

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: P858510

Luminaire Tested: **LD4C20W2N2765D010 4LBSWNL1_6500K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858510
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: LD4C20W2N2765D010 4LBSWNLI_6500K
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 6500K, W2N2765 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

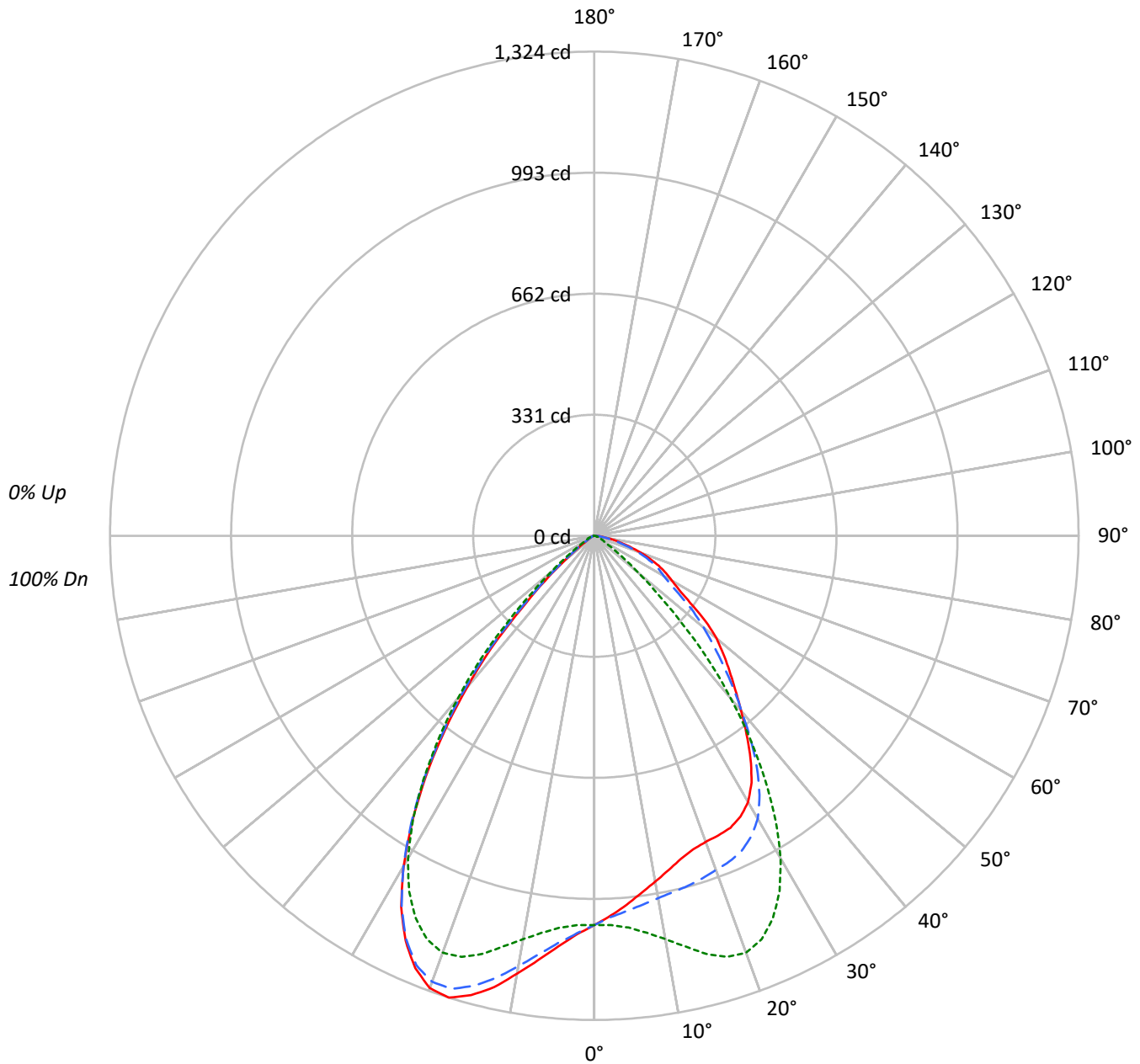
Lumens per Lamp: N/A
Luminaire Lumens: 1964.0 lumens
Efficiency: N/A
Efficacy: 77.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

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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	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°	130753	130753	130753
5°	124914	132621	138960
10°	119771	139706	151657
15°	116275	150564	165407
20°	116435	158585	172025
25°	119409	156510	165552
30°	119247	144469	147817
35°	111687	122111	120446
40°	100041	93145	86907
45°	90762	59141	48509
50°	83388	30007	20718
55°	68455	13387	6854
60°	60075	7519	3759
65°	56540	5640	2820
70°	48420	4490	2514
75°	36929	3323	1994
80°	26531	1981	990
85°	19593	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	5.3
10°-20°	322.2	16.4
20°-30°	498.5	25.4
30°-40°	491.1	25.0
40°-50°	301.6	15.4
50°-60°	134.1	6.8
60°-70°	74.9	3.8
70°-80°	32.4	1.7
80°-90°	5.8	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°	924.1	47.0
0°-40°	1415.2	72.1
0°-60°	1850.9	94.2
0°-90°	1964.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1964.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1064	1064	1064	1064	1064	
5°	1013	1030	1075	1117	1127	95
15°	914	991	1184	1274	1300	259
25°	881	952	1155	1217	1221	404
35°	745	775	814	811	803	462
45°	522	496	340	297	279	405
55°	320	289	62	36	32	294
65°	194	175	19	11	10	190
75°	78	67	7	4	4	86
85°	14	11	0	0	0	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3
2.5°	1039.3	1039.3	1039.3	1039.3	1042.0	1037.9	1042.0	1042.0	1046.2	1047.6	1043.5
5°	1012.9	1011.5	1012.9	1012.9	1015.6	1014.3	1018.4	1021.2	1026.8	1029.6	1029.6
7.5°	985.1	985.1	985.1	987.9	992.0	990.7	994.8	999.0	1007.3	1012.9	1017.1
10°	960.1	958.7	962.8	964.3	968.4	968.4	975.4	979.5	989.2	1000.4	1005.9
