

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: P735639

Luminaire Tested: **4APN6-39-B2750-W2D-CP250-3000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735639
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-CP250-3000K
Description: 4FT 3900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3000K CCT, AND CP250 LENS

Light Source: -
Ballast/Driver: -

Summary

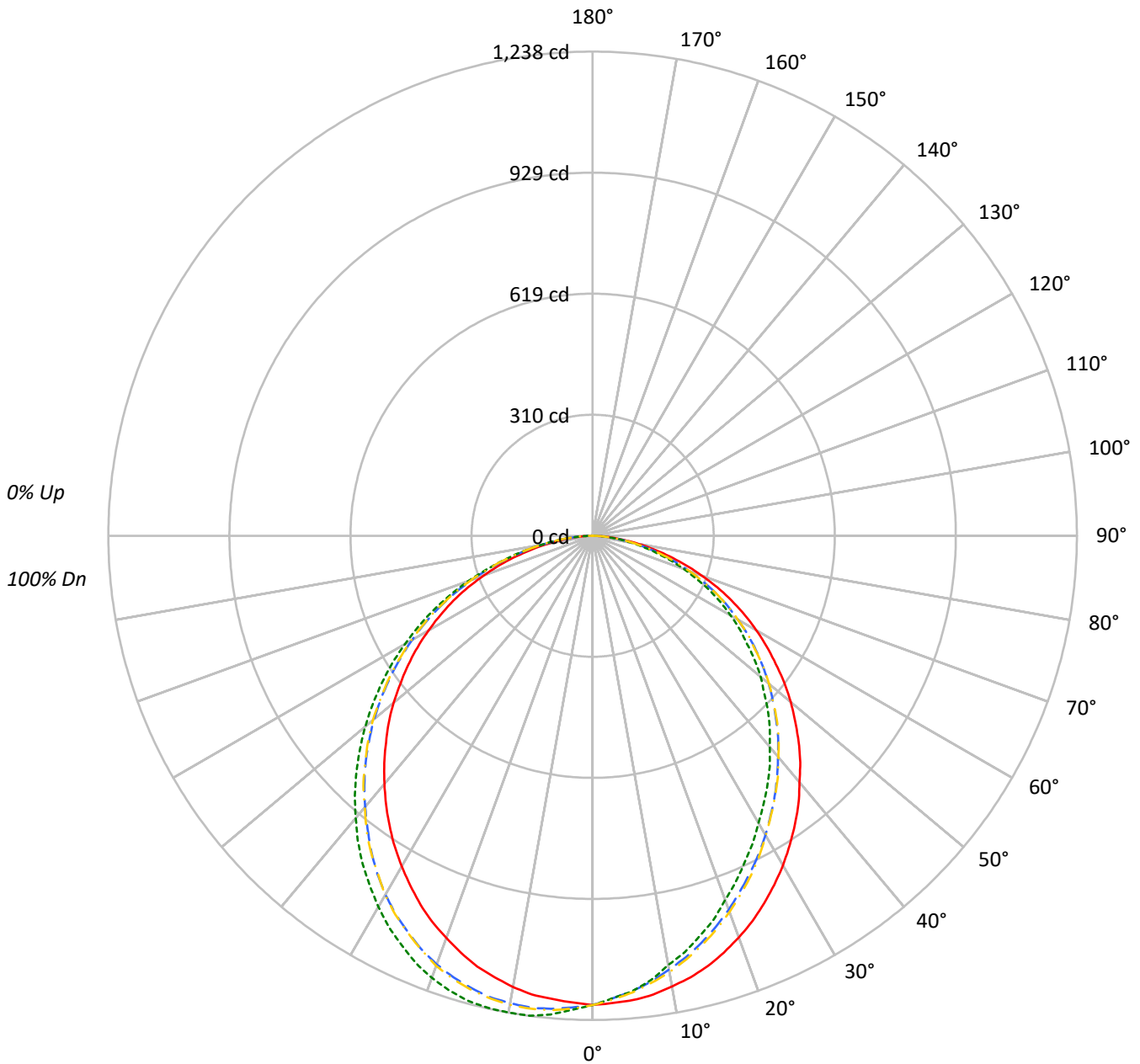
Lumens per Lamp: N/A
Luminaire Lumens: 3218.0 lumens
Efficiency: N/A
Efficacy: 65.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 49.1
Input Voltage (V): NR
Input Current (A_{in}): 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°	11070	11070	11070	11070
5°	11038	10824	11012	11378
10°	10961	10440	10974	11596
15°	10877	10113	10891	11758
20°	10728	9729	10741	11808
25°	10557	9369	10597	11759
30°	10367	9038	10397	11669
35°	10150	8775	10196	11542
40°	9906	8484	9972	11344
45°	9722	8271	9742	11139
50°	9489	8047	9526	10890
55°	9191	7752	9256	10589
60°	8916	7514	8942	10219
65°	8562	7200	8562	9778
70°	7982	6666	7947	9115
75°	7258	6049	7162	8181
80°	6275	5196	6062	6997
85°	4891	3885	4605	5748



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.4	3.5
10°-20°	321.8	10.0
20°-30°	478.4	14.9
30°-40°	563.8	17.5
40°-50°	574.1	17.8
50°-60°	511.4	15.9
60°-70°	385.3	12.0
70°-80°	214.3	6.7
80°-90°	55.7	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°	913.5	28.4
0°-40°	1477.3	45.9
0°-60°	2562.8	79.6
0°-90°	3218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3218.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1200	1200	1200	1200	1200	
5°	1192	1169	1189	1228	1192	113
15°	1139	1059	1140	1231	1139	321
25°	1037	920	1041	1155	1037	478
35°	901	779	905	1025	901	564
45°	745	634	747	854	745	574
55°	571	482	575	658	571	512
65°	392	330	392	448	392	387
75°	204	170	201	230	204	216
85°	46	37	44	54	46	56
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°	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8
2.5°	1195.8	1195.8	1197.1	1191.8	1185.0	1182.2	1180.9	1179.5	1182.2	1183.5	1182.2
5°	1191.8	1189.0	1186.3	1179.5	1171.4	1165.9	1163.2	1161.9	1164.6	1168.7	1164.6
7.5°	1183.5	1178.2	1172.7	1163.2	1153.8	1145.6	1141.5	1138.8	1141.5	1145.6	1142.8
