4	44.8	43.8	42.9	41.6	41.3	40.7	40.7	41.3
75°	35.3	33.7	32.2	30.6	30.0	29.6	28.7	28.1	28.1	27.8	28.1
77.5°	23.7	22.1	20.5	19.9	19.2	18.6	18.3	18.0	17.0	17.0	17.0
80°	13.6	12.9	12.3	11.4	11.4	11.0	10.4	10.1	9.8	9.8	9.8
82.5°	6.9	6.6	6.0	5.7	5.7	5.7	5.4	5.4	5.0	5.0	5.0
85°	2.8	2.5	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.2	2.5
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°	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8
2.5°	856.9	856.5	856.5	856.5	856.5	856.5	856.2	856.2	855.9	855.9	855.9
5°	851.5	851.2	850.9	850.6	850.2	849.9	849.6	849.3	848.3	848.0	847.4
7.5°	843.9	843.3	842.4	842.0	841.4	840.5	839.2	838.6	837.3	835.7	835.1
10°	833.8	832.6	831.6	830.1	829.7	828.5	825.3	823.7	821.5	819.6	817.4
12.5°	821.5	820.3	818.1	815.9	814.6	811.8	808.9	806.4	803.6	799.5	796.3
15°	806.4	804.5	800.1	799.5	797.6	793.2	789.4	784.6	780.2	775.8	772.0
17.5°	786.2	782.1	779.9	777.1	774.9	769.2	765.1	759.7	753.7	748.7	743.3
20°	759.7	755.3	751.5	749.9	747.1	742.1	737.0	730.4	724.4	718.1	713.4
22.5°	728.2	725.3	719.7	717.8	714.3	709.3	703.3	697.0	691.3	684.4	678.0
25°	694.4	690.3	685.9	682.1	679.6	674.9	667.3	662.6	656.3	648.7	644.0
27.5°	658.5	653.8	647.5	644.9	642.7	636.4	630.1	624.1	619.1	612.4	608.3
30°	616.9	613.4	609.3	606.1	603.0	597.9	592.3	585.3	580.0	576.8	571.1
32.5°	574.6	571.8	566.4	564.8	561.4	557.3	553.2	548.1	542.4	537.7	533.3
35°	529.5	526.7	522.9	520.0	518.8	515.9	511.5	507.1	504.3	498.9	496.7
37.5°	484.4	483.5	479.7	476.8	475.9	472.4	470.2	467.1	463.0	461.7	459.2
40°	438.0	437.4	435.2	434.9	433.0	432.1	428.9	426.4	424.5	423.5	422.0
42.5°	395.5	394.8	393.0	393.3	391.4	390.7	390.4	388.2	386.6	384.8	385.1
45°	353.5	352.9	351.6	351.0	352.0	351.6	351.0	350.1	350.1	350.4	349.4
47.5°	313.2	313.8	312.5	313.2	313.2	312.2	312.2	313.5	313.8	314.4	315.1
50°	275.0	276.9	276.3	277.2	277.5	277.8	276.9	278.5	278.2	281.0	280.4
52.5°	240.3	240.6	241.9	242.2	242.5	242.8	244.4	245.7	246.0	247.2	249.5
55°	206.9	207.2	209.7	209.7	211.3	211.6	213.8	214.5	215.4	218.9	219.5
57.5°	175.3	177.2	178.5	179.1	180.1	181.7	182.9	185.8	187.3	189.5	191.7
60°	147.0	149.2	150.7	151.4	152.6	154.5	156.1	159.3	162.1	164.6	166.2
62.5°	120.8	122.7	123.9	126.1	126.1	127.7	131.5	133.4	136.6	138.8	141.6
65°	97.4	98.7	100.9	100.9	102.2	104.7	107.9	110.7	113.8	117.0	119.8
67.5°	76.3	77.3	78.5	79.8	80.4	83.6	86.1	90.2	93.0	95.2	98.7
