

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: P858468

Luminaire Tested: **LD4C20W2N2050D010 4LBSWNL1_5000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858468
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: LD4C20W2N2050D010 4LBSWNLI_5000K
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, W2N2050 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

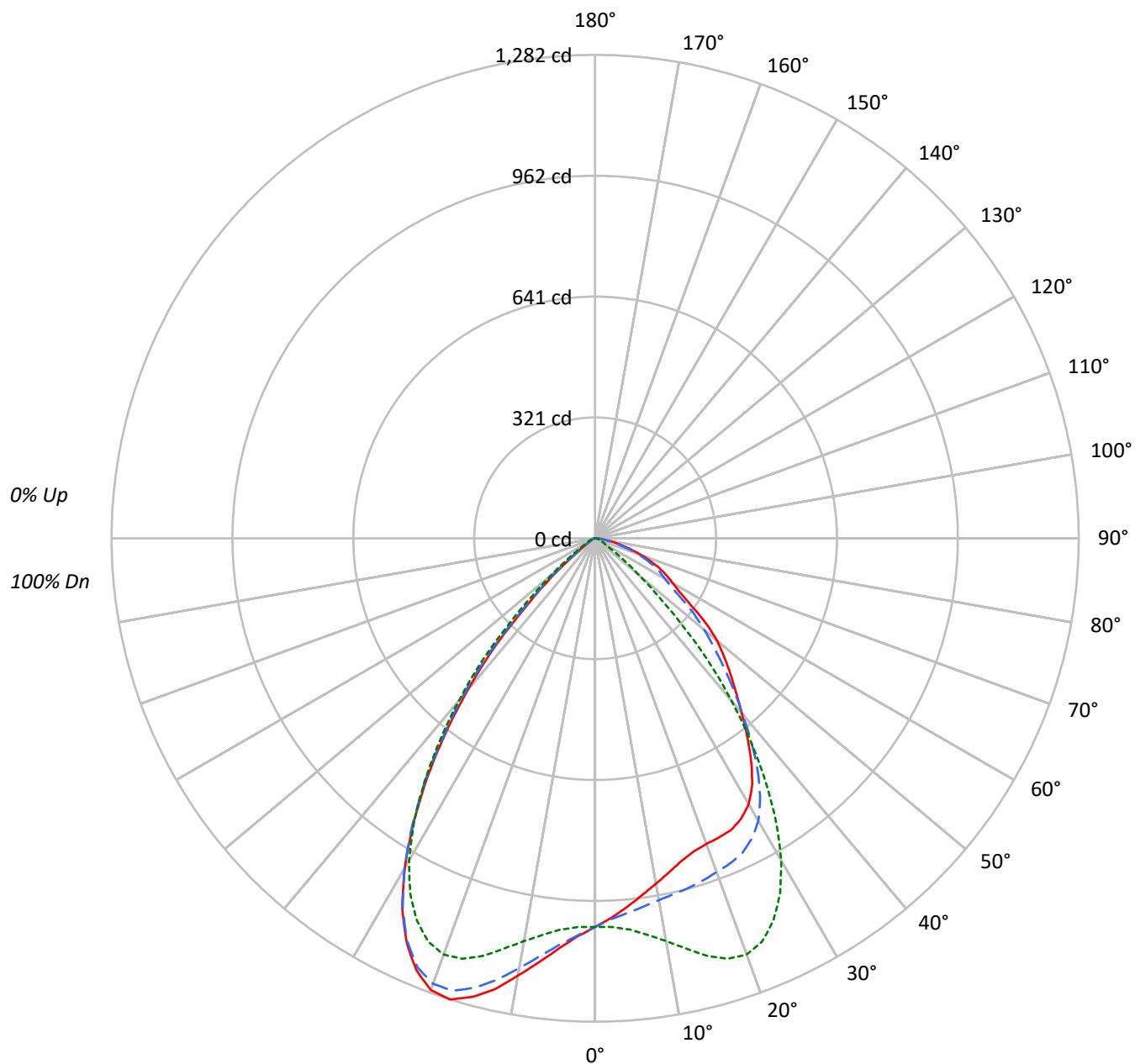
Lumens per Lamp: N/A
Luminaire Lumens: 1902.0 lumens
Efficiency: N/A
Efficacy: 74.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 25.4
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: P858468

