

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: P563818

Luminaire Tested: **LD4C30D010 EX4C309030 4LBSQLWWH**

Issue Date: 2/18/2022

Test Information

Test Method: LM-79-08
Report Number: P563818
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C30D010 EX4C309030 4LBSQLWWH
Description: 4 INCH 3000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

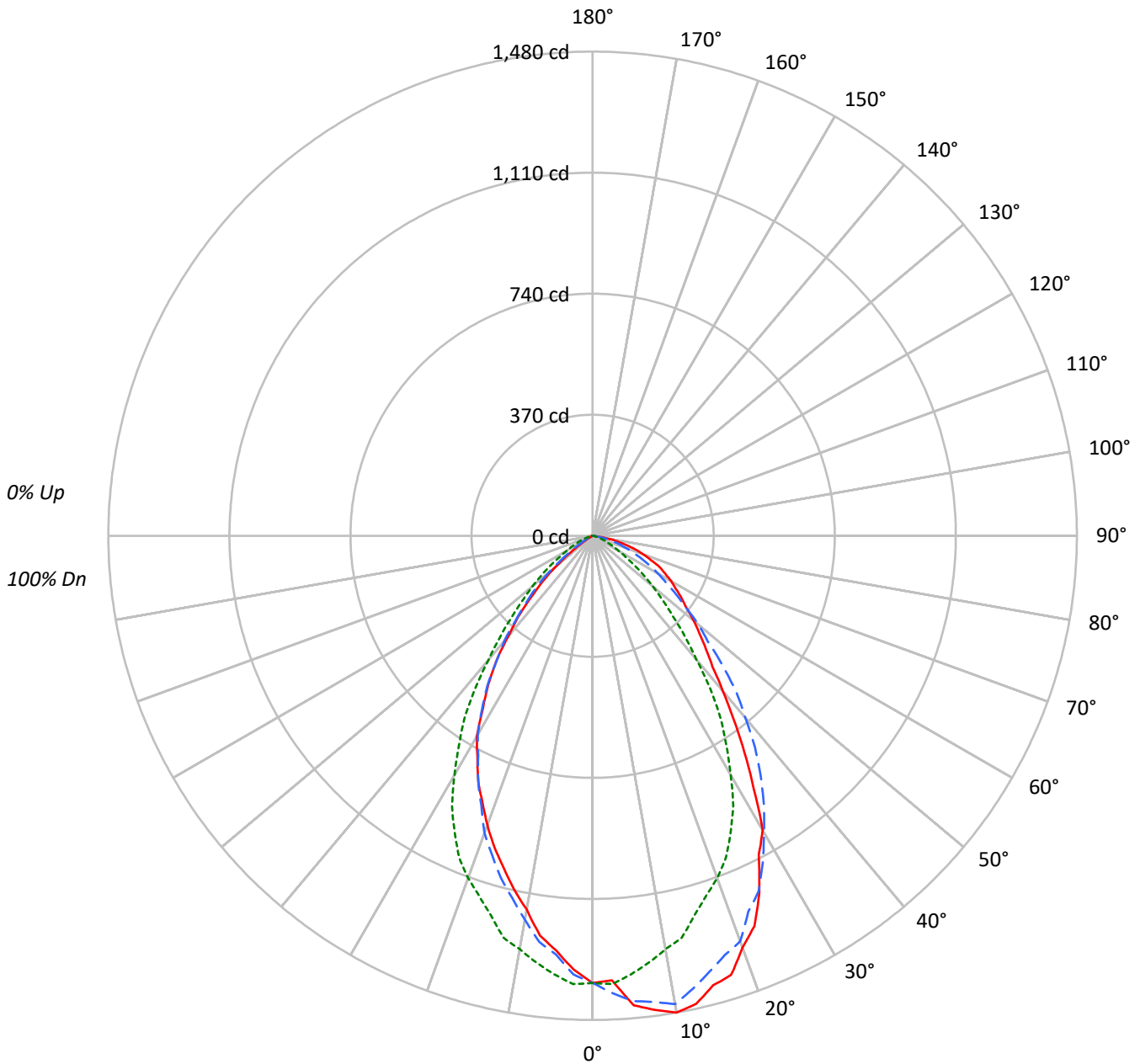
Lumens per Lamp: N/A
Luminaire Lumens: 1959.1 lumens
Efficiency: N/A
Efficacy: 62.0 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 31.6
Input Voltage (V):
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				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	84	82	80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72			
4	91	81	74	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	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	131871	131871	131871
5°	139523	130322	123329
10°	144987	125725	113673
15°	142097	119991	104937
20°	137480	114254	96592
25°	128246	106251	88109
30°	115772	94035	78882
35°	95364	80498	65445
40°	77816	62122	50370
45°	66863	47186	36229
50°	60509	35906	22877
55°	55682	25906	8260
60°	53455	17715	1254
65°	51621	11986	365
70°	46239	8322	451
75°	37877	4287	0
80°	23671	1834	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.1	6.5
10°-20°	345.0	17.6
20°-30°	460.7	23.5
30°-40°	437.3	22.3
40°-50°	302.3	15.4
50°-60°	167.0	8.5
60°-70°	82.9	4.2
70°-80°	32.7	1.7
80°-90°	3.1	0.2
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°	933.7	47.7
0°-40°	1371.1	70.0
0°-60°	1840.4	93.9
0°-90°	1959.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1959.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1367	1367	1367	1367	1367	
5°	1440	1427	1346	1285	1273	138
15°	1422	1380	1201	1083	1050	402
25°	1205	1200	998	828	828	549
35°	810	895	683	562	556	507
45°	490	562	346	284	266	382
55°	331	311	154	79	49	298
65°	226	164	52	2	2	219
75°	102	62	12	0	0	108
85°	0	2	0	0	0	9
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°	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7
2.5°	1360.2	1397.8	1401.2	1397.8	1402.8	1401.2	1409.3	1401.2	1411.1	1396.3	1399.6
5°	1440.5	1425.7	1456.8	1440.5	1440.5	1438.9	1433.9	1432.3	1438.9	1417.6	1427.4
