

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: P735631

Luminaire Tested: **4APN6-39-B2750-W2D-4000K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735631  
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: 4APN6-39-B2750-W2D-4000K  
Description: 4FT 3900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 4000K CCT

Light Source: -  
Ballast/Driver: -

**Summary**

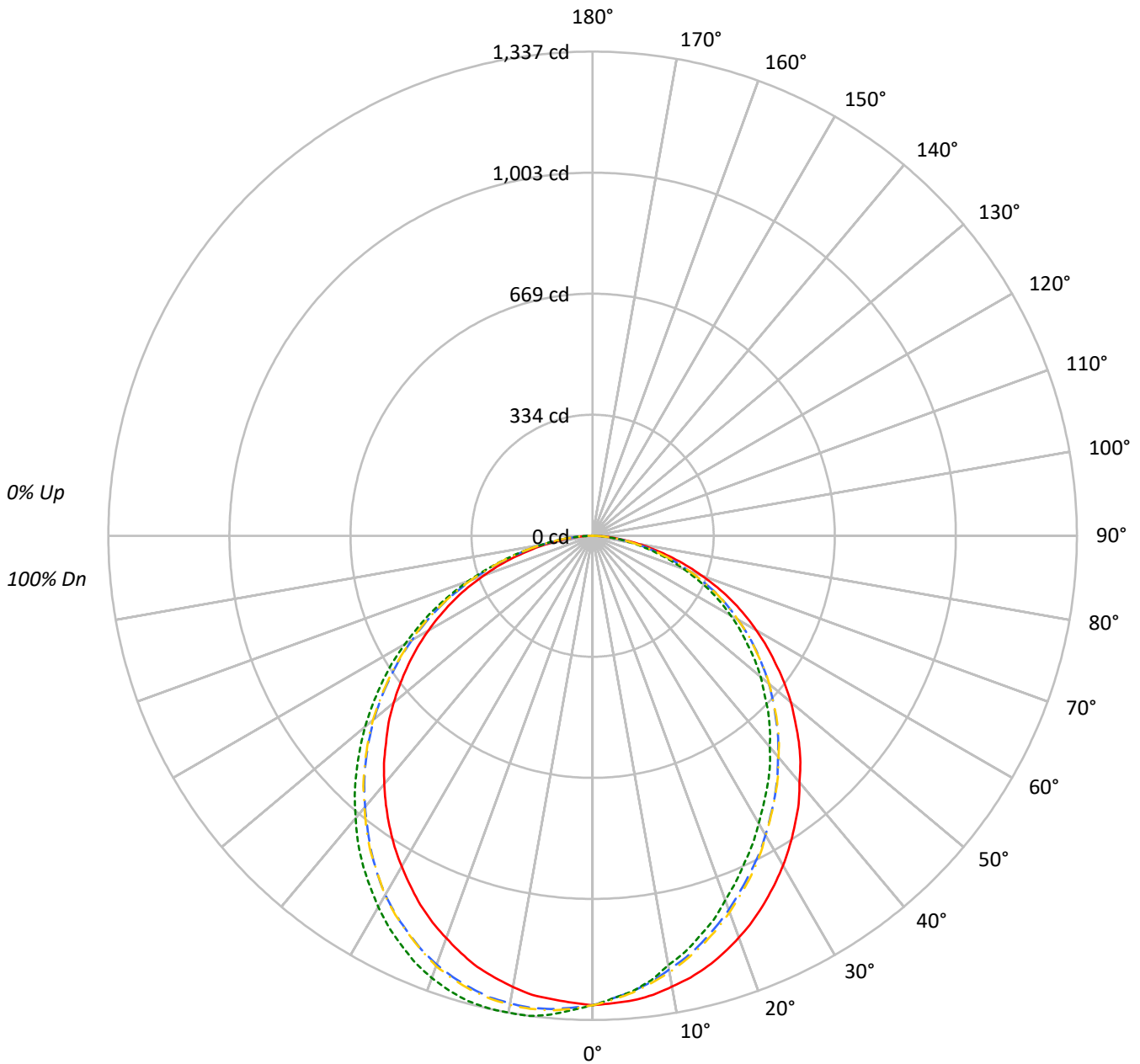
Lumens per Lamp: N/A  
Luminaire Lumens: 3477.0 lumens  
Efficiency: N/A  
Efficacy: 70.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 49.1  
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