10°	1170.0	1163.2	1155.1	1144.3	1130.7	1121.2	1117.1	1113.1	1114.4	1114.4	1114.4
12.5°	1156.4	1147.0	1137.5	1123.9	1108.9	1098.0	1091.3	1085.9	1088.5	1090.0	1090.0
15°	1138.8	1126.6	1113.1	1098.0	1083.2	1070.9	1062.8	1057.3	1058.8	1058.8	1060.1
17.5°	1117.1	1103.5	1090.0	1072.3	1054.6	1041.0	1031.6	1024.8	1027.4	1028.9	1030.2
20°	1092.7	1077.7	1062.8	1043.7	1024.8	1009.8	1000.3	992.2	990.9	990.9	992.2
22.5°	1066.9	1050.5	1032.9	1012.6	992.2	975.9	966.3	958.3	957.0	957.0	958.3
25°	1037.0	1019.3	1001.7	981.4	959.6	943.4	931.1	923.0	921.6	920.3	923.0
27.5°	1005.8	988.2	970.5	950.2	927.1	910.8	898.5	890.4	887.6	886.4	889.1
30°	973.1	952.8	933.9	912.0	891.7	875.5	863.2	853.7	851.1	848.4	851.1
32.5°	937.9	917.5	897.2	875.5	855.2	838.8	826.6	817.2	814.4	813.0	815.7
35°	901.2	880.9	862.0	840.1	819.8	803.6	791.3	783.3	780.5	779.1	780.5
37.5°	864.5	844.3	825.3	803.6	783.3	766.9	754.7	746.6	745.1	743.8	745.1
40°	822.5	804.9	785.8	765.5	745.1	729.0	719.4	709.9	707.1	704.4	708.6
42.5°	785.8	768.2	749.3	730.3	709.9	693.6	682.7	674.7	671.9	670.5	671.9
45°	745.1	726.2	707.1	689.5	670.5	655.6	644.8	636.5	635.2	633.9	635.2
47.5°	701.8	685.5	669.2	651.6	632.5	617.6	608.1	600.0	597.3	594.5	597.3
50°	661.1	644.8	628.4	612.1	594.5	580.9	571.4	563.3	561.9	560.6	561.9
52.5°	617.6	601.3	586.4	570.1	555.1	541.5	532.1	525.3	523.9	522.6	523.9
55°	571.4	557.8	544.3	530.7	515.8	503.5	495.5	487.2	484.6	481.9	484.6
57.5°	527.9	515.8	502.2	488.7	475.1	464.3	456.0	449.2	447.9	446.5	447.9
60°	483.2	472.3	460.1	447.9	434.4	423.5	416.8	411.3	408.5	407.2	408.5
62.5°	438.4	427.6	418.0	405.8	393.6	385.4	378.6	373.3	370.5	369.2	370.5
65°	392.2	382.8	373.3	362.5	352.9	344.7	337.9	332.6	331.1	329.8	329.8
67.5°	344.7	336.6	328.5	319.0	308.2	299.9	293.1	289.1	287.8	286.3	287.8
70°	295.9	289.1	281.0	272.8	264.7	257.9	253.9	249.8	248.4	247.1	247.1
72.5°	249.8	244.3	237.5	230.8	224.0	217.2	213.1	210.4	209.1	207.7	207.7
75°	203.6	198.1	194.1	188.7	182.0	177.8	173.7	171.0	169.7	169.7	169.7
77.5°	160.1	156.1	152.1	146.6	142.5	138.5	135.7	134.4	133.0	133.0	133.0
80°	118.1	115.4	112.6	109.9	105.8	101.8	100.5	99.1	97.8	97.8	97.8
82.5°	80.2	78.7	75.9	73.4	70.6	69.2	67.9	66.6	66.6	66.6	66.6
85°	46.2	44.8	43.5	42.0	40.7	40.7	39.4	38.0	36.7	36.7	36.7
87.5°	19.1	19.1	19.1	17.6	16.3	16.3	16.3	16.3	16.3	16.3	16.3