7.5°	1461.8	1483.2	1511.1	1476.6	1478.2	1478.2	1468.3	1465.1	1465.1	1425.7	1437.2
10°	1479.8	1466.7	1481.5	1468.3	1479.8	1478.2	1484.7	1463.4	1478.2	1455.3	1453.6
12.5°	1465.1	1460.2	1479.8	1458.6	1452.0	1453.6	1445.4	1440.5	1445.4	1419.2	1417.6
15°	1422.5	1427.4	1456.8	1433.9	1430.7	1427.4	1417.6	1401.2	1414.3	1378.2	1379.9
17.5°	1407.8	1399.6	1404.4	1384.8	1389.7	1386.4	1384.8	1370.1	1366.7	1343.8	1343.8
20°	1338.9	1356.9	1356.9	1343.8	1343.8	1342.2	1320.9	1334.0	1319.2	1312.7	1319.2
22.5°	1291.3	1293.1	1293.1	1281.6	1283.2	1276.7	1265.2	1257.0	1265.2	1257.0	1243.8
25°	1204.6	1207.8	1227.5	1206.2	1202.8	1209.5	1199.6	1194.7	1193.1	1173.4	1199.6
27.5°	1099.6	1132.3	1130.8	1122.6	1132.3	1119.3	1114.4	1116.0	1121.0	1119.3	1125.8
30°	1039.1	1044.0	1048.8	1042.3	1044.0	1039.1	1039.1	1040.6	1053.7	1048.8	1047.2
32.5°	916.1	932.5	945.6	945.6	947.2	952.2	950.5	985.0	993.1	976.7	973.5
35°	809.6	821.1	832.5	834.1	855.5	857.1	858.7	868.6	891.5	896.5	894.7
37.5°	708.0	719.5	722.7	737.5	749.0	760.4	773.6	786.6	806.3	822.6	814.5
40°	617.8	622.7	631.0	637.5	660.4	660.4	667.0	693.2	714.6	727.6	726.0
42.5°	542.5	544.1	550.6	562.1	583.5	578.5	583.5	601.5	632.6	634.2	652.2
45°	490.0	488.4	493.2	494.9	508.1	514.6	517.9	531.0	557.1	560.5	562.1
47.5°	442.5	440.9	449.1	452.3	457.2	463.7	463.7	465.5	475.2	483.5	477.0
50°	403.1	403.1	403.1	406.4	414.6	413.0	414.6	421.2	426.1	422.7	421.2
52.5°	360.5	367.1	372.0	373.7	375.2	375.2	377.0	373.7	372.0	367.1	357.2
55°	331.0	337.6	337.6	337.6	337.6	344.1	336.0	337.6	337.6	324.5	311.4
57.5°	301.6	308.1	313.0	306.5	313.0	306.5	303.1	301.6	298.2	285.1	265.5
60°	277.0	280.2	278.6	277.0	280.2	275.4	272.0	265.5	262.2	244.1	231.1
62.5°	249.1	250.7	252.4	249.1	245.9	244.1	237.6	227.8	221.2	206.5	195.0
65°	226.1	221.2	219.6	218.0	214.7	209.7	204.9	193.4	188.5	175.4	163.9
67.5°	191.7	190.1	193.4	188.5	180.2	180.2	175.4	165.5	154.0	145.9	134.4
70°	163.9	162.2	159.0	154.0	152.4	145.9	145.9	134.4	131.1	116.4	106.5
72.5°	134.4	134.4	129.4	124.6	119.6	116.4	114.7	106.5	101.6	93.4	85.2
75°	101.6	101.6	100.0	95.0	91.8	88.5	86.9	80.4	75.4	67.2	62.3
77.5°	72.1	72.1	65.5	62.3	63.9	60.6	57.4	55.7	54.0	49.1	42.6
