

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: P858507

Luminaire Tested: **LD4C20W2N2765D010 4LBSWNL1_3500K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858507
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_3500K
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, W2N2765 LEDS
AND 4LBSWNLI TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

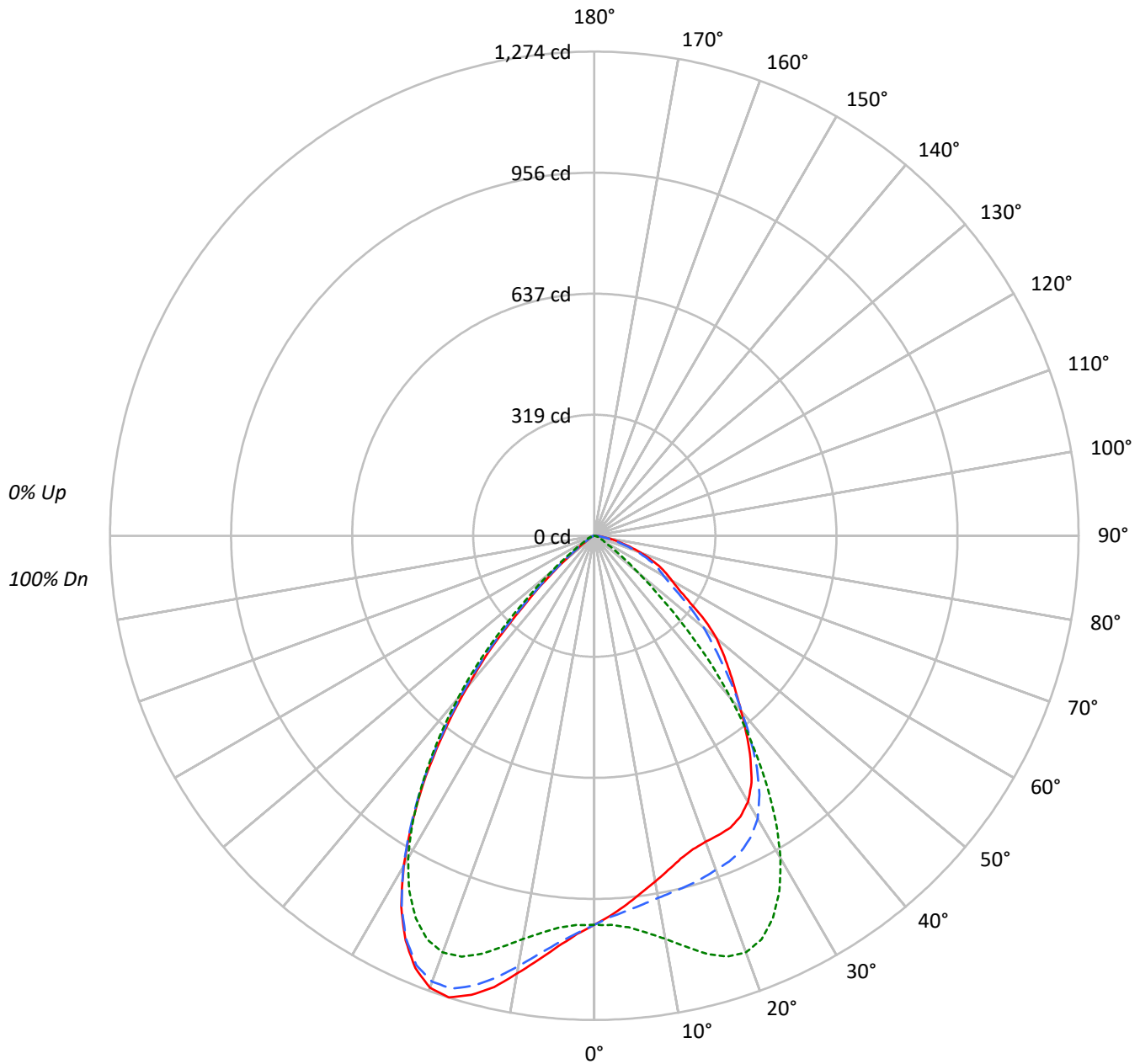
Lumens per Lamp: N/A
Luminaire Lumens: 1889.0 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	112	108	105	102		109	106	103	101		102	100	98		98	96	95		95	93	92
2	104	98	93	89		102	96	92	88		93	89	86		90	87	84		87	85	82
3	97	89	83	78		95	88	82	77		85	80	76		82	78	75		80	77	74
4	91	81	75	69		89	80	74	69		78	72	68		76	71	67		74	70	66
5	85	75	67	62		83	74	67	62		72	66	61		70	65	60		68	64	60
6	79	69	61	56		78	68	61	56		66	60	55		64	59	55		63	58	54
7	75	63	56	51		73	62	55	51		61	55	50		60	54	50		58	53	50
8	70	58	51	46		69	58	51	46		57	50	46		55	50	46		54	49	45
9	66	54	47	42		65	54	47	42		53	46	42		52	46	42		51	46	42
10	62	51	44	39		61	50	43	39		49	43	39		48	43	39		47	42	39

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	125765	125765	125765
5°	120141	127553	133657
10°	115193	134367	145869
15°	111836	144815	159086
20°	111990	152519	165449
25°	114841	150533	159235
30°	114693	138951	142171
35°	107428	117447	115842
40°	96224	89585	83587
45°	87305	56883	46667
50°	80197	28860	19915
55°	65842	12894	6576
60°	57790	7224	3612
65°	54389	5436	2733
70°	46552	4310	2407
75°	35505	3180	1899
80°	25540	1910	990
85°	18888	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.4	5.3
10°-20°	309.9	16.4
20°-30°	479.4	25.4
30°-40°	472.4	25.0
40°-50°	290.1	15.4
50°-60°	129.0	6.8
60°-70°	72.0	3.8
70°-80°	31.2	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°	888.8	47.0
0°-40°	1361.2	72.1
0°-60°	1780.2	94.2
0°-90°	1889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1889.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1024	1024	1024	1024	1024	
5°	974	990	1034	1074	1084	91
15°	879	953	1139	1225	1251	249
25°	847	915	1110	1171	1175	389
35°	716	746	783	780	772	445
45°	502	477	327	286	269	389
55°	307	278	60	35	31	282
65°	187	168	19	11	9	183
75°	75	64	7	4	4	82
85°	13	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°	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7