12.5°	936.4	935.1	937.9	942.0	949.0	949.0	954.5	961.5	975.4	987.9	997.6
15°	914.2	915.6	919.8	922.6	930.9	930.9	937.9	946.2	961.5	976.8	990.7
17.5°	898.9	900.3	903.1	907.3	915.6	915.6	922.6	932.3	949.0	965.6	982.3
20°	890.6	892.0	894.8	898.9	905.9	907.3	912.9	924.0	939.2	957.3	972.6
22.5°	886.5	889.2	892.0	894.8	901.7	901.7	908.7	917.0	932.3	950.4	964.3
25°	880.9	883.6	885.1	889.2	894.8	894.8	898.9	908.7	922.6	937.9	951.7
27.5°	865.6	868.4	869.8	873.9	879.5	878.1	883.6	890.6	903.1	917.0	928.1
30°	840.6	842.0	844.8	846.1	850.3	850.3	854.5	861.4	869.8	882.3	893.4
32.5°	800.3	803.1	804.5	805.8	810.0	808.6	810.0	814.2	822.5	833.7	840.6
35°	744.7	750.3	750.3	753.0	754.5	753.0	753.0	758.6	762.8	771.1	775.3
37.5°	683.6	687.8	686.4	689.1	690.6	686.4	689.1	690.6	696.1	700.2	701.7
40°	623.8	625.2	625.2	625.2	625.2	623.8	625.2	626.6	630.8	630.8	626.6
42.5°	569.7	571.1	571.1	568.2	571.1	569.7	569.7	569.7	569.7	564.1	559.9
45°	522.4	523.8	523.8	522.4	522.4	519.6	518.3	516.9	512.7	505.8	496.0
47.5°	477.9	480.7	482.1	479.4	477.9	475.2	475.2	466.8	461.3	452.9	439.1
50°	436.3	439.1	439.1	436.3	436.3	432.1	428.0	425.1	416.8	407.1	390.4
52.5°	383.5	387.6	387.6	386.3	386.3	380.7	379.3	373.7	366.8	355.7	341.8
55°	319.6	325.1	323.7	322.4	319.6	319.6	319.6	315.4	311.2	302.9	289.0
57.5°	273.7	275.1	275.1	273.7	273.7	270.9	270.9	266.8	265.4	257.0	245.9
60°	244.5	244.5	245.9	244.5	243.2	241.7	240.4	237.6	233.4	227.9	219.5
62.5°	220.9	222.3	222.3	220.9	219.5	218.1	216.8	214.0	211.2	207.0	198.7
65°	194.5	197.3	195.9	194.5	193.1	191.7	191.7	188.9	186.2	183.4	175.1
67.5°	165.3	166.7	168.1	165.3	165.3	164.0	164.0	161.2	159.8	154.2	148.7
70°	134.8	136.1	136.1	134.8	134.8	133.4	133.4	132.0	130.6	126.5	120.9
72.5°	105.6	107.0	105.6	104.2	104.2	104.2	102.8	101.4	100.1	97.3	93.1
75°	77.8	77.8	79.2	77.8	76.4	76.4	75.0	75.0	72.2	70.9	66.7
77.5°	55.6	56.9	55.6	55.6	54.2	52.8	52.8	51.4	51.4	50.0	47.2
80°	37.5	37.5	38.9	37.5	36.1	37.5	36.1	34.7	34.7	33.4	30.6
82.5°	23.6	25.0	23.6	23.6	23.6	23.6	23.6	22.2	22.2	20.8	19.4
85°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	12.5	12.5	12.5	11.1
87.5°	7.0	7.0	5.6	5.6	7.0	7.0	7.0	5.6	5.6	5.6	5.6
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3
2.5°	1049.0	1050.4	1053.1	1057.3	1057.3	1054.6	1061.5	1061.5	1064.3	1065.7	1071.2