TEST NUMBER: P735631

CATALOG NUMBER: 4APN6-39-B2750-W2D-4000K

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

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

	0°	90°	180°	270°
0°	11961	11961	11961	11961
5°	11926	11694	11898	12293
10°	11843	11281	11858	12529
15°	11752	10927	11768	12705
20°	11592	10512	11606	12758
25°	11406	10123	11450	12706
30°	11202	9766	11233	12608
35°	10968	9481	11016	12472
40°	10703	9167	10776	12258
45°	10505	8938	10526	12035
50°	10253	8694	10293	11767
55°	9931	8376	10002	11442
60°	9634	8119	9662	11042
65°	9252	7781	9252	10566
70°	8624	7202	8586	9849
75°	7842	6534	7735	8837
80°	6780	5611	6551	7561
85°	5282	4192	4975	6214



TEST NUMBER: P735631

CATALOG NUMBER: 4APN6-39-B2750-W2D-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.5	3.5
10°-20°	347.7	10.0
20°-30°	516.9	14.9
30°-40°	609.2	17.5
40°-50°	620.3	17.8
50°-60°	552.6	15.9
60°-70°	416.3	12.0
70°-80°	231.5	6.7
80°-90°	60.2	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°	987.0	28.4
0°-40°	1596.2	45.9
0°-60°	2769.1	79.6
0°-90°	3477.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3477.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1296	1296	1296	1296	1296	
5°	1288	1263	1285	1327	1288	122
15°	1230	1144	1232	1330	1230	347
25°	1120	994	1125	1248	1120	516
35°	974	842	978	1107	974	609
45°	805	685	807	922	805	620
55°	617	521	622	711	617	553
65°	424	356	424	484	424	418
75°	220	183	217	248	220	234
85°	50	40	47	59	50	60
90°	0	0	0	0	0	



TEST NUMBER: P735631

CATALOG NUMBER: 4APN6-39-B2750-W2D-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4
2.5°	1292.1	1292.1	1293.4	1287.7	1280.4	1277.4	1276.0	1274.4	1277.4	1278.8	1277.4
5°	1287.7	1284.7	1281.8	1274.4	1265.7	1259.8	1256.8	1255.4	1258.4	1262.7	1258.4
7.5°	1278.8	1273.0	1267.1	1256.8	1246.7	1237.8	1233.4	1230.4	1233.4	1237.8	1234.8
10°	1264.1	1256.8	1248.1	1236.4	1221.7	1211.4	1207.0	1202.7	1204.1	1204.1	1204.1
12.5°	1249.4	1239.3	1229.0	1214.4	1198.1	1186.4	1179.1	1173.3	1176.1	1177.7	1177.7
15°	1230.4	1217.3	1202.7	1186.4	1170.4	1157.1	1148.4	1142.4	1144.0	1144.0	1145.4
17.5°	1207.0	1192.4	1177.7	1158.7	1139.5	1124.8	1114.7	1107.3	1110.1	1111.7	1113.1
20°	1180.7	1164.4	1148.4	1127.8	1107.3	1091.1	1080.8	1072.1	1070.7	1070.7	1072.1
22.5°	1152.7	1135.1	1116.1	1094.1	1072.1	1054.4	1044.1	1035.4	1034.0	1034.0	1035.4
25°	1120.4	1101.4	1082.4	1060.4	1036.8	1019.3	1006.1	997.3	995.8	994.4	997.3
27.5°	1086.7	1067.7	1048.7	1026.7	1001.7	984.1	970.8	962.1	959.1	957.7	960.7
30°	1051.5	1029.5	1009.0	985.5	963.5	946.0	932.7	922.4	919.6	916.7	919.6
32.5°	1013.4	991.4	969.4	946.0	924.0	906.4	893.1	883.0	880.0	878.4	881.4
35°	973.8	951.8	931.3	907.8	885.8	868.3	855.0	846.3	843.3	841.8	843.3
37.5°	934.1	912.3	891.7	868.3	846.3	828.7	815.4	806.7	805.1	803.7	805.1
40°	888.7	869.7	849.1	827.1	805.1	787.6	777.3	767.0	764.1	761.1	765.6
42.5°	849.1	830.1	809.6	789.0	767.0	749.4	737.7	729.0	726.0	724.4	726.0
45°	805.1	784.7	764.1	745.0	724.4	708.4	696.7	687.8	686.4	685.0	686.4
47.5°	758.3	740.7	723.0	704.0	683.4	667.3	657.0	648.3	645.3	642.4	645.3
50°	714.3	696.7	679.0	661.4	642.4	627.7	617.4	608.7	607.1	605.7	607.1
52.5°	667.3	649.7	633.6	616.0	599.8	585.1	575.0	567.6	566.1	564.7	566.1
55°	617.4	602.7	588.1	573.4	557.3	544.1	535.3	526.4	523.6	520.7	523.6
57.5°	570.4	557.3	542.7	528.0	513.3	501.6	492.7	485.4	484.0	482.4	484.0
60°	522.1	510.4	497.1	484.0	469.3	457.6	450.3	444.4	441.4	440.0	441.4
62.5°	473.7	462.0	451.7	438.4	425.3	416.4	409.1	403.3	400.4	399.0	400.4
65°	423.8	413.6	403.3	391.6	381.3	372.4	365.1	359.3	357.8	356.4	356.4
67.5°	372.4	363.7	355.0	344.7	333.0	324.1	316.7	312.4	311.0	309.4	311.0
70°	319.7	312.4	303.6	294.7	286.0	278.7	274.3	269.9	268.4	267.0	267.0
72.5°	269.9	264.0	256.7	249.3	242.0	234.7	230.3	227.3	225.9	224.4	224.4
75°	220.0	214.1	209.7	203.9	196.6	192.1	187.7	184.7	183.3	183.3	183.3
77.5°	173.0	168.7	164.3	158.4	154.0	149.6	146.7	145.3	143.7	143.7	143.7
80°	127.6	124.7	121.7	118.7	114.4	110.0	108.6	107.0	105.6	105.6	105.6
82.5°	86.6	85.0	82.1	79.3	76.3	74.7	73.3	71.9	71.9	71.9	71.9
85°	49.9	48.4	47.0	45.4	44.0	44.0	42.6	41.0	39.6	39.6	39.6
87.5°	20.6	20.6	20.6	19.0	17.6	17.6	17.6	17.6	17.6	17.6	17.6
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: P735631

