

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: FAIL-SAFE

Report Number: P735599

Luminaire Tested: **4APN6-29-B2750-W2D-3000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735599
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P709119)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN6-29-B2750-W2D-3000K
Description: 4FT 2900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3000K CCT

Light Source: -
Ballast/Driver: -

Summary

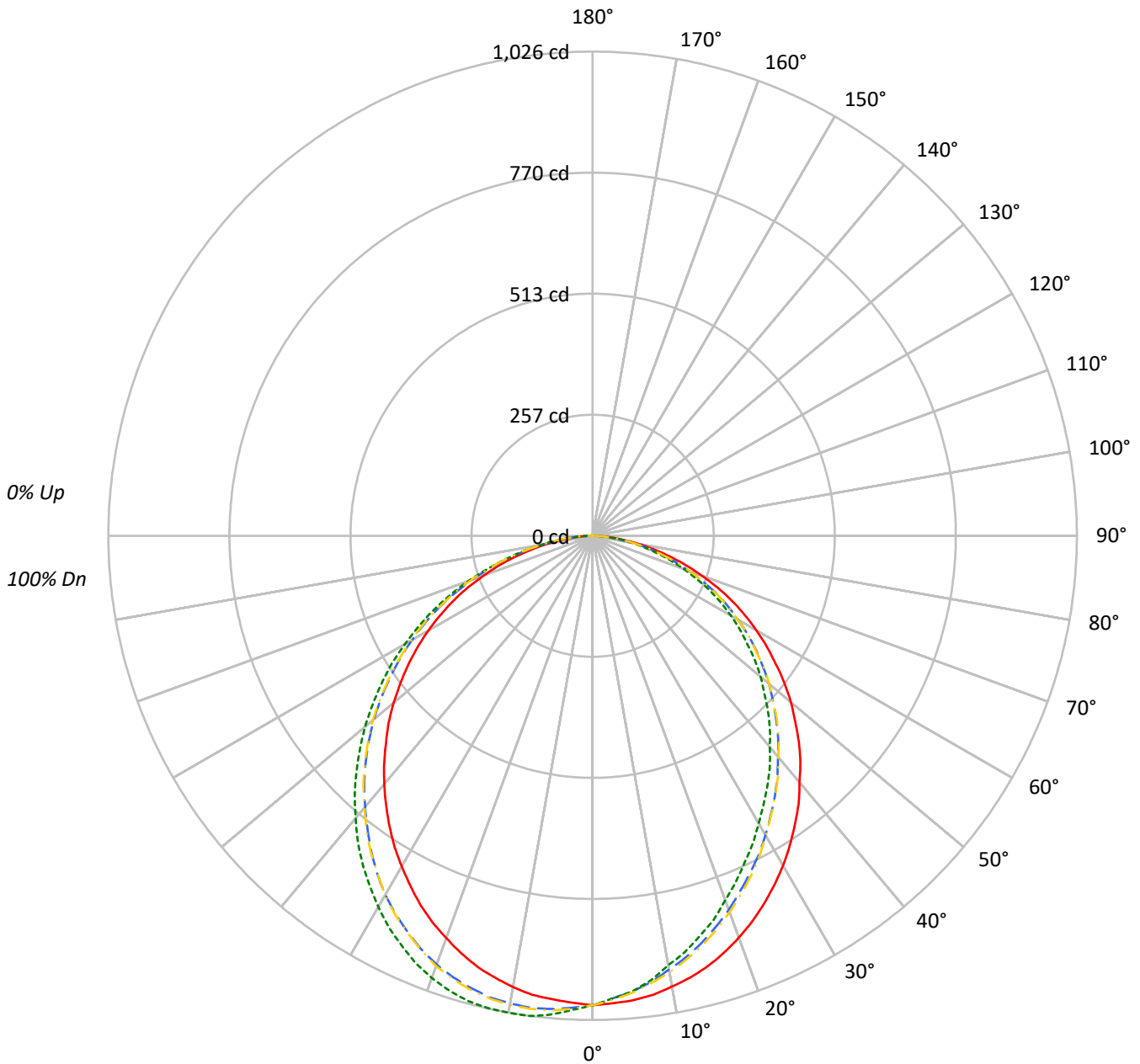
Lumens per Lamp: N/A
Luminaire Lumens: 2668.0 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 28.5
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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84																			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70																			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59																			
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51																			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44																			
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38																			
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34																			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30																			
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27																			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9178	9178	9178	9178
5°	9151	8973	9130	9433
10°	9087	8656	9099	9615
15°	9018	8384	9029	9748
20°	8895	8066	8905	9790
25°	8752	7767	8786	9749
30°	8595	7494	8620	9674
35°	8416	7275	8453	9570
40°	8213	7034	8268	9406
45°	8061	6858	8077	9235
50°	7867	6671	7897	9028
55°	7620	6426	7674	8779
60°	7392	6230	7414	8471
65°	7099	5969	7099	8108
70°	6617	5527	6587	7556
75°	6017	5016	5935	6780
80°	5202	4309	5026	5802
85°	4054	3218	3811	4764