70°	57.7	58.3	59.9	61.2	62.1	64.3	67.2	70.0	72.9	75.4	78.8
72.5°	41.3	42.6	44.2	45.1	45.7	47.3	50.1	53.0	55.5	58.0	59.9
75°	28.4	29.3	30.0	30.9	31.9	33.1	35.0	36.9	39.7	42.3	44.5
77.5°	17.7	18.6	19.6	19.9	20.2	21.4	22.7	24.6	26.5	28.4	30.0
80°	10.4	10.7	11.0	11.4	12.0	12.9	13.6	14.8	16.1	17.3	18.9
82.5°	5.4	5.7	6.0	6.0	6.0	6.3	7.3	7.9	8.2	8.8	9.8
85°	2.2	2.2	2.2	2.5	2.5	2.8	2.8	3.2	3.2	3.5	3.8
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: P879384

CATALOG NUMBER: LD4C20D010 EU4209040 4LBLDWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	858.8	858.8	858.8	858.8	858.8	858.8	858.8	858.8
2.5°	855.6	855.6	855.6	855.3	855.6	855.6	855.6	855.3
5°	847.4	846.8	846.8	846.5	846.1	846.1	846.5	845.8
7.5°	833.8	832.9	832.3	832.3	831.9	831.6	831.6	830.1
10°	816.2	814.3	814.3	813.7	811.1	810.8	810.2	810.2
12.5°	794.1	791.9	790.6	789.1	787.5	786.2	785.9	784.6
15°	767.9	765.1	762.9	762.2	759.7	757.8	757.8	757.2
17.5°	739.5	735.1	733.5	732.0	728.5	728.2	727.6	724.7
20°	707.4	703.3	701.1	699.5	697.3	694.1	693.5	693.8
22.5°	673.6	668.0	666.1	664.5	662.3	659.4	659.4	657.2
25°	638.6	633.6	631.7	629.8	626.3	625.1	623.5	623.8
27.5°	603.0	598.3	596.7	593.2	591.0	589.4	587.8	587.8
30°	565.8	563.2	560.7	560.4	556.0	554.1	552.5	551.3
32.5°	529.8	526.7	525.4	524.1	521.9	519.4	519.1	516.9
35°	494.5	491.3	489.8	488.5	486.0	485.0	484.1	484.7
37.5°	457.3	456.7	455.7	454.1	452.6	452.2	451.0	452.6
40°	420.7	420.4	419.1	419.4	419.4	418.8	419.4	419.4
42.5°	385.4	385.4	384.1	384.8	385.1	385.7	386.6	387.3
45°	351.0	350.7	351.0	351.6	351.0	352.6	353.8	354.8
47.5°	315.7	316.0	317.3	317.6	318.2	320.4	320.4	320.4
50°	281.9	283.5	282.9	284.8	284.5	285.7	284.5	284.5
52.5°	249.8	251.3	251.7	252.0	253.9	254.2	254.2	253.9
55°	221.1	223.3	222.3	223.9	224.9	225.5	226.4	225.8
57.5°	194.6	195.5	196.5	196.8	198.1	198.7	199.3	198.7
60°	168.4	170.3	171.9	172.2	172.8	173.5	173.8	174.7
62.5°	143.8	147.0	147.6	147.9	149.5	150.4	151.1	151.7
65°	122.0	124.3	125.8	126.8	128.0	128.0	129.0	129.0
67.5°	100.9	103.1	104.1	104.7	106.6	106.9	108.5	108.5
70°	81.7	83.3	83.9	84.8	86.7	88.0	88.6	89.2
72.5°	63.1	65.0	65.9	67.2	68.4	69.4	69.7	70.6
75°	46.0	48.9	49.2	50.5	51.4	52.7	53.3	53.0
77.5°	32.2	33.1	34.4	35.0	36.0	36.9	37.8	37.8
80°	19.9	21.1	21.4	21.8	23.0	23.7	24.3	24.3
82.5°	10.4	11.0	11.7	12.0	12.6	12.6	12.9	13.2
85°	4.1	4.4	4.4	4.4	4.7	5.0	5.0	5.0
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)