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNL1_5000K

Luminous Intensity Polar Plot





TEST NUMBER: P858468

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNL1_5000K

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						
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°	126625	126625	126625
5°	120967	128441	134570
10°	115991	135290	146879
15°	112612	145807	160180
20°	112761	153578	166599
25°	115641	151576	160319
30°	115473	139916	143150
35°	108163	118256	116637
40°	96882	90194	84164
45°	87896	57265	46980
50°	80751	29051	20068
55°	66291	12980	6618
60°	58183	7273	3636
65°	54767	5465	2733
70°	46876	4346	2407
75°	35743	3180	1946
80°	25682	1910	990
85°	18888	0	0



TEST NUMBER: P858468

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNL1_5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	5.3
10°-20°	312.0	16.4
20°-30°	482.7	25.4
30°-40°	475.6	25.0
40°-50°	292.1	15.4
50°-60°	129.9	6.8
60°-70°	72.5	3.8
70°-80°	31.4	1.7
80°-90°	5.6	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°	894.9	47.0
0°-40°	1370.5	72.1
0°-60°	1792.5	94.2
0°-90°	1902.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1902.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1031	1031	1031	1031	1031	
5°	981	997	1042	1082	1091	92
15°	885	959	1146	1234	1259	251
25°	853	922	1118	1179	1183	391
35°	721	751	788	786	778	448
45°	506	480	330	288	270	392
55°	310	280	61	35	31	284
65°	188	170	19	11	9	184
75°	75	65	7	4	4	83
85°	13	11	0	0	0	17
90°	0	0	0	0	0	



TEST NUMBER: P858468

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNLI_5000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7
2.5°	1006.5	1006.5	1006.5	1006.5	1009.1	1005.1	1009.1	1009.1	1013.2	1014.5	1010.5
5°	980.9	979.6	980.9	980.9	983.6	982.3	986.3	989.0	994.4	997.1	997.1
7.5°	954.0	954.0	954.0	956.7	960.7	959.4	963.4	967.4	975.5	980.9	984.9
10°	929.8	928.4	932.4	933.8	937.8	937.8	944.6	948.6	958.0	968.8	974.2
12.5°	906.9	905.6	908.2	912.3	919.0	919.0	924.4	931.1	944.6	956.7	966.1
15°	885.4	886.7	890.7	893.4	901.5	901.5	908.2	916.3	931.1	945.9	959.4
17.5°	870.6	871.9	874.6	878.6	886.7	886.7	893.4	902.9	919.0	935.1	951.3
20°	862.5	863.9	866.5	870.6	877.3	878.6	884.0	894.8	909.6	927.1	941.9
22.5°	858.5	861.2	863.9	866.5	873.2	873.2	880.0	888.1	902.9	920.4	933.8
25°	853.1	855.7	857.1	861.2	866.5	866.5	870.6	880.0	893.4	908.2	921.7
27.5°	838.3	841.0	842.3	846.4	851.7	850.4	855.7	862.5	874.6	888.1	898.8
30°	814.0	815.4	818.1	819.4	823.5	823.5	827.5	834.2	842.3	854.4	865.2
32.5°	775.0	777.7	779.1	780.4	784.5	783.1	784.5	788.5	796.5	807.3	814.0
35°	721.2	726.6	726.6	729.3	730.6	729.3	729.3	734.7	738.7	746.8	750.8
37.5°	662.0	666.1	664.7	667.4	668.8	664.7	667.4	668.8	674.1	678.1	679.5
40°	604.1	605.5	605.5	605.5	605.5	604.1	605.5	606.8	610.9	610.9	606.8
42.5°	551.7	553.0	553.0	550.3	553.0	551.7	551.7	551.7	551.7	546.3	542.2
45°	505.9	507.3	507.3	505.9	505.9	503.2	501.9	500.5	496.5	489.8	480.3
47.5°	462.8	465.5	466.9	464.2	462.8	460.2	460.2	452.1	446.7	438.7	425.2
50°	422.5	425.2	425.2	422.5	422.5	418.5	414.5	411.7	403.6	394.3	378.1
52.5°	371.4	375.4	375.4	374.1	374.1	368.7	367.3	361.9	355.2	344.4	331.0
55°	309.5	314.9	313.5	312.2	309.5	309.5	309.5	305.4	301.4	293.3	279.9
57.5°	265.1	266.4	266.4	265.1	265.1	262.4	262.4	258.4	257.0	248.9	238.2
60°	236.8	236.8	238.2	236.8	235.5	234.1	232.8	230.1	226.0	220.7	212.6
62.5°	213.9	215.3	215.3	213.9	212.6	211.2	209.9	207.2	204.5	200.5	192.4
65°	188.4	191.0	189.7	188.4	187.0	185.7	185.7	183.0	180.3	177.6	169.5
67.5°	160.1	161.5	162.8	160.1	160.1	158.8	158.8	156.1	154.7	149.3	144.0
70°	130.5	131.8	131.8	130.5	130.5	129.2	129.2	127.8	126.5	122.5	117.1
72.5°	102.3	103.6	102.3	100.9	100.9	100.9	99.6	98.2	96.9	94.2	90.1
75°	75.3	75.3	76.7	75.3	74.0	74.0	72.6	72.6	70.0	68.6	64.6
77.5°	53.8	55.1	53.8	53.8	52.5	51.1	51.1	49.8	49.8	48.4	45.8
80°	36.3	36.3	37.7	36.3	35.0	36.3	35.0	33.6	33.6	32.3	29.6
82.5°	22.9	24.2	22.9	22.9	22.9	22.9	22.9	21.5	21.5	20.2	18.8
85°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	12.1	12.1	12.1	10.8
87.5°	6.7	6.7	5.4	5.4	6.7	6.7	6.7	5.4	5.4	5.4	5.4
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: P858468