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.0	3.5
10°-20°	266.8	10.0
20°-30°	396.6	14.9
30°-40°	467.4	17.5
40°-50°	476.0	17.8
50°-60°	424.0	15.9
60°-70°	319.4	12.0
70°-80°	177.7	6.7
80°-90°	46.2	1.7
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°	757.4	28.4
0°-40°	1224.8	45.9
0°-60°	2124.8	79.6
0°-90°	2668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2668.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	995	995	995	995	995	
5°	988	969	986	1018	988	94
15°	944	878	945	1021	944	266
25°	860	763	863	958	860	396
35°	747	646	750	850	747	467
45°	618	526	619	708	618	476
55°	474	400	477	546	474	424
65°	325	273	325	371	325	321
75°	169	141	166	190	169	179
85°	38	30	36	45	38	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8
2.5°	991.4	991.4	992.5	988.1	982.5	980.2	979.1	977.9	980.2	981.2	980.2
5°	988.1	985.8	983.5	977.9	971.2	966.6	964.4	963.3	965.6	968.9	965.6
7.5°	981.2	976.8	972.3	964.4	956.6	949.8	946.4	944.1	946.4	949.8	947.5
10°	970.0	964.4	957.7	948.7	937.4	929.5	926.2	922.8	923.9	923.9	923.9
12.5°	958.7	951.0	943.1	931.8	919.3	910.4	904.7	900.3	902.5	903.7	903.7
15°	944.1	934.1	922.8	910.4	898.0	887.9	881.2	876.6	877.8	877.8	878.9
17.5°	926.2	914.9	903.7	889.1	874.3	863.1	855.3	849.7	851.8	853.0	854.1
20°	906.0	893.5	881.2	865.4	849.7	837.2	829.3	822.6	821.5	821.5	822.6
22.5°	884.5	871.0	856.4	839.5	822.6	809.1	801.2	794.5	793.4	793.4	794.5
25°	859.7	845.1	830.5	813.6	795.6	782.2	772.0	765.3	764.1	763.0	765.3
27.5°	833.9	819.3	804.7	787.8	768.6	755.1	744.9	738.2	735.9	734.9	737.1
30°	806.8	789.9	774.3	756.2	739.3	725.9	715.7	707.8	705.7	703.4	705.7
32.5°	777.6	760.7	743.8	725.9	709.0	695.5	685.3	677.5	675.2	674.0	676.3
35°	747.2	730.3	714.6	696.5	679.7	666.3	656.1	649.4	647.1	645.9	647.1
37.5°	716.8	700.0	684.2	666.3	649.4	635.9	625.7	619.0	617.8	616.7	617.8
40°	681.9	667.3	651.5	634.6	617.8	604.4	596.5	588.6	586.3	584.0	587.5
42.5°	651.5	636.9	621.3	605.4	588.6	575.0	566.1	559.4	557.1	555.9	557.1
45°	617.8	602.1	586.3	571.7	555.9	543.5	534.6	527.7	526.7	525.6	526.7
47.5°	581.9	568.3	554.8	540.2	524.4	512.1	504.2	497.5	495.2	492.9	495.2
50°	548.1	534.6	521.0	507.5	492.9	481.6	473.7	467.0	465.8	464.8	465.8
52.5°	512.1	498.5	486.2	472.7	460.2	449.0	441.2	435.6	434.4	433.3	434.4
55°	473.7	462.5	451.2	440.0	427.7	417.5	410.8	403.9	401.8	399.5	401.8
57.5°	437.7	427.7	416.4	405.1	393.9	384.9	378.1	372.5	371.4	370.2	371.4
60°	400.6	391.6	381.4	371.4	360.1	351.2	345.5	341.0	338.7	337.6	338.7
62.5°	363.5	354.5	346.6	336.4	326.4	319.5	313.9	309.5	307.2	306.1	307.2
65°	325.2	317.4	309.5	300.5	292.6	285.8	280.1	275.7	274.5	273.4	273.4
67.5°	285.8	279.1	272.4	264.5	255.5	248.7	243.0	239.7	238.6	237.4	238.6
70°	245.3	239.7	233.0	226.2	219.5	213.8	210.5	207.1	205.9	204.9	204.9
72.5°	207.1	202.6	196.9	191.3	185.7	180.1	176.7	174.4	173.4	172.2	172.2