2.5°	999.6	999.6	999.6	999.6	1002.2	998.3	1002.2	1002.2	1006.3	1007.6	1003.6
5°	974.2	972.9	974.2	974.2	976.9	975.5	979.5	982.2	987.6	990.3	990.3
7.5°	947.5	947.5	947.5	950.2	954.1	952.8	956.8	960.8	968.8	974.2	978.2
10°	923.4	922.1	926.1	927.4	931.4	931.4	938.1	942.1	951.5	962.2	967.5
12.5°	900.7	899.4	902.0	906.1	912.7	912.7	918.1	924.8	938.1	950.2	959.5
15°	879.3	880.7	884.7	887.3	895.3	895.3	902.0	910.0	924.8	939.5	952.8
17.5°	864.6	866.0	868.6	872.6	880.7	880.7	887.3	896.7	912.7	928.7	944.8
20°	856.6	858.0	860.6	864.6	871.3	872.6	878.0	888.7	903.3	920.7	935.4
22.5°	852.6	855.3	858.0	860.6	867.3	867.3	874.0	882.0	896.7	914.1	927.4
25°	847.2	849.9	851.3	855.3	860.6	860.6	864.6	874.0	887.3	902.0	915.4
27.5°	832.6	835.2	836.5	840.6	845.9	844.6	849.9	856.6	868.6	882.0	892.7
30°	808.5	809.8	812.5	813.8	817.8	817.8	821.8	828.5	836.5	848.6	859.3
32.5°	769.7	772.4	773.8	775.1	779.1	777.7	779.1	783.1	791.1	801.8	808.5
35°	716.3	721.6	721.6	724.3	725.7	724.3	724.3	729.6	733.7	741.7	745.7
37.5°	657.5	661.5	660.2	662.8	664.2	660.2	662.8	664.2	669.5	673.5	674.9
40°	600.0	601.4	601.4	601.4	601.4	600.0	601.4	602.7	606.7	606.7	602.7
42.5°	547.9	549.3	549.3	546.5	549.3	547.9	547.9	547.9	547.9	542.6	538.5
45°	502.5	503.8	503.8	502.5	502.5	499.8	498.5	497.1	493.1	486.4	477.1
47.5°	459.7	462.4	463.7	461.0	459.7	457.0	457.0	449.0	443.7	435.7	422.3
50°	419.6	422.3	422.3	419.6	419.6	415.6	411.6	408.9	400.9	391.6	375.5
52.5°	368.8	372.8	372.8	371.5	371.5	366.2	364.8	359.5	352.8	342.1	328.7
55°	307.4	312.7	311.4	310.1	307.4	307.4	307.4	303.3	299.3	291.3	278.0
57.5°	263.2	264.6	264.6	263.2	263.2	260.6	260.6	256.6	255.2	247.2	236.5
60°	235.2	235.2	236.5	235.2	233.9	232.5	231.2	228.5	224.5	219.2	211.2
62.5°	212.5	213.8	213.8	212.5	211.2	209.8	208.5	205.8	203.1	199.1	191.1
65°	187.1	189.7	188.4	187.1	185.8	184.4	184.4	181.7	179.1	176.4	168.4
67.5°	159.0	160.4	161.7	159.0	159.0	157.7	157.7	155.0	153.7	148.3	143.0
70°	129.6	130.9	130.9	129.6	129.6	128.3	128.3	127.0	125.6	121.6	116.3
72.5°	101.6	102.9	101.6	100.2	100.2	100.2	98.9	97.5	96.2	93.6	89.5
75°	74.8	74.8	76.2	74.8	73.5	73.5	72.1	72.1	69.5	68.2	64.1
77.5°	53.5	54.8	53.5	53.5	52.1	50.8	50.8	49.4	49.4	48.1	45.4
