

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: P858425

Luminaire Tested: **LD4C15W2N2765D010 4LBSWNL1\_5000K**

Issue Date: 11/9/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P858425  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 11/9/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C15W2N2765D010 4LBSWNL\_5000K  
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, W2N2765 LEDS  
AND 4LBSWNL TRIM WITH FINISH  
  
Light Source: -  
Ballast/Driver: -

**Summary**

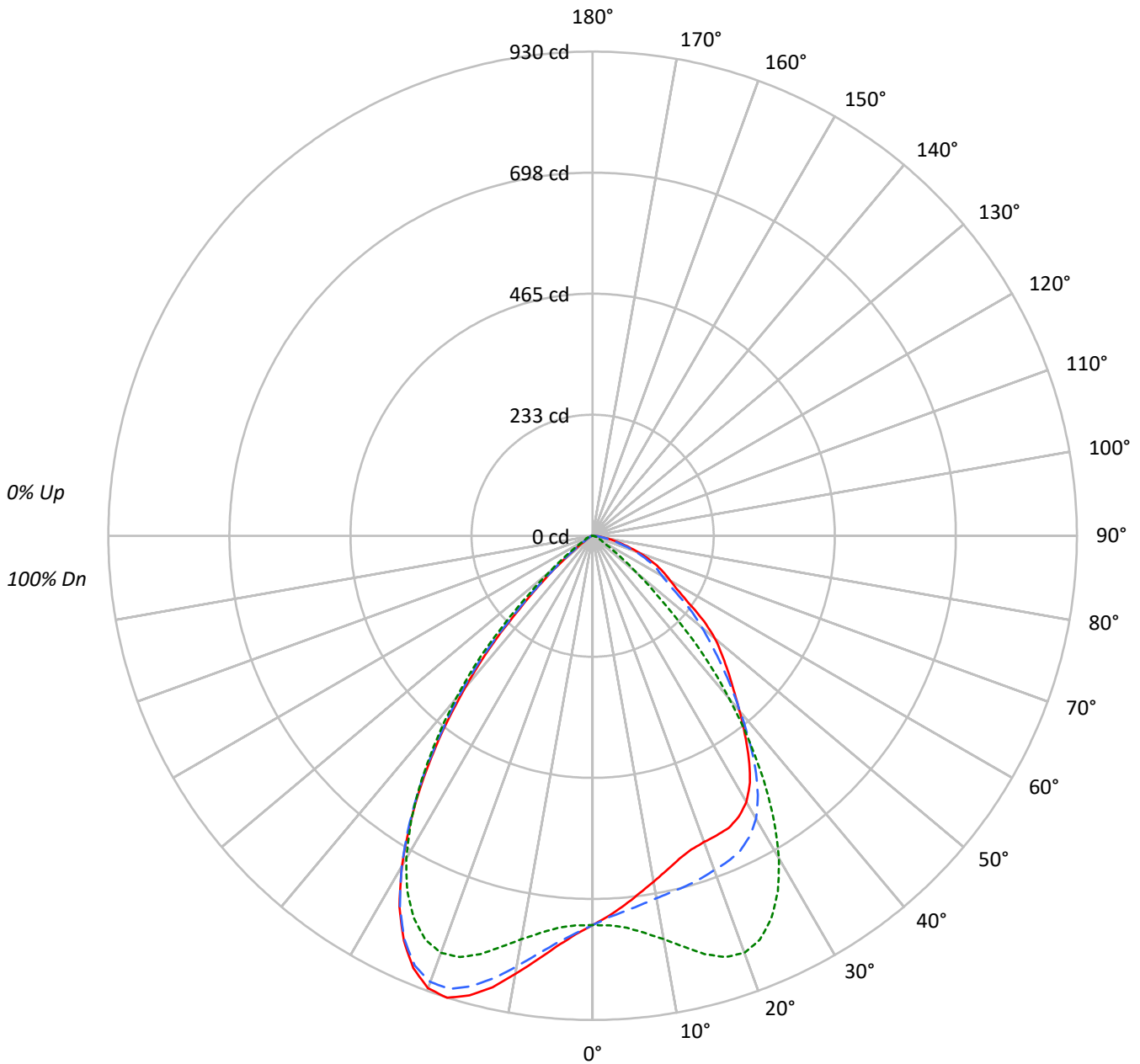
Lumens per Lamp: N/A  
Luminaire Lumens: 1380.0 lumens  
Efficiency: N/A  
Efficacy: 71.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.2  
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: P858425