75°	168.8	164.3	160.9	156.5	150.9	147.4	144.0	141.7	140.7	140.7	140.7
77.5°	132.8	129.4	126.1	121.5	118.2	114.8	112.5	111.5	110.3	110.3	110.3
80°	97.9	95.7	93.4	91.1	87.8	84.4	83.3	82.1	81.1	81.1	81.1
82.5°	66.5	65.2	63.0	60.8	58.5	57.3	56.3	55.2	55.2	55.2	55.2
85°	38.3	37.1	36.0	34.8	33.8	33.8	32.7	31.5	30.4	30.4	30.4
87.5°	15.8	15.8	15.8	14.6	13.5	13.5	13.5	13.5	13.5	13.5	13.5
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8
2.5°	977.9	980.2	982.5	985.8	989.2	992.5	991.4	990.4	994.8	1000.4	1001.6
5°	963.3	965.6	968.9	974.5	980.2	984.7	985.8	985.8	994.8	1002.7	1005.0
7.5°	945.3	948.7	953.1	958.7	966.6	973.5	976.8	981.2	990.4	1000.4	1005.0
10°	922.8	928.5	935.2	943.1	951.0	958.7	965.6	971.2	982.5	993.7	1000.4
12.5°	902.5	908.1	914.9	923.9	934.1	944.1	951.0	958.7	972.3	985.8	993.7
15°	880.0	885.6	893.5	902.5	913.7	925.0	935.2	945.3	958.7	973.5	982.5
17.5°	855.3	860.9	868.7	880.0	892.4	904.7	916.0	927.3	943.1	958.7	968.9
20°	824.9	832.8	842.8	854.1	868.7	883.4	894.7	907.0	923.9	940.8	952.0
22.5°	795.6	803.5	814.7	828.2	844.1	859.7	873.3	886.8	904.7	921.6	934.1
25°	767.4	776.5	787.8	801.2	815.9	831.6	847.4	863.1	881.2	899.1	911.6
27.5°	739.3	747.2	758.4	772.0	788.9	804.7	820.3	836.1	855.3	874.3	887.9
30°	707.8	716.8	727.0	740.5	758.4	776.5	792.2	809.1	828.2	847.4	860.9
32.5°	678.6	686.5	696.5	710.1	728.0	746.1	763.0	781.0	799.0	818.1	831.6
35°	649.4	657.2	667.3	680.9	698.8	716.8	733.7	750.5	768.6	786.6	800.1
37.5°	620.0	627.9	638.1	651.5	668.4	686.5	702.2	719.1	737.1	755.1	767.4
40°	589.6	597.5	605.4	619.0	635.9	653.8	669.6	686.5	704.4	722.4	734.9
42.5°	559.4	567.1	577.3	590.8	606.5	622.3	638.1	653.8	670.7	687.6	700.0
45°	528.9	535.6	545.8	558.1	574.0	588.6	604.4	619.0	635.9	651.5	664.0
47.5°	497.5	504.2	512.1	524.4	540.2	555.9	571.7	586.3	600.9	616.7	627.9
50°	467.0	473.7	482.7	494.0	508.7	523.3	536.8	550.2	565.0	579.6	589.6
52.5°	435.6	442.3	450.2	461.4	473.7	487.3	499.6	513.1	526.7	540.2	550.2
55°	403.9	408.5	415.2	425.4	438.9	452.4	464.8	477.1	489.6	500.8	510.9
57.5°	372.5	378.1	386.0	395.0	406.2	417.5	428.7	440.0	451.2	462.5	471.5
60°	341.0	345.5	351.2	358.9	370.2	380.4	391.6	401.8	411.8	422.0	429.9
62.5°	308.3	312.8	318.5	326.4	335.3	344.3	354.5	363.5	372.5	381.4	389.3
65°	274.5	279.1	284.7	291.4	299.3	307.2	316.2	325.2	332.0	338.7	346.6
67.5°	239.7	244.2	249.9	255.5	262.2	270.1	278.0	285.8	292.6	299.3	304.9
70°	205.9	209.3	214.9	219.5	225.1	230.7	237.4	244.2	248.7	254.3	261.1
72.5°	173.4	176.7	181.1	185.7	189.0	193.6	200.3	205.9	211.5	218.4	221.7
75°	141.7	144.0	147.4	150.9	154.2	157.6	162.1	166.5	171.1	174.4	179.0
77.5°	110.3	112.5	115.9	118.2	120.4	122.7	126.1	129.4	132.8	135.0	139.6
80°	81.1	83.3	85.5	87.8	90.0	92.3	93.4	94.6	99.0	102.4	104.6
82.5°	55.2	56.3	57.3	59.6	60.8	61.9	63.0	63.0	65.2	67.5	70.9