80°	36.1	36.1	37.4	36.1	34.8	36.1	34.8	33.4	33.4	32.1	29.4
82.5°	22.7	24.0	22.7	22.7	22.7	22.7	22.7	21.4	21.4	20.1	18.7
85°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	12.0	12.0	12.0	10.7
87.5°	6.7	6.7	5.3	5.3	6.7	6.7	6.7	5.3	5.3	5.3	5.3
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7
2.5°	1008.9	1010.3	1012.9	1017.0	1017.0	1014.3	1021.0	1021.0	1023.7	1025.0	1030.3
5°	998.3	1000.9	1006.3	1012.9	1014.3	1012.9	1022.3	1026.3	1030.3	1034.3	1042.4
7.5°	988.9	994.2	1003.6	1012.9	1017.0	1017.0	1031.7	1037.0	1045.0	1053.0	1062.4
10°	983.6	991.6	1004.9	1019.6	1023.7	1027.6	1045.0	1055.7	1066.4	1077.1	1090.5
12.5°	976.9	991.6	1008.9	1027.6	1035.6	1041.0	1065.1	1078.4	1093.1	1106.5	1123.9
15°	975.5	992.9	1015.6	1039.7	1050.4	1058.4	1085.1	1103.8	1121.2	1138.6	1156.0
17.5°	970.2	991.6	1019.6	1046.4	1059.7	1070.4	1101.1	1123.9	1143.9	1161.3	1181.4
20°	963.5	987.6	1018.3	1047.7	1062.4	1073.1	1106.5	1127.9	1150.6	1166.6	1185.3
22.5°	954.1	978.2	1008.9	1038.3	1051.7	1061.0	1094.4	1113.2	1133.2	1149.3	1166.6
25°	938.1	960.8	987.6	1011.6	1025.0	1033.0	1062.4	1079.8	1094.4	1110.5	1126.5
27.5°	915.4	932.8	955.5	972.9	980.9	988.9	1012.9	1027.6	1041.0	1054.4	1065.1
30°	875.3	888.7	904.7	919.4	927.4	928.7	951.5	959.5	970.2	979.5	987.6
32.5°	821.8	832.6	841.9	849.9	855.3	856.6	874.0	876.6	887.3	887.3	899.4
35°	753.7	759.1	765.7	765.7	769.7	765.7	777.7	780.4	781.8	783.1	792.5
37.5°	676.2	678.8	682.9	674.9	674.9	670.8	674.9	677.5	672.2	672.2	678.8
40°	602.7	597.3	592.0	584.0	580.0	571.9	571.9	565.3	561.3	558.6	559.9
42.5°	531.9	519.8	507.8	490.4	482.4	474.4	466.4	457.0	454.3	447.7	443.7
45°	463.7	446.3	430.3	402.2	386.2	378.2	360.8	342.1	330.1	327.4	316.7
47.5°	406.2	380.8	354.1	320.7	304.7	290.0	264.6	248.6	232.5	224.5	217.8
50°	355.4	332.8	298.0	261.9	241.9	227.2	199.1	180.4	163.0	151.0	143.0
52.5°	311.4	286.0	253.9	212.5	192.5	176.4	145.7	124.3	109.6	97.5	88.2
55°	261.9	241.9	209.8	171.0	151.0	132.3	105.5	82.9	68.2	60.2	53.5
57.5°	225.9	208.5	177.7	140.3	121.6	104.2	77.5	58.8	46.8	38.7	34.8
60°	201.8	185.8	159.0	122.9	105.5	89.5	64.1	46.8	36.1	29.4	26.7
62.5°	181.7	165.7	141.7	108.2	93.6	77.5	54.8	38.7	29.4	24.0	20.1
65°	159.0	144.3	122.9	93.6	80.2	66.8	46.8	32.1	24.0	18.7	16.0
67.5°	135.0	121.6	102.9	77.5	66.8	56.1	37.4	26.7	20.1	16.0	13.4