CATALOG NUMBER: LD4C15W2N2765D010 4LBSWNL1\_5000K

### 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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48																			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44																			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40																			
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37																			

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

	0°	90°	180°
0°	91870	91870	91870
5°	87769	93183	97635
10°	84155	98165	106560
15°	81705	105794	116224
20°	81816	111428	120867
25°	83894	109975	116319
30°	83782	101514	103869
35°	78483	85801	84632
40°	70292	65449	61070
45°	63780	41559	34088
50°	58599	21081	14564
55°	48107	9403	4819
60°	42212	5283	2629
65°	39738	3983	1977
70°	34016	3161	1760
75°	25964	2326	1377
80°	18678	1415	707
85°	13814	0	0



TEST NUMBER: P858425

CATALOG NUMBER: LD4C15W2N2765D010 4LBSWNL1\_5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.6	5.3
10°-20°	226.4	16.4
20°-30°	350.3	25.4
30°-40°	345.1	25.0
40°-50°	211.9	15.4
50°-60°	94.2	6.8
60°-70°	52.6	3.8
70°-80°	22.8	1.7
80°-90°	4.1	0.3
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°	649.3	47.0
0°-40°	994.4	72.1
0°-60°	1300.5	94.2
0°-90°	1380.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1380.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	748	748	748	748	748	
5°	712	723	756	785	792	67
15°	642	696	832	895	914	182
25°	619	669	811	855	858	284
35°	523	545	572	570	564	325
45°	367	348	239	209	196	284
55°	225	203	44	25	22	206
65°	137	123	14	8	7	134
75°	55	47	5	3	3	60
85°	10	8	0	0	0	12
90°	0	0	0	0	0	