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNL1_5000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7
2.5°	1015.9	1017.2	1019.9	1024.0	1024.0	1021.3	1028.0	1028.0	1030.7	1032.0	1037.4
5°	1005.1	1007.8	1013.2	1019.9	1021.3	1019.9	1029.3	1033.4	1037.4	1041.5	1049.5
7.5°	995.7	1001.1	1010.5	1019.9	1024.0	1024.0	1038.8	1044.1	1052.2	1060.3	1069.7
10°	990.3	998.4	1011.8	1026.6	1030.7	1034.7	1052.2	1063.0	1073.7	1084.5	1098.0
12.5°	983.6	998.4	1015.9	1034.7	1042.8	1048.2	1072.4	1085.8	1100.7	1114.1	1131.6
15°	982.3	999.8	1022.6	1046.8	1057.6	1065.7	1092.6	1111.4	1128.9	1146.4	1163.9
17.5°	976.9	998.4	1026.6	1053.6	1067.0	1077.8	1108.7	1131.6	1151.8	1169.3	1189.5
20°	970.1	994.4	1025.3	1054.9	1069.7	1080.5	1114.1	1135.7	1158.5	1174.7	1193.5
22.5°	960.7	984.9	1015.9	1045.5	1059.0	1068.3	1102.0	1120.8	1141.0	1157.2	1174.7
25°	944.6	967.4	994.4	1018.6	1032.0	1040.1	1069.7	1087.2	1102.0	1118.2	1134.3
27.5°	921.7	939.2	962.1	979.6	987.6	995.7	1019.9	1034.7	1048.2	1061.6	1072.4
30°	881.3	894.8	910.9	925.7	933.8	935.1	958.0	966.1	976.9	986.3	994.4
32.5°	827.5	838.3	847.7	855.7	861.2	862.5	880.0	882.7	893.4	893.4	905.6
35°	758.9	764.3	771.0	771.0	775.0	771.0	783.1	785.8	787.2	788.5	797.9
37.5°	680.8	683.5	687.6	679.5	679.5	675.5	679.5	682.2	676.8	676.8	683.5
40°	606.8	601.4	596.1	588.0	584.0	575.9	575.9	569.2	565.1	562.4	563.8
42.5°	535.5	523.4	511.3	493.8	485.7	477.7	469.6	460.2	457.5	450.8	446.7
45°	466.9	449.4	433.3	405.0	388.9	380.8	363.3	344.4	332.4	329.6	318.9
47.5°	409.0	383.5	356.6	322.9	306.8	292.0	266.4	250.3	234.1	226.0	219.3
50°	357.9	335.1	300.1	263.7	243.5	228.7	200.5	181.7	164.2	152.0	144.0
52.5°	313.5	287.9	255.7	213.9	193.8	177.6	146.7	125.1	110.3	98.2	88.8
55°	263.7	243.5	211.2	172.2	152.0	133.2	106.3	83.4	68.6	60.6	53.8
57.5°	227.4	209.9	179.0	141.3	122.5	105.0	78.0	59.2	47.1	39.0	35.0
60°	203.2	187.0	160.1	123.8	106.3	90.1	64.6	47.1	36.3	29.6	26.9
62.5°	183.0	166.8	142.6	109.0	94.2	78.0	55.1	39.0	29.6	24.2	20.2
65°	160.1	145.3	123.8	94.2	80.7	67.3	47.1	32.3	24.2	18.8	16.1
67.5°	135.9	122.5	103.6	78.0	67.3	56.5	37.7	26.9	20.2	16.1	13.4
70°	110.3	99.6	82.1	63.3	53.8	44.4	30.9	21.5	14.8	12.1	10.8
72.5°	84.8	75.3	63.3	48.4	40.4	33.6	22.9	16.1	12.1	9.4	8.1
75°	60.6	53.8	44.4	35.0	29.6	24.2	17.5	12.1	8.1	6.7	5.4
77.5°	41.7	37.7	30.9	24.2	20.2	17.5	12.1	8.1	6.7	5.4	4.1
80°	26.9	24.2	20.2	14.8	12.1	10.8	6.7	5.4	4.1	2.7	2.7
82.5°	16.1	14.8	12.1	8.1	6.7	5.4	4.1	2.7	2.7	1.4	1.4
85°	9.4	8.1	5.4	4.1	4.1	2.7	2.7	1.4	1.4	0.0	0.0
87.5°	4.1	2.7	2.7	1.4	1.4	1.4	1.4	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: P858468