CATALOG NUMBER: 4APN6-39-B2750-W2D-4000K

**CANDELA DISTRIBUTION (continued):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4
2.5°	1274.4	1277.4	1280.4	1284.7	1289.1	1293.4	1292.1	1290.7	1296.4	1303.8	1305.3
5°	1255.4	1258.4	1262.7	1270.1	1277.4	1283.3	1284.7	1284.7	1296.4	1306.7	1309.7
7.5°	1232.0	1236.4	1242.1	1249.4	1259.8	1268.7	1273.0	1278.8	1290.7	1303.8	1309.7
10°	1202.7	1210.0	1218.7	1229.0	1239.3	1249.4	1258.4	1265.7	1280.4	1295.0	1303.8
12.5°	1176.1	1183.5	1192.4	1204.1	1217.3	1230.4	1239.3	1249.4	1267.1	1284.7	1295.0
15°	1146.8	1154.1	1164.4	1176.1	1190.8	1205.4	1218.7	1232.0	1249.4	1268.7	1280.4
17.5°	1114.7	1122.0	1132.1	1146.8	1163.0	1179.1	1193.8	1208.4	1229.0	1249.4	1262.7
20°	1075.0	1085.3	1098.4	1113.1	1132.1	1151.3	1166.0	1182.1	1204.1	1226.1	1240.7
22.5°	1036.8	1047.1	1061.8	1079.4	1100.0	1120.4	1138.1	1155.7	1179.1	1201.1	1217.3
25°	1000.1	1012.0	1026.7	1044.1	1063.3	1083.8	1104.4	1124.8	1148.4	1171.8	1188.0
27.5°	963.5	973.8	988.4	1006.1	1028.1	1048.7	1069.1	1089.7	1114.7	1139.5	1157.1
30°	922.4	934.1	947.4	965.0	988.4	1012.0	1032.4	1054.4	1079.4	1104.4	1122.0
32.5°	884.4	894.7	907.8	925.4	948.8	972.4	994.4	1017.8	1041.3	1066.1	1083.8
35°	846.3	856.4	869.7	887.3	910.7	934.1	956.1	978.1	1001.7	1025.1	1042.7
37.5°	808.1	818.4	831.6	849.1	871.1	894.7	915.1	937.1	960.7	984.1	1000.1
40°	768.4	778.7	789.0	806.7	828.7	852.1	872.7	894.7	918.1	941.5	957.7
42.5°	729.0	739.1	752.4	770.0	790.4	811.0	831.6	852.1	874.1	896.1	912.3
45°	689.3	698.1	711.3	727.4	748.0	767.0	787.6	806.7	828.7	849.1	865.3
47.5°	648.3	657.0	667.3	683.4	704.0	724.4	745.0	764.1	783.1	803.7	818.4
50°	608.7	617.4	629.1	643.8	663.0	682.0	699.6	717.1	736.3	755.3	768.4
52.5°	567.6	576.4	586.7	601.3	617.4	635.0	651.1	668.7	686.4	704.0	717.1
55°	526.4	532.4	541.1	554.4	572.0	589.6	605.7	621.8	638.0	652.7	665.8
57.5°	485.4	492.7	503.0	514.7	529.4	544.1	558.7	573.4	588.1	602.7	614.4
60°	444.4	450.3	457.6	467.8	482.4	495.7	510.4	523.6	536.7	550.0	560.3
62.5°	401.8	407.7	415.0	425.3	437.0	448.7	462.0	473.7	485.4	497.1	507.4
65°	357.8	363.7	371.0	379.8	390.1	400.4	412.1	423.8	432.7	441.4	451.7
67.5°	312.4	318.3	325.6	333.0	341.7	352.0	362.3	372.4	381.3	390.1	397.4
70°	268.4	272.7	280.1	286.0	293.3	300.7	309.4	318.3	324.1	331.4	340.3
72.5°	225.9	230.3	236.1	242.0	246.4	252.3	261.0	268.4	275.7	284.6	289.0
75°	184.7	187.7	192.1	196.6	201.0	205.3	211.3	217.0	223.0	227.3	233.3
77.5°	143.7	146.7	151.0	154.0	157.0	159.9	164.3	168.7	173.0	176.0	181.9
80°	105.6	108.6	111.4	114.4	117.3	120.3	121.7	123.3	129.0	133.4	136.4
82.5°	71.9	73.3	74.7	77.7	79.3	80.7	82.1	82.1	85.0	88.0	92.4
85°	41.0	42.6	44.0	44.0	44.0	44.0	45.4	47.0	48.4	51.3	54.3
87.5°	16.1	16.1	17.6	17.6	17.6	17.6	17.6	17.6	19.0	22.0	23.4
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: P735631