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°	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8
2.5°	1179.5	1182.2	1185.0	1189.0	1193.1	1197.1	1195.8	1194.5	1199.8	1206.6	1208.1
5°	1161.9	1164.6	1168.7	1175.4	1182.2	1187.7	1189.0	1189.0	1199.8	1209.4	1212.1
7.5°	1140.2	1144.3	1149.6	1156.4	1165.9	1174.2	1178.2	1183.5	1194.5	1206.6	1212.1
10°	1113.1	1119.9	1127.9	1137.5	1147.0	1156.4	1164.6	1171.4	1185.0	1198.6	1206.6
12.5°	1088.5	1095.3	1103.5	1114.4	1126.6	1138.8	1147.0	1156.4	1172.7	1189.0	1198.6
15°	1061.4	1068.1	1077.7	1088.5	1102.1	1115.7	1127.9	1140.2	1156.4	1174.2	1185.0
17.5°	1031.6	1038.4	1047.8	1061.4	1076.4	1091.3	1104.8	1118.4	1137.5	1156.4	1168.7
20°	994.9	1004.5	1016.6	1030.2	1047.8	1065.6	1079.1	1094.0	1114.4	1134.7	1148.3
22.5°	959.6	969.1	982.7	999.0	1018.1	1037.0	1053.3	1069.6	1091.3	1111.6	1126.6
25°	925.6	936.6	950.2	966.3	984.1	1003.0	1022.1	1041.0	1062.8	1084.5	1099.5
27.5°	891.7	901.2	914.8	931.1	951.5	970.5	989.5	1008.5	1031.6	1054.6	1070.9
30°	853.7	864.5	876.8	893.1	914.8	936.6	955.5	975.9	999.0	1022.1	1038.4
32.5°	818.5	828.0	840.1	856.5	878.1	899.9	920.3	941.9	963.8	986.7	1003.0
35°	783.3	792.6	804.9	821.2	842.9	864.5	884.9	905.3	927.1	948.7	965.0
37.5°	747.9	757.4	769.7	785.8	806.2	828.0	846.9	867.3	889.1	910.8	925.6
40°	711.2	720.7	730.3	746.6	766.9	788.6	807.7	828.0	849.7	871.3	886.4
42.5°	674.7	684.0	696.3	712.6	731.5	750.6	769.7	788.6	808.9	829.3	844.3
45°	638.0	646.1	658.3	673.2	692.3	709.9	729.0	746.6	766.9	785.8	800.9
47.5°	600.0	608.1	617.6	632.5	651.6	670.5	689.5	707.1	724.8	743.8	757.4
50°	563.3	571.4	582.2	595.8	613.6	631.2	647.5	663.7	681.4	699.1	711.2
52.5°	525.3	533.4	543.0	556.5	571.4	587.7	602.6	618.9	635.2	651.6	663.7
55°	487.2	492.7	500.8	513.1	529.4	545.7	560.6	575.4	590.5	604.0	616.2
57.5°	449.2	456.0	465.6	476.4	490.0	503.5	517.1	530.7	544.3	557.8	568.7
60°	411.3	416.8	423.5	432.9	446.5	458.8	472.3	484.6	496.7	509.0	518.6
62.5°	371.8	377.3	384.1	393.6	404.5	415.3	427.6	438.4	449.2	460.1	469.6
65°	331.1	336.6	343.4	351.5	361.0	370.5	381.4	392.2	400.4	408.5	418.0
67.5°	289.1	294.6	301.4	308.2	316.2	325.8	335.3	344.7	352.9	361.0	367.8
70°	248.4	252.4	259.2	264.7	271.5	278.3	286.3	294.6	299.9	306.7	314.9