5°	1037.9	1040.7	1046.2	1053.1	1054.6	1053.1	1062.9	1067.1	1071.2	1075.4	1083.7
7.5°	1028.2	1033.7	1043.5	1053.1	1057.3	1057.3	1072.6	1078.2	1086.5	1094.8	1104.6
10°	1022.6	1030.9	1044.8	1060.1	1064.3	1068.4	1086.5	1097.6	1108.7	1119.9	1133.8
12.5°	1015.6	1030.9	1049.0	1068.4	1076.8	1082.3	1107.4	1121.2	1136.5	1150.4	1168.5
15°	1014.3	1032.3	1056.0	1081.0	1092.1	1100.4	1128.2	1147.6	1165.7	1183.8	1201.9
17.5°	1008.7	1030.9	1060.1	1087.9	1101.8	1112.9	1144.9	1168.5	1189.3	1207.4	1228.3
20°	1001.8	1026.8	1058.8	1089.3	1104.6	1115.7	1150.4	1172.7	1196.3	1213.0	1232.4
22.5°	992.0	1017.1	1049.0	1079.5	1093.5	1103.2	1137.9	1157.4	1178.2	1194.9	1213.0
25°	975.4	999.0	1026.8	1051.8	1065.7	1074.0	1104.6	1122.7	1137.9	1154.6	1171.3
27.5°	951.7	969.8	993.4	1011.5	1019.8	1028.2	1053.1	1068.4	1082.3	1096.3	1107.4
30°	910.0	924.0	940.6	955.9	964.3	965.6	989.2	997.6	1008.7	1018.4	1026.8
32.5°	854.5	865.6	875.3	883.6	889.2	890.6	908.7	911.5	922.6	922.6	935.1
35°	783.6	789.2	796.1	796.1	800.3	796.1	808.6	811.4	812.8	814.2	823.9
37.5°	703.0	705.8	710.0	701.7	701.7	697.5	701.7	704.4	698.9	698.9	705.8
40°	626.6	621.0	615.5	607.2	603.0	594.6	594.6	587.7	583.5	580.8	582.2
42.5°	553.0	540.5	528.0	509.9	501.6	493.2	484.9	475.2	472.4	465.5	461.3
45°	482.1	464.1	447.4	418.2	401.6	393.2	375.2	355.7	343.2	340.4	329.3
47.5°	422.4	396.0	368.2	333.5	316.8	301.5	275.1	258.5	241.7	233.4	226.4
50°	369.6	346.0	309.8	272.3	251.5	236.2	207.0	187.6	169.5	157.0	148.7
52.5°	323.7	297.3	264.0	220.9	200.1	183.4	151.4	129.2	113.9	101.4	91.7
55°	272.3	251.5	218.1	177.8	157.0	137.6	109.7	86.2	70.9	62.5	55.6
57.5°	234.8	216.8	184.8	145.9	126.5	108.4	80.6	61.1	48.6	40.3	36.1
60°	209.8	193.1	165.3	127.8	109.7	93.1	66.7	48.6	37.5	30.6	27.8
62.5°	188.9	172.3	147.3	112.5	97.3	80.6	56.9	40.3	30.6	25.0	20.8
65°	165.3	150.1	127.8	97.3	83.3	69.5	48.6	33.4	25.0	19.4	16.7
67.5°	140.3	126.5	107.0	80.6	69.5	58.4	38.9	27.8	20.8	16.7	13.9
70°	113.9	102.8	84.8	65.3	55.6	45.8	32.0	22.2	15.3	12.5	11.1
72.5°	87.5	77.8	65.3	50.0	41.7	34.7	23.6	16.7	12.5	9.7	8.3
75°	62.5	55.6	45.8	36.1	30.6	25.0	18.1	12.5	8.3	7.0	5.6
77.5°	43.1	38.9	32.0	25.0	20.8	18.1	12.5	8.3	7.0	5.6	4.2