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNL1_5000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7
2.5°	1034.7	1041.5	1040.1	1044.1	1042.8	1042.8	1049.5	1046.8	1053.6	1053.6	1054.9
5°	1049.5	1059.0	1059.0	1065.7	1064.3	1067.0	1073.7	1073.7	1081.8	1084.5	1084.5
7.5°	1071.0	1083.2	1085.8	1092.6	1093.9	1099.3	1104.7	1106.0	1116.8	1119.5	1120.8
10°	1100.7	1115.5	1119.5	1126.2	1128.9	1134.3	1141.0	1143.7	1157.2	1158.5	1163.9
12.5°	1137.0	1153.1	1157.2	1165.2	1166.6	1173.3	1182.7	1185.4	1198.9	1202.9	1206.9
15°	1172.0	1186.7	1193.5	1201.6	1202.9	1211.0	1219.1	1221.7	1233.9	1239.2	1243.3
17.5°	1196.2	1213.7	1217.7	1228.5	1228.5	1235.2	1243.3	1246.0	1258.1	1262.1	1264.8
20°	1201.6	1217.7	1223.1	1231.2	1232.5	1236.6	1243.3	1246.0	1256.8	1258.1	1262.1
22.5°	1181.4	1197.6	1200.2	1208.3	1209.6	1213.7	1219.1	1217.7	1231.2	1229.8	1231.2
25°	1138.4	1153.1	1153.1	1162.5	1161.2	1165.2	1167.9	1166.6	1178.7	1178.7	1178.7
27.5°	1076.4	1089.9	1091.2	1098.0	1093.9	1095.3	1098.0	1096.6	1104.7	1104.7	1104.7
30°	999.8	1010.5	1006.5	1011.8	1009.1	1011.8	1009.1	1007.8	1010.5	1013.2	1011.8
32.5°	904.2	912.3	912.3	913.6	913.6	905.6	902.9	902.9	901.5	900.2	900.2
35°	793.9	800.6	797.9	797.9	796.5	788.5	784.5	781.8	785.8	777.7	783.1
37.5°	680.8	682.2	678.1	676.8	670.1	670.1	663.4	657.9	660.6	659.3	653.9
40°	557.1	562.4	554.4	551.7	555.7	550.3	543.6	536.9	542.2	535.5	538.2
42.5°	436.0	434.6	431.9	431.9	431.9	423.8	422.5	421.1	422.5	417.1	413.1
45°	314.9	310.8	306.8	306.8	301.4	298.7	298.7	294.7	287.9	287.9	279.9
47.5°	212.6	203.2	200.5	199.2	196.5	196.5	193.8	191.0	189.7	183.0	183.0
50°	138.6	129.2	126.5	125.1	126.5	123.8	121.1	118.4	115.7	114.4	111.7
52.5°	83.4	79.4	76.7	75.3	72.6	71.3	70.0	67.3	65.9	65.9	64.6
55°	49.8	45.8	40.4	40.4	40.4	39.0	37.7	36.3	35.0	35.0	33.6
57.5°	30.9	28.3	25.6	24.2	24.2	24.2	22.9	22.9	22.9	22.9	21.5
60°	22.9	20.2	18.8	18.8	18.8	17.5	17.5	17.5	17.5	16.1	16.1
62.5°	17.5	16.1	14.8	14.8	13.4	13.4	13.4	13.4	13.4	13.4	12.1
65°	14.8	12.1	12.1	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
67.5°	10.8	9.4	9.4	9.4	9.4	8.1	8.1	8.1	8.1	8.1	8.1
70°	8.1	8.1	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
72.5°	6.7	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
75°	5.4	5.4	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	4.1	4.1	4.1	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	2.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	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: P858468