72.5°	209.1	213.1	218.5	224.0	228.0	233.5	241.6	248.4	255.2	263.4	267.4
75°	171.0	173.7	177.8	182.0	186.0	190.0	195.5	200.9	206.4	210.4	215.9
77.5°	133.0	135.7	139.8	142.5	145.3	148.0	152.1	156.1	160.1	162.9	168.4
80°	97.8	100.5	103.1	105.8	108.6	111.3	112.6	114.1	119.4	123.5	126.2
82.5°	66.6	67.9	69.2	71.9	73.4	74.7	75.9	75.9	78.7	81.4	85.5
85°	38.0	39.4	40.7	40.7	40.7	40.7	42.0	43.5	44.8	47.5	50.3
87.5°	14.9	14.9	16.3	16.3	16.3	16.3	16.3	16.3	17.6	20.4	21.7
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°	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8	1199.8
2.5°	1206.6	1208.1	1210.7	1212.1	1213.4	1213.4	1214.9	1216.2	1213.4	1210.7	1209.4
5°	1213.4	1214.9	1218.9	1223.0	1225.7	1228.5	1227.0	1225.7	1223.0	1218.9	1216.2
7.5°	1214.9	1218.9	1223.0	1228.5	1232.5	1237.8	1235.2	1232.5	1227.0	1221.7	1217.5
10°	1210.7	1216.2	1223.0	1229.7	1233.8	1237.8	1235.2	1232.5	1227.0	1220.2	1214.9
12.5°	1205.3	1212.1	1220.2	1227.0	1231.0	1236.5	1232.5	1228.5	1221.7	1214.9	1208.1
15°	1193.1	1201.3	1210.7	1218.9	1225.7	1231.0	1227.0	1224.2	1216.2	1206.6	1197.1
17.5°	1178.2	1189.0	1198.6	1208.1	1213.4	1218.9	1216.2	1213.4	1203.9	1193.1	1182.2
20°	1160.6	1171.4	1180.9	1190.3	1197.1	1202.6	1198.6	1194.5	1185.0	1175.4	1164.6
22.5°	1138.8	1149.6	1160.6	1170.0	1176.7	1182.2	1176.7	1170.0	1160.6	1151.0	1140.2
25°	1111.6	1123.9	1136.0	1145.6	1149.6	1155.1	1149.6	1144.3	1134.7	1125.2	1113.1
27.5°	1084.5	1096.7	1108.9	1118.4	1122.4	1127.9	1122.4	1117.1	1107.6	1098.0	1085.9
30°	1053.3	1065.6	1077.7	1087.2	1091.3	1095.3	1090.0	1084.5	1076.4	1066.9	1054.6
32.5°	1018.1	1030.2	1039.7	1049.2	1054.6	1060.1	1054.6	1050.5	1041.0	1028.9	1016.6
35°	979.9	992.2	1004.5	1013.9	1019.3	1024.8	1018.1	1011.3	1003.0	993.5	982.7
37.5°	937.9	951.5	965.0	975.9	979.9	985.4	979.9	973.1	965.0	955.5	943.4
40°	898.5	910.8	923.0	933.9	937.9	941.9	936.6	931.1	921.6	912.0	899.9
42.5°	857.9	870.0	880.9	890.4	894.4	899.9	894.4	887.6	880.9	872.8	862.0
45°	814.4	826.6	836.1	845.6	849.7	853.7	848.4	841.6	834.8	828.0	817.2
47.5°	769.7	780.5	790.0	799.4	802.2	806.2	800.9	796.8	790.0	783.3	773.7
50°	723.5	734.3	743.8	751.9	754.7	758.7	753.4	747.9	742.5	737.0	729.0
52.5°	676.0	685.5	695.0	703.1	705.8	708.6	703.1	697.6	692.3	686.8	678.7