80°	27.8	25.0	20.8	15.3	12.5	11.1	7.0	5.6	4.2	2.8	2.8
82.5°	16.7	15.3	12.5	8.3	7.0	5.6	4.2	2.8	2.8	1.4	1.4
85°	9.7	8.3	5.6	4.2	4.2	2.8	2.8	1.4	1.4	0.0	0.0
87.5°	4.2	2.8	2.8	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3
2.5°	1068.4	1075.4	1074.0	1078.2	1076.8	1076.8	1083.7	1081.0	1087.9	1087.9	1089.3
5°	1083.7	1093.5	1093.5	1100.4	1099.0	1101.8	1108.7	1108.7	1117.1	1119.9	1119.9
7.5°	1105.9	1118.5	1121.2	1128.2	1129.6	1135.1	1140.7	1142.1	1153.2	1156.0	1157.4
10°	1136.5	1151.8	1156.0	1162.9	1165.7	1171.3	1178.2	1181.0	1194.9	1196.3	1201.9
12.5°	1174.0	1190.7	1194.9	1203.2	1204.6	1211.5	1221.3	1224.1	1237.9	1242.1	1246.3
15°	1210.2	1225.4	1232.4	1240.7	1242.1	1250.5	1258.8	1261.6	1274.1	1279.6	1283.8
17.5°	1235.2	1253.2	1257.4	1268.5	1268.5	1275.5	1283.8	1286.6	1299.1	1303.3	1306.0
20°	1240.7	1257.4	1263.0	1271.3	1272.7	1276.9	1283.8	1286.6	1297.7	1299.1	1303.3
22.5°	1219.9	1236.6	1239.4	1247.7	1249.1	1253.2	1258.8	1257.4	1271.3	1269.9	1271.3
25°	1175.5	1190.7	1190.7	1200.4	1199.1	1203.2	1206.0	1204.6	1217.1	1217.1	1217.1
27.5°	1111.5	1125.4	1126.8	1133.8	1129.6	1131.0	1133.8	1132.3	1140.7	1140.7	1140.7
30°	1032.3	1043.5	1039.3	1044.8	1042.0	1044.8	1042.0	1040.7	1043.5	1046.2	1044.8
32.5°	933.7	942.0	942.0	943.4	943.4	935.1	932.3	932.3	930.9	929.5	929.5
35°	819.7	826.7	823.9	823.9	822.5	814.2	810.0	807.3	811.4	803.1	808.6
37.5°	703.0	704.4	700.2	698.9	691.9	691.9	685.0	679.4	682.2	680.8	675.3
40°	575.2	580.8	572.4	569.7	573.8	568.2	561.3	554.4	559.9	553.0	555.8
42.5°	450.2	448.8	446.0	446.0	446.0	437.7	436.3	434.9	436.3	430.7	426.5
45°	325.1	320.9	316.8	316.8	311.2	308.4	308.4	304.3	297.3	297.3	289.0
47.5°	219.5	209.8	207.0	205.7	202.9	202.9	200.1	197.3	195.9	188.9	188.9
50°	143.1	133.4	130.6	129.2	130.6	127.8	125.0	122.3	119.5	118.1	115.3
52.5°	86.2	82.0	79.2	77.8	75.0	73.6	72.2	69.5	68.1	68.1	66.7
55°	51.4	47.2	41.7	41.7	41.7	40.3	38.9	37.5	36.1	36.1	34.7
57.5°	32.0	29.2	26.4	25.0	25.0	25.0	23.6	23.6	23.6	23.6	22.2
60°	23.6	20.8	19.4	19.4	19.4	18.1	18.1	18.1	18.1	16.7	16.7
62.5°	18.1	16.7	15.3	15.3	13.9	13.9	13.9	13.9	13.9	13.9	12.5
65°	15.3	12.5	12.5	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
67.5°	11.1	9.7	9.7	9.7	9.7	8.3	8.3	8.3	8.3	8.3	8.3