TEST NUMBER: P858425

CATALOG NUMBER: LD4C15W2N2765D010 4LBSWNL1\_5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8
2.5°	730.2	730.2	730.2	730.2	732.2	729.3	732.2	732.2	735.1	736.1	733.2
5°	711.7	710.7	711.7	711.7	713.6	712.7	715.6	717.5	721.5	723.4	723.4
7.5°	692.2	692.2	692.2	694.1	697.0	696.1	699.0	701.9	707.8	711.7	714.6
10°	674.6	673.6	676.5	677.5	680.4	680.4	685.3	688.3	695.1	702.9	706.8
12.5°	658.0	657.0	659.0	661.9	666.8	666.8	670.7	675.6	685.3	694.1	700.9
15°	642.4	643.4	646.3	648.2	654.1	654.1	659.0	664.8	675.6	686.3	696.1
17.5°	631.6	632.6	634.6	637.5	643.4	643.4	648.2	655.1	666.8	678.5	690.2
20°	625.8	626.8	628.7	631.6	636.5	637.5	641.4	649.2	659.9	672.6	683.4
22.5°	622.9	624.8	626.8	628.7	633.6	633.6	638.5	644.3	655.1	667.8	677.5
25°	618.9	620.9	621.9	624.8	628.7	628.7	631.6	638.5	648.2	659.0	668.7
27.5°	608.2	610.2	611.1	614.1	618.0	617.0	620.9	625.8	634.6	644.3	652.1
30°	590.6	591.6	593.6	594.5	597.5	597.5	600.4	605.3	611.1	619.9	627.7
32.5°	562.3	564.3	565.3	566.2	569.2	568.2	569.2	572.1	577.9	585.8	590.6
35°	523.3	527.2	527.2	529.1	530.1	529.1	529.1	533.0	536.0	541.8	544.8
37.5°	480.3	483.3	482.3	484.2	485.2	482.3	484.2	485.2	489.1	492.0	493.0
40°	438.3	439.3	439.3	439.3	439.3	438.3	439.3	440.3	443.2	443.2	440.3
42.5°	400.3	401.3	401.3	399.3	401.3	400.3	400.3	400.3	400.3	396.4	393.4
45°	367.1	368.1	368.1	367.1	367.1	365.1	364.2	363.2	360.2	355.4	348.5
47.5°	335.8	337.8	338.8	336.8	335.8	333.9	333.9	328.0	324.1	318.3	308.5
50°	306.6	308.5	308.5	306.6	306.6	303.6	300.7	298.7	292.9	286.1	274.3
52.5°	269.5	272.4	272.4	271.4	271.4	267.5	266.5	262.6	257.7	249.9	240.2
55°	224.6	228.5	227.5	226.5	224.6	224.6	224.6	221.6	218.7	212.8	203.1
57.5°	192.3	193.3	193.3	192.3	192.3	190.4	190.4	187.5	186.5	180.6	172.8
60°	171.8	171.8	172.8	171.8	170.9	169.9	168.9	167.0	164.0	160.1	154.3
62.5°	155.2	156.2	156.2	155.2	154.3	153.3	152.3	150.4	148.4	145.5	139.6
65°	136.7	138.6	137.7	136.7	135.7	134.7	134.7	132.8	130.8	128.9	123.0
67.5°	116.2	117.2	118.1	116.2	116.2	115.2	115.2	113.3	112.3	108.4	104.5
70°	94.7	95.7	95.7	94.7	94.7	93.7	93.7	92.8	91.8	88.9	84.9
72.5°	74.2	75.2	74.2	73.2	73.2	73.2	72.3	71.3	70.3	68.3	65.4
75°	54.7	54.7	55.7	54.7	53.7	53.7	52.7	52.7	50.8	49.8	46.9
77.5°	39.1	40.0	39.1	39.1	38.1	37.1	37.1	36.1	36.1	35.2	33.2
80°	26.4	26.4	27.3	26.4	25.4	26.4	25.4	24.4	24.4	23.4	21.5
82.5°	16.6	17.6	16.6	16.6	16.6	16.6	16.6	15.6	15.6	14.6	13.7
85°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	8.8	8.8	8.8	7.8
87.5°	4.9	4.9	3.9	3.9	4.9	4.9	4.9	3.9	3.9	3.9	3.9
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: P858425