85°	31.5	32.7	33.8	33.8	33.8	33.8	34.8	36.0	37.1	39.4	41.7
87.5°	12.3	12.3	13.5	13.5	13.5	13.5	13.5	13.5	14.6	16.9	18.0
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8	994.8
2.5°	1000.4	1001.6	1003.8	1005.0	1006.0	1006.0	1007.2	1008.3	1006.0	1003.8	1002.7
5°	1006.0	1007.2	1010.6	1013.9	1016.2	1018.5	1017.3	1016.2	1013.9	1010.6	1008.3
7.5°	1007.2	1010.6	1013.9	1018.5	1021.8	1026.3	1024.1	1021.8	1017.3	1012.9	1009.4
10°	1003.8	1008.3	1013.9	1019.6	1022.9	1026.3	1024.1	1021.8	1017.3	1011.7	1007.2
12.5°	999.3	1005.0	1011.7	1017.3	1020.6	1025.2	1021.8	1018.5	1012.9	1007.2	1001.6
15°	989.2	996.0	1003.8	1010.6	1016.2	1020.6	1017.3	1015.0	1008.3	1000.4	992.5
17.5°	976.8	985.8	993.7	1001.6	1006.0	1010.6	1008.3	1006.0	998.1	989.2	980.2
20°	962.2	971.2	979.1	986.9	992.5	997.1	993.7	990.4	982.5	974.5	965.6
22.5°	944.1	953.1	962.2	970.0	975.6	980.2	975.6	970.0	962.2	954.3	945.3
25°	921.6	931.8	941.9	949.8	953.1	957.7	953.1	948.7	940.8	932.9	922.8
27.5°	899.1	909.3	919.3	927.3	930.6	935.2	930.6	926.2	918.3	910.4	900.3
30°	873.3	883.4	893.5	901.4	904.7	908.1	903.7	899.1	892.4	884.5	874.3
32.5°	844.1	854.1	862.0	869.9	874.3	878.9	874.3	871.0	863.1	853.0	842.8
35°	812.4	822.6	832.8	840.6	845.1	849.7	844.1	838.4	831.6	823.7	814.7
37.5°	777.6	788.9	800.1	809.1	812.4	817.0	812.4	806.8	800.1	792.2	782.2
40°	744.9	755.1	765.3	774.3	777.6	781.0	776.5	772.0	764.1	756.2	746.1
42.5°	711.3	721.3	730.3	738.2	741.6	746.1	741.6	735.9	730.3	723.6	714.6
45°	675.2	685.3	693.2	701.1	704.4	707.8	703.4	697.8	692.1	686.5	677.5
47.5°	638.1	647.1	655.0	662.8	665.1	668.4	664.0	660.6	655.0	649.4	641.5
50°	599.8	608.8	616.7	623.4	625.7	629.0	624.6	620.0	615.6	611.1	604.4
52.5°	560.4	568.3	576.2	582.9	585.2	587.5	582.9	578.4	574.0	569.4	562.7
55°	520.0	527.7	535.6	541.3	543.5	545.8	541.3	537.9	533.4	530.0	523.3
57.5°	479.4	487.3	494.0	499.6	501.9	504.2	499.6	495.2	491.8	488.3	482.7
60°	437.7	445.6	451.2	455.8	458.1	459.1	454.6	451.2	449.0	446.8	441.2
62.5°	397.2	402.9	408.5	411.8	414.1	415.2	411.8	409.6	407.4	405.1	400.6
65°	354.5	361.2	365.8	369.1	370.2	371.4	368.0	365.8	363.5	361.2	357.9
67.5°	311.8	317.4	320.7	324.1	325.2	325.2	325.2	324.1	321.8	318.5	315.1
70°	268.9	273.4	276.8	279.1	280.1	280.1	278.0	275.7	275.7	274.5	272.4
72.5°	225.1	228.4	230.7	233.0	233.0	233.0	233.0	234.1	233.0	230.7	227.4
75°	183.4	186.8	189.0	190.2	190.2	190.2	190.2	191.3	190.2	189.0	186.8
77.5°	144.0	146.3	147.4	148.6	148.6	148.6	149.7	150.9	149.7	148.6	147.4
80°	106.9	108.0	109.2	110.3	109.2	109.2	110.3	112.5	111.5	110.3	109.2
82.5°	73.2	74.2	75.4	75.4	76.5	77.7	77.7	77.7	77.7	76.5	75.4
85°	43.9	45.0	45.0	45.0	45.0	45.0	46.1	47.3	47.3	46.1	46.1
87.5°	20.2	21.4	20.2	19.2	18.0	18.0	20.2	22.5	22.5	21.4	21.4
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: 4APN6-29-B2750-W2D-3000K