70°	109.6	98.9	81.5	62.8	53.5	44.1	30.7	21.4	14.7	12.0	10.7
72.5°	84.2	74.8	62.8	48.1	40.1	33.4	22.7	16.0	12.0	9.4	8.0
75°	60.2	53.5	44.1	34.8	29.4	24.0	17.4	12.0	8.0	6.7	5.3
77.5°	41.4	37.4	30.7	24.0	20.1	17.4	12.0	8.0	6.7	5.3	4.0
80°	26.7	24.0	20.1	14.7	12.0	10.7	6.7	5.3	4.0	2.7	2.7
82.5°	16.0	14.7	12.0	8.0	6.7	5.3	4.0	2.7	2.7	1.4	1.4
85°	9.4	8.0	5.3	4.0	4.0	2.7	2.7	1.4	1.4	0.0	0.0
87.5°	4.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7
2.5°	1027.6	1034.3	1033.0	1037.0	1035.6	1035.6	1042.4	1039.7	1046.4	1046.4	1047.7
5°	1042.4	1051.7	1051.7	1058.4	1057.1	1059.7	1066.4	1066.4	1074.4	1077.1	1077.1
7.5°	1063.7	1075.8	1078.4	1085.1	1086.4	1091.8	1097.2	1098.5	1109.2	1111.8	1113.2
10°	1093.1	1107.8	1111.8	1118.5	1121.2	1126.5	1133.2	1135.9	1149.3	1150.6	1156.0
12.5°	1129.2	1145.2	1149.3	1157.3	1158.6	1165.3	1174.7	1177.3	1190.7	1194.7	1198.7
15°	1164.0	1178.6	1185.3	1193.3	1194.7	1202.7	1210.7	1213.4	1225.4	1230.8	1234.8
17.5°	1188.0	1205.4	1209.4	1220.1	1220.1	1226.7	1234.8	1237.5	1249.5	1253.5	1256.2
20°	1193.3	1209.4	1214.8	1222.8	1224.1	1228.1	1234.8	1237.5	1248.2	1249.5	1253.5
22.5°	1173.3	1189.4	1192.0	1200.0	1201.4	1205.4	1210.7	1209.4	1222.8	1221.4	1222.8
25°	1130.6	1145.2	1145.2	1154.6	1153.3	1157.3	1159.9	1158.6	1170.6	1170.6	1170.6
27.5°	1069.1	1082.5	1083.8	1090.5	1086.4	1087.8	1090.5	1089.1	1097.2	1097.2	1097.2
30°	992.9	1003.6	999.6	1004.9	1002.2	1004.9	1002.2	1000.9	1003.6	1006.3	1004.9
32.5°	898.0	906.1	906.1	907.4	907.4	899.4	896.7	896.7	895.3	894.0	894.0
35°	788.4	795.1	792.5	792.5	791.1	783.1	779.1	776.4	780.4	772.4	777.7
37.5°	676.2	677.5	673.5	672.2	665.5	665.5	658.8	653.5	656.1	654.8	649.5
40°	553.2	558.6	550.6	547.9	551.9	546.5	539.9	533.2	538.5	531.9	534.6
42.5°	433.0	431.6	429.0	429.0	429.0	420.9	419.6	418.3	419.6	414.3	410.3
45°	312.7	308.7	304.7	304.7	299.3	296.6	296.6	292.7	286.0	286.0	278.0
47.5°	211.2	201.8	199.1	197.8	195.1	195.1	192.5	189.7	188.4	181.7	181.7
50°	137.6	128.3	125.6	124.3	125.6	122.9	120.3	117.6	114.9	113.6	110.9
52.5°	82.9	78.8	76.2	74.8	72.1	70.8	69.5	66.8	65.5	65.5	64.1
55°	49.4	45.4	40.1	40.1	40.1	38.7	37.4	36.1	34.8	34.8	33.4
57.5°	30.7	28.1	25.4	24.0	24.0	24.0	22.7	22.7	22.7	22.7	21.4
60°	22.7	20.1	18.7	18.7	18.7	17.4	17.4	17.4	17.4	16.0	16.0
62.5°	17.4	16.0	14.7	14.7	13.4	13.4	13.4	13.4	13.4	13.4	12.0