CATALOG NUMBER: LD4C15W2N2765D010 4LBSWNL1\_5000K

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8
2.5°	737.1	738.0	740.0	742.9	742.9	741.0	745.9	745.9	747.8	748.8	752.7
5°	729.3	731.2	735.1	740.0	741.0	740.0	746.8	749.8	752.7	755.6	761.5
7.5°	722.4	726.3	733.2	740.0	742.9	742.9	753.7	757.6	763.4	769.3	776.1
10°	718.5	724.4	734.1	744.9	747.8	750.7	763.4	771.2	779.0	786.9	796.6
12.5°	713.6	724.4	737.1	750.7	756.6	760.5	778.1	787.8	798.6	808.3	821.0
15°	712.7	725.4	742.0	759.5	767.3	773.2	792.7	806.4	819.1	831.8	844.5
17.5°	708.8	724.4	744.9	764.4	774.2	782.0	804.4	821.0	835.7	848.4	863.0
20°	703.9	721.5	743.9	765.4	776.1	783.9	808.3	824.0	840.5	852.3	865.9
22.5°	697.0	714.6	737.1	758.5	768.3	775.1	799.5	813.2	827.9	839.6	852.3
25°	685.3	701.9	721.5	739.0	748.8	754.6	776.1	788.8	799.5	811.3	823.0
27.5°	668.7	681.4	698.0	710.7	716.6	722.4	740.0	750.7	760.5	770.3	778.1
30°	639.4	649.2	660.9	671.7	677.5	678.5	695.1	700.9	708.8	715.6	721.5
32.5°	600.4	608.2	615.0	620.9	624.8	625.8	638.5	640.4	648.2	648.2	657.0
35°	550.6	554.5	559.4	559.4	562.3	559.4	568.2	570.1	571.1	572.1	578.9
37.5°	494.0	495.9	498.9	493.0	493.0	490.1	493.0	495.0	491.1	491.1	495.9
40°	440.3	436.4	432.5	426.6	423.7	417.8	417.8	413.0	410.0	408.1	409.1
42.5°	388.6	379.8	371.0	358.3	352.4	346.6	340.7	333.9	331.9	327.1	324.1
45°	338.8	326.1	314.4	293.9	282.2	276.3	263.6	249.9	241.2	239.2	231.4
47.5°	296.8	278.2	258.7	234.3	222.6	211.9	193.3	181.6	169.9	164.0	159.1
50°	259.7	243.1	217.7	191.4	176.7	166.0	145.5	131.8	119.1	110.3	104.5
52.5°	227.5	208.9	185.5	155.2	140.6	128.9	106.4	90.8	80.1	71.3	64.4
55°	191.4	176.7	153.3	125.0	110.3	96.7	77.1	60.5	49.8	43.9	39.1
57.5°	165.0	152.3	129.9	102.5	88.9	76.2	56.6	43.0	34.2	28.3	25.4
60°	147.4	135.7	116.2	89.8	77.1	65.4	46.9	34.2	26.4	21.5	19.5
62.5°	132.8	121.1	103.5	79.1	68.3	56.6	40.0	28.3	21.5	17.6	14.6
65°	116.2	105.5	89.8	68.3	58.6	48.8	34.2	23.4	17.6	13.7	11.7
67.5°	98.6	88.9	75.2	56.6	48.8	41.0	27.3	19.5	14.6	11.7	9.8
70°	80.1	72.3	59.6	45.9	39.1	32.2	22.5	15.6	10.7	8.8	7.8
72.5°	61.5	54.7	45.9	35.2	29.3	24.4	16.6	11.7	8.8	6.8	5.9
75°	43.9	39.1	32.2	25.4	21.5	17.6	12.7	8.8	5.9	4.9	3.9
77.5°	30.3	27.3	22.5	17.6	14.6	12.7	8.8	5.9	4.9	3.9	2.9
80°	19.5	17.6	14.6	10.7	8.8	7.8	4.9	3.9	2.9	2.0	2.0
82.5°	11.7	10.7	8.8	5.9	4.9	3.9	2.9	2.0	2.0	1.0	1.0
85°	6.8	5.9	3.9	2.9	2.9	2.0	2.0	1.0	1.0	0.0	0.0
87.5°	2.9	2.0	2.0	1.0	1.0	1.0	1.0	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	0.0	0.0	0.0