55°	627.2	636.5	646.1	652.8	655.6	658.3	652.8	648.8	643.3	639.3	631.2
57.5°	578.2	587.7	595.8	602.6	605.3	608.1	602.6	597.3	593.2	589.0	582.2
60°	527.9	537.5	544.3	549.7	552.5	553.8	548.3	544.3	541.5	538.9	532.1
62.5°	479.1	485.9	492.7	496.7	499.5	500.8	496.7	494.0	491.4	488.7	483.2
65°	427.6	435.7	441.2	445.2	446.5	447.9	443.9	441.2	438.4	435.7	431.6
67.5°	376.0	382.8	386.9	390.9	392.2	392.2	392.2	390.9	388.2	384.1	380.1
70°	324.3	329.8	333.9	336.6	337.9	337.9	335.3	332.6	332.6	331.1	328.5
72.5°	271.5	275.5	278.3	281.0	281.0	281.0	281.0	282.3	281.0	278.3	274.2
75°	221.2	225.3	228.0	229.5	229.5	229.5	229.5	230.8	229.5	228.0	225.3
77.5°	173.7	176.5	177.8	179.2	179.2	179.2	180.5	182.0	180.5	179.2	177.8
80°	129.0	130.2	131.7	133.0	131.7	131.7	133.0	135.7	134.4	133.0	131.7
82.5°	88.2	89.5	91.0	91.0	92.3	93.7	93.7	93.7	93.7	92.3	91.0
85°	53.0	54.3	54.3	54.3	54.3	54.3	55.6	57.0	57.0	55.6	55.6
87.5°	24.4	25.9	24.4	23.1	21.7	21.7	24.4	27.1	27.1	25.9	25.9
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: P735639

CATALOG NUMBER: 4APN6-39-B2750-W2D-CP250-3000K

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	1199.8	1199.8	1199.8	1199.8
2.5°	1210.7	1209.4	1202.6	1195.8
5°	1214.9	1210.7	1201.3	1191.8
7.5°	1214.9	1209.4	1195.8	1183.5
10°	1208.1	1199.8	1185.0	1170.0
12.5°	1199.8	1190.3	1172.7	1156.4
15°	1187.7	1176.7	1157.8	1138.8
17.5°	1170.0	1156.4	1137.5	1117.1
20°	1152.3	1137.5	1114.4	1092.7
22.5°	1127.9	1114.4	1090.0	1066.9
25°	1100.8	1085.9	1061.4	1037.0
27.5°	1072.3	1054.6	1030.2	1005.8
30°	1039.7	1022.1	997.7	973.1
32.5°	1004.5	988.2	963.8	937.9
35°	969.1	951.5	927.1	901.2
37.5°	929.8	913.5	889.1	864.5
40°	887.6	871.3	846.9	822.5
42.5°	848.4	833.3	808.9	785.8
45°	804.9	790.0	766.9	745.1
47.5°	760.1	745.1	723.5	701.8
50°	716.7	701.8	681.4	661.1
52.5°	667.9	655.6	636.5	617.6
55°	620.4	608.1	589.0	571.4
57.5°	572.9	561.9	544.3	527.9
60°	522.6	511.8	498.2	483.2
62.5°	475.1	465.6	452.0	438.4
65°	424.8	416.8	404.5	392.2
67.5°	373.3	366.5	355.7	344.7
70°	321.7	313.5	305.4	295.9
72.5°	270.2	266.0	257.9	249.8
75°	221.2	217.2	210.4	203.6
77.5°	175.2	171.0	165.6	160.1
80°	129.0	126.2	122.2	118.1
82.5°	89.5	86.9	84.2	80.2
85°	54.3	51.5	48.8	46.2
87.5°	24.4	23.1	20.4	19.1
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)