70°	8.3	8.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
72.5°	7.0	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
75°	5.6	5.6	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
77.5°	4.2	4.2	4.2	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
80°	2.8	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: P858510

CATALOG NUMBER: LD4C20W2N2765D010 4LBSWNL1_6500K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3	1064.3
2.5°	1089.3	1096.3	1089.3	1089.3	1093.5	1092.1	1094.8	1090.7
5°	1121.2	1131.0	1124.0	1122.7	1129.6	1128.2	1129.6	1126.8
7.5°	1160.2	1169.9	1162.9	1162.9	1169.9	1168.5	1172.7	1169.9
10°	1204.6	1215.7	1206.0	1207.4	1217.1	1215.7	1215.7	1215.7
12.5°	1250.5	1261.6	1256.0	1256.0	1263.0	1264.3	1265.8	1264.3
15°	1288.0	1299.1	1292.2	1292.2	1301.9	1300.5	1301.9	1300.5
17.5°	1310.2	1321.3	1313.0	1313.0	1321.3	1321.3	1322.7	1324.1
20°	1304.6	1317.2	1310.2	1307.4	1317.2	1317.2	1315.8	1315.8
22.5°	1272.7	1283.8	1278.2	1275.5	1282.4	1279.6	1278.2	1279.6
25°	1217.1	1228.3	1217.1	1217.1	1222.7	1221.3	1222.7	1221.3
27.5°	1142.1	1150.4	1139.3	1137.9	1143.5	1140.7	1139.3	1143.5
30°	1042.0	1050.4	1044.8	1040.7	1047.6	1043.5	1040.7	1042.0
32.5°	928.1	933.7	930.9	924.0	928.1	925.3	924.0	925.3
35°	803.1	810.0	798.9	797.5	804.5	798.9	796.1	803.1
37.5°	673.8	682.2	672.5	673.8	669.7	671.1	668.3	672.5
40°	551.6	550.2	547.4	546.0	547.4	543.3	546.0	541.9
42.5°	419.6	422.4	421.0	419.6	421.0	415.4	412.7	418.2
45°	291.8	290.4	287.6	284.8	284.8	283.4	283.4	279.2
47.5°	187.6	186.2	180.6	182.0	184.8	182.0	177.8	183.4
50°	113.9	112.5	112.5	111.2	113.9	111.2	108.4	108.4
52.5°	63.9	63.9	62.5	62.5	62.5	62.5	61.1	59.8
55°	34.7	33.4	33.4	33.4	32.0	32.0	32.0	32.0
57.5°	22.2	22.2	22.2	22.2	22.2	22.2	20.8	20.8
60°	16.7	16.7	16.7	16.7	15.3	16.7	15.3	15.3
62.5°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
65°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
67.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
70°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
72.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
75°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
77.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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)