TEST NUMBER: P858425

CATALOG NUMBER: LD4C15W2N2765D010 4LBSWNL1\_5000K

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8
2.5°	750.7	755.6	754.6	757.6	756.6	756.6	761.5	759.5	764.4	764.4	765.4
5°	761.5	768.3	768.3	773.2	772.2	774.2	779.0	779.0	784.9	786.9	786.9
7.5°	777.1	785.9	787.8	792.7	793.7	797.6	801.5	802.5	810.3	812.2	813.2
10°	798.6	809.3	812.2	817.1	819.1	823.0	827.9	829.8	839.6	840.5	844.5
12.5°	824.9	836.6	839.6	845.4	846.4	851.3	858.1	860.1	869.8	872.8	875.7
15°	850.3	861.0	865.9	871.8	872.8	878.6	884.5	886.4	895.2	899.1	902.1
17.5°	867.9	880.6	883.5	891.3	891.3	896.2	902.1	904.0	912.8	915.7	917.7
20°	871.8	883.5	887.4	893.3	894.2	897.2	902.1	904.0	911.8	912.8	915.7
22.5°	857.1	868.9	870.8	876.7	877.6	880.6	884.5	883.5	893.3	892.3	893.3
25°	825.9	836.6	836.6	843.5	842.5	845.4	847.4	846.4	855.2	855.2	855.2
27.5°	781.0	790.8	791.7	796.6	793.7	794.7	796.6	795.6	801.5	801.5	801.5
30°	725.4	733.2	730.2	734.1	732.2	734.1	732.2	731.2	733.2	735.1	734.1
32.5°	656.0	661.9	661.9	662.9	662.9	657.0	655.1	655.1	654.1	653.1	653.1
35°	576.0	580.9	578.9	578.9	577.9	572.1	569.2	567.2	570.1	564.3	568.2
37.5°	494.0	495.0	492.0	491.1	486.2	486.2	481.3	477.4	479.3	478.4	474.5
40°	404.2	408.1	402.2	400.3	403.2	399.3	394.4	389.5	393.4	388.6	390.5
42.5°	316.3	315.3	313.4	313.4	313.4	307.5	306.6	305.6	306.6	302.7	299.7
45°	228.5	225.5	222.6	222.6	218.7	216.7	216.7	213.8	208.9	208.9	203.1
47.5°	154.3	147.4	145.5	144.5	142.6	142.6	140.6	138.6	137.7	132.8	132.8
50°	100.6	93.7	91.8	90.8	91.8	89.8	87.9	85.9	84.0	83.0	81.0
52.5°	60.5	57.6	55.7	54.7	52.7	51.7	50.8	48.8	47.8	47.8	46.9
55°	36.1	33.2	29.3	29.3	29.3	28.3	27.3	26.4	25.4	25.4	24.4
57.5°	22.5	20.5	18.6	17.6	17.6	17.6	16.6	16.6	16.6	16.6	15.6
60°	16.6	14.6	13.7	13.7	13.7	12.7	12.7	12.7	12.7	11.7	11.7
62.5°	12.7	11.7	10.7	10.7	9.8	9.8	9.8	9.8	9.8	9.8	8.8
65°	10.7	8.8	8.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
67.5°	7.8	6.8	6.8	6.8	6.8	5.9	5.9	5.9	5.9	5.9	5.9
70°	5.9	5.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	4.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	3.9	3.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.9	2.9	2.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	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	0.0	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: P858425

CATALOG NUMBER: LD4C15W2N2765D010 4LBSWNL1\_5000K

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	747.8	747.8	747.8	747.8	747.8	747.8	747.8	747.8
2.5°	765.4	770.3	765.4	765.4	768.3	767.3	769.3	766.4
5°	787.8	794.7	789.8	788.8	793.7	792.7	793.7	791.7
7.5°	815.2	822.0	817.1	817.1	822.0	821.0	824.0	822.0
10°	846.4	854.2	847.4	848.4	855.2	854.2	854.2	854.2
12.5°	878.6	886.4	882.5	882.5	887.4	888.4	889.4	888.4
15°	905.0	912.8	907.9	907.9	914.7	913.8	914.7	913.8
17.5°	920.6	928.4	922.6	922.6	928.4	928.4	929.4	930.4
20°	916.7	925.5	920.6	918.6	925.5	925.5	924.5	924.5
22.5°	894.2	902.1	898.1	896.2	901.1	899.1	898.1	899.1
25°	855.2	863.0	855.2	855.2	859.1	858.1	859.1	858.1
27.5°	802.5	808.3	800.5	799.5	803.5	801.5	800.5	803.5
30°	732.2	738.0	734.1	731.2	736.1	733.2	731.2	732.2
32.5°	652.1	656.0	654.1	649.2	652.1	650.2	649.2	650.2
35°	564.3	569.2	561.4	560.4	565.3	561.4	559.4	564.3
37.5°	473.5	479.3	472.5	473.5	470.6	471.5	469.6	472.5
40°	387.6	386.6	384.7	383.7	384.7	381.7	383.7	380.8
42.5°	294.8	296.8	295.8	294.8	295.8	291.9	290.0	293.9
45°	205.0	204.1	202.1	200.1	200.1	199.2	199.2	196.2
47.5°	131.8	130.8	126.9	127.9	129.9	127.9	125.0	128.9
50°	80.1	79.1	79.1	78.1	80.1	78.1	76.2	76.2
52.5°	44.9	44.9	43.9	43.9	43.9	43.9	43.0	42.0
55°	24.4	23.4	23.4	23.4	22.5	22.5	22.5	22.5
57.5°	15.6	15.6	15.6	15.6	15.6	15.6	14.6	14.6
60°	11.7	11.7	11.7	11.7	10.7	11.7	10.7	10.7
62.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
65°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)