CATALOG NUMBER: 4APN6-39-B2750-W2D-4000K

**CANDELA DISTRIBUTION (continued):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4	1296.4
2.5°	1303.8	1305.3	1308.1	1309.7	1311.1	1311.1	1312.7	1314.1	1311.1	1308.1	1306.7
5°	1311.1	1312.7	1317.0	1321.4	1324.4	1327.3	1325.8	1324.4	1321.4	1317.0	1314.1
7.5°	1312.7	1317.0	1321.4	1327.3	1331.7	1337.4	1334.7	1331.7	1325.8	1320.0	1315.4
10°	1308.1	1314.1	1321.4	1328.7	1333.1	1337.4	1334.7	1331.7	1325.8	1318.4	1312.7
12.5°	1302.4	1309.7	1318.4	1325.8	1330.1	1336.1	1331.7	1327.3	1320.0	1312.7	1305.3
15°	1289.1	1298.0	1308.1	1317.0	1324.4	1330.1	1325.8	1322.8	1314.1	1303.8	1293.4
17.5°	1273.0	1284.7	1295.0	1305.3	1311.1	1317.0	1314.1	1311.1	1300.8	1289.1	1277.4
20°	1254.0	1265.7	1276.0	1286.1	1293.4	1299.4	1295.0	1290.7	1280.4	1270.1	1258.4
22.5°	1230.4	1242.1	1254.0	1264.1	1271.4	1277.4	1271.4	1264.1	1254.0	1243.7	1232.0
25°	1201.1	1214.4	1227.4	1237.8	1242.1	1248.1	1242.1	1236.4	1226.1	1215.8	1202.7
27.5°	1171.8	1185.0	1198.1	1208.4	1212.8	1218.7	1212.8	1207.0	1196.7	1186.4	1173.3
30°	1138.1	1151.3	1164.4	1174.7	1179.1	1183.5	1177.7	1171.8	1163.0	1152.7	1139.5
32.5°	1100.0	1113.1	1123.4	1133.7	1139.5	1145.4	1139.5	1135.1	1124.8	1111.7	1098.4
35°	1058.8	1072.1	1085.3	1095.5	1101.4	1107.3	1100.0	1092.7	1083.8	1073.5	1061.8
37.5°	1013.4	1028.1	1042.7	1054.4	1058.8	1064.7	1058.8	1051.5	1042.7	1032.4	1019.3
40°	970.8	984.1	997.3	1009.0	1013.4	1017.8	1012.0	1006.1	995.8	985.5	972.4
42.5°	927.0	940.1	951.8	962.1	966.4	972.4	966.4	959.1	951.8	943.0	931.3
45°	880.0	893.1	903.4	913.7	918.1	922.4	916.7	909.3	902.0	894.7	883.0
47.5°	831.6	843.3	853.6	863.8	866.7	871.1	865.3	861.0	853.6	846.3	836.0
50°	781.7	793.4	803.7	812.4	815.4	819.8	814.0	808.1	802.3	796.4	787.6
52.5°	730.4	740.7	751.0	759.7	762.7	765.6	759.7	753.8	748.0	742.1	733.3
55°	677.6	687.8	698.1	705.4	708.4	711.3	705.4	701.0	695.1	690.7	682.0
57.5°	624.7	635.0	643.8	651.1	654.1	657.0	651.1	645.3	641.0	636.4	629.1
60°	570.4	580.7	588.1	594.0	597.0	598.4	592.4	588.1	585.1	582.3	575.0
62.5°	517.7	525.0	532.4	536.7	539.7	541.1	536.7	533.8	531.0	528.0	522.1
65°	462.0	470.7	476.7	481.0	482.4	484.0	479.6	476.7	473.7	470.7	466.4
67.5°	406.3	413.6	418.0	422.4	423.8	423.8	423.8	422.4	419.4	415.0	410.7
70°	350.4	356.4	360.7	363.7	365.1	365.1	362.3	359.3	359.3	357.8	355.0
72.5°	293.3	297.7	300.7	303.6	303.6	303.6	303.6	305.0	303.6	300.7	296.3
75°	239.0	243.4	246.4	247.9	247.9	247.9	247.9	249.3	247.9	246.4	243.4
77.5°	187.7	190.7	192.1	193.6	193.6	193.6	195.0	196.6	195.0	193.6	192.1
80°	139.3	140.7	142.3	143.7	142.3	142.3	143.7	146.7	145.3	143.7	142.3
82.5°	95.3	96.7	98.3	98.3	99.7	101.3	101.3	101.3	101.3	99.7	98.3
85°	57.3	58.7	58.7	58.7	58.7	58.7	60.1	61.6	61.6	60.1	60.1
87.5°	26.4	27.9	26.4	25.0	23.4	23.4	26.4	29.3	29.3	27.9	27.9
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: P735631