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	994.8	994.8	994.8	994.8
2.5°	1003.8	1002.7	997.1	991.4
5°	1007.2	1003.8	996.0	988.1
7.5°	1007.2	1002.7	991.4	981.2
10°	1001.6	994.8	982.5	970.0
12.5°	994.8	986.9	972.3	958.7
15°	984.7	975.6	959.9	944.1
17.5°	970.0	958.7	943.1	926.2
20°	955.4	943.1	923.9	906.0
22.5°	935.2	923.9	903.7	884.5
25°	912.6	900.3	880.0	859.7
27.5°	889.1	874.3	854.1	833.9
30°	862.0	847.4	827.2	806.8
32.5°	832.8	819.3	799.0	777.6
35°	803.5	788.9	768.6	747.2
37.5°	770.9	757.4	737.1	716.8
40°	735.9	722.4	702.2	681.9
42.5°	703.4	690.9	670.7	651.5
45°	667.3	655.0	635.9	617.8
47.5°	630.2	617.8	599.8	581.9
50°	594.2	581.9	565.0	548.1
52.5°	553.7	543.5	527.7	512.1
55°	514.3	504.2	488.3	473.7
57.5°	474.9	465.8	451.2	437.7
60°	433.3	424.3	413.1	400.6
62.5°	393.9	386.0	374.7	363.5
65°	352.2	345.5	335.3	325.2
67.5°	309.5	303.9	294.9	285.8
70°	266.7	259.9	253.2	245.3
72.5°	224.0	220.5	213.8	207.1
75°	183.4	180.1	174.4	168.8
77.5°	145.2	141.7	137.3	132.8
80°	106.9	104.6	101.3	97.9
82.5°	74.2	72.1	69.8	66.5
85°	45.0	42.7	40.5	38.3
87.5°	20.2	19.2	16.9	15.8
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°













(END OF REPORT)