65°	14.7	12.0	12.0	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
67.5°	10.7	9.4	9.4	9.4	9.4	8.0	8.0	8.0	8.0	8.0	8.0
70°	8.0	8.0	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
72.5°	6.7	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
75°	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
77.5°	4.0	4.0	4.0	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: P858507

CATALOG NUMBER: LD4C20W2N2765D010 4LBSWNL1_3500K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7	1023.7
2.5°	1047.7	1054.4	1047.7	1047.7	1051.7	1050.4	1053.0	1049.1
5°	1078.4	1087.8	1081.1	1079.8	1086.4	1085.1	1086.4	1083.8
7.5°	1115.9	1125.2	1118.5	1118.5	1125.2	1123.9	1127.9	1125.2
10°	1158.6	1169.3	1159.9	1161.3	1170.6	1169.3	1169.3	1169.3
12.5°	1202.7	1213.4	1208.1	1208.1	1214.8	1216.1	1217.4	1216.1
15°	1238.8	1249.5	1242.8	1242.8	1252.1	1250.8	1252.1	1250.8
17.5°	1260.2	1270.9	1262.9	1262.9	1270.9	1270.9	1272.2	1273.6
20°	1254.8	1266.9	1260.2	1257.5	1266.9	1266.9	1265.5	1265.5
22.5°	1224.1	1234.8	1229.4	1226.7	1233.4	1230.8	1229.4	1230.8
25°	1170.6	1181.4	1170.6	1170.6	1176.0	1174.7	1176.0	1174.7
27.5°	1098.5	1106.5	1095.8	1094.4	1099.8	1097.2	1095.8	1099.8
30°	1002.2	1010.3	1004.9	1000.9	1007.6	1003.6	1000.9	1002.2
32.5°	892.7	898.0	895.3	888.7	892.7	890.0	888.7	890.0
35°	772.4	779.1	768.4	767.1	773.8	768.4	765.7	772.4
37.5°	648.1	656.1	646.8	648.1	644.1	645.4	642.8	646.8
40°	530.5	529.2	526.5	525.2	526.5	522.5	525.2	521.2
42.5°	403.6	406.2	404.9	403.6	404.9	399.6	396.9	402.2
45°	280.6	279.3	276.6	273.9	273.9	272.6	272.6	268.6
47.5°	180.4	179.1	173.7	175.1	177.7	175.1	171.0	176.4
50°	109.6	108.2	108.2	106.9	109.6	106.9	104.2	104.2
52.5°	61.5	61.5	60.2	60.2	60.2	60.2	58.8	57.5
55°	33.4	32.1	32.1	32.1	30.7	30.7	30.7	30.7
57.5°	21.4	21.4	21.4	21.4	21.4	21.4	20.1	20.1
60°	16.0	16.0	16.0	16.0	14.7	16.0	14.7	14.7
62.5°	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
65°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
67.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
70°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
72.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
75°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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)