CATALOG NUMBER: 4APN6-39-B2750-W2D-4000K

**CANDELA DISTRIBUTION (continued):**

	330°	340°	350°	360°
0°	1296.4	1296.4	1296.4	1296.4
2.5°	1308.1	1306.7	1299.4	1292.1
5°	1312.7	1308.1	1298.0	1287.7
7.5°	1312.7	1306.7	1292.1	1278.8
10°	1305.3	1296.4	1280.4	1264.1
12.5°	1296.4	1286.1	1267.1	1249.4
15°	1283.3	1271.4	1251.0	1230.4
17.5°	1264.1	1249.4	1229.0	1207.0
20°	1245.1	1229.0	1204.1	1180.7
22.5°	1218.7	1204.1	1177.7	1152.7
25°	1189.4	1173.3	1146.8	1120.4
27.5°	1158.7	1139.5	1113.1	1086.7
30°	1123.4	1104.4	1078.0	1051.5
32.5°	1085.3	1067.7	1041.3	1013.4
35°	1047.1	1028.1	1001.7	973.8
37.5°	1004.7	987.0	960.7	934.1
40°	959.1	941.5	915.1	888.7
42.5°	916.7	900.4	874.1	849.1
45°	869.7	853.6	828.7	805.1
47.5°	821.3	805.1	781.7	758.3
50°	774.4	758.3	736.3	714.3
52.5°	721.6	708.4	687.8	667.3
55°	670.3	657.0	636.4	617.4
57.5°	619.0	607.1	588.1	570.4
60°	564.7	553.0	538.3	522.1
62.5°	513.3	503.0	488.4	473.7
65°	459.0	450.3	437.0	423.8
67.5°	403.3	396.0	384.3	372.4
70°	347.6	338.7	330.0	319.7
72.5°	291.9	287.4	278.7	269.9
75°	239.0	234.7	227.3	220.0
77.5°	189.3	184.7	179.0	173.0
80°	139.3	136.4	132.0	127.6
82.5°	96.7	93.9	91.0	86.6
85°	58.7	55.7	52.7	49.9
87.5°	26.4	25.0	22.0	20.6
90°	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





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















(END OF REPORT)