CATALOG NUMBER: LD4C20W2N2050D010 4LBSWNL1_5000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7	1030.7
2.5°	1054.9	1061.6	1054.9	1054.9	1059.0	1057.6	1060.3	1056.3
5°	1085.8	1095.3	1088.5	1087.2	1093.9	1092.6	1093.9	1091.2
7.5°	1123.5	1133.0	1126.2	1126.2	1133.0	1131.6	1135.7	1133.0
10°	1166.6	1177.4	1167.9	1169.3	1178.7	1177.4	1177.4	1177.4
12.5°	1211.0	1221.7	1216.4	1216.4	1223.1	1224.4	1225.8	1224.4
15°	1247.3	1258.1	1251.4	1251.4	1260.8	1259.4	1260.8	1259.4
17.5°	1268.8	1279.6	1271.6	1271.6	1279.6	1279.6	1280.9	1282.3
20°	1263.4	1275.6	1268.8	1266.1	1275.6	1275.6	1274.3	1274.3
22.5°	1232.5	1243.3	1237.9	1235.2	1241.9	1239.2	1237.9	1239.2
25°	1178.7	1189.5	1178.7	1178.7	1184.1	1182.7	1184.1	1182.7
27.5°	1106.0	1114.1	1103.3	1102.0	1107.4	1104.7	1103.3	1107.4
30°	1009.1	1017.2	1011.8	1007.8	1014.5	1010.5	1007.8	1009.1
32.5°	898.8	904.2	901.5	894.8	898.8	896.1	894.8	896.1
35°	777.7	784.5	773.7	772.3	779.1	773.7	771.0	777.7
37.5°	652.6	660.6	651.3	652.6	648.6	649.9	647.2	651.3
40°	534.2	532.9	530.2	528.8	530.2	526.1	528.8	524.8
42.5°	406.3	409.0	407.7	406.3	407.7	402.3	399.6	405.0
45°	282.6	281.2	278.6	275.8	275.8	274.5	274.5	270.4
47.5°	181.7	180.3	174.9	176.3	179.0	176.3	172.2	177.6
50°	110.3	109.0	109.0	107.6	110.3	107.6	105.0	105.0
52.5°	61.9	61.9	60.6	60.6	60.6	60.6	59.2	57.9
55°	33.6	32.3	32.3	32.3	30.9	30.9	30.9	30.9
57.5°	21.5	21.5	21.5	21.5	21.5	21.5	20.2	20.2
60°	16.1	16.1	16.1	16.1	14.8	16.1	14.8	14.8
62.5°	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
65°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
67.5°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
70°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
72.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
75°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)