80°	42.6	41.0	36.1	37.7	36.1	36.1	34.4	32.8	29.5	26.2	22.9
82.5°	11.5	13.1	13.1	13.1	14.7	11.5	11.5	11.5	13.1	13.1	8.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6
87.5°	1.6	3.3	6.5	6.5	6.5	6.5	6.5	5.0	5.0	5.0	3.3
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°	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7
2.5°	1383.2	1381.5	1383.2	1371.7	1397.8	1378.2	1374.9	1371.7	1383.2	1371.7	1355.3
5°	1412.7	1396.3	1391.3	1386.4	1401.2	1378.2	1373.3	1374.9	1366.7	1345.5	1347.1
7.5°	1422.5	1407.8	1393.0	1361.8	1374.9	1370.1	1356.9	1347.1	1334.0	1316.0	1312.7
10°	1425.7	1409.3	1388.1	1378.2	1358.6	1352.1	1347.1	1330.7	1314.3	1283.2	1275.0
12.5°	1415.9	1396.3	1370.1	1361.8	1347.1	1325.8	1314.3	1297.9	1283.2	1258.6	1240.6
15°	1373.3	1356.9	1348.7	1320.9	1314.3	1301.2	1278.2	1255.3	1234.1	1201.2	1191.3
17.5°	1324.2	1317.6	1309.4	1288.1	1286.5	1273.3	1252.1	1232.3	1204.6	1153.7	1137.3
20°	1273.3	1273.3	1247.1	1238.9	1255.3	1229.1	1212.7	1194.7	1137.3	1112.7	1083.2
22.5°	1235.7	1217.7	1202.8	1189.8	1191.3	1175.0	1152.1	1116.0	1094.7	1065.2	1030.8
25°	1161.9	1168.5	1135.7	1130.8	1135.7	1098.0	1086.6	1057.0	1025.8	998.0	971.8
27.5°	1116.0	1098.0	1076.7	1058.7	1058.7	1044.0	1011.2	1004.6	957.1	930.8	898.1
30°	1047.2	1034.1	1016.1	989.8	986.6	975.1	948.8	932.5	883.3	844.0	826.0
32.5°	960.3	955.5	940.7	911.2	901.3	888.2	855.5	827.6	804.7	760.4	739.1
35°	898.1	880.1	849.0	824.3	816.1	793.2	767.0	747.2	722.7	683.4	655.5
37.5°	804.7	786.6	757.1	727.6	727.6	704.7	668.6	649.0	614.6	591.6	568.6
40°	722.7	699.7	670.3	635.9	631.0	598.1	583.5	550.6	529.4	493.2	490.0
42.5°	631.0	609.6	583.5	557.1	537.5	521.1	483.5	458.9	436.0	417.9	413.0
45°	547.4	519.5	496.6	463.7	444.1	424.5	399.9	383.5	365.5	345.8	334.4
47.5°	475.2	452.3	419.5	390.1	370.4	360.5	332.6	314.6	299.9	286.9	278.6
50°	401.5	373.7	355.6	322.9	319.5	296.6	273.7	259.0	250.7	239.2	227.8
52.5°	345.8	319.5	295.0	270.5	257.2	249.1	227.8	213.0	201.6	193.4	186.9
55°	291.7	268.7	249.1	224.5	216.3	204.9	180.2	177.0	165.5	154.0	145.9
57.5°	250.7	229.4	206.5	190.1	175.4	167.2	147.5	134.4	127.9	118.0	109.8
60°	213.0	190.1	172.1	152.4	145.9	134.4	119.6	108.2	100.0	91.8	83.6
62.5°	178.6	159.0	139.4	122.9	113.1	106.5	95.0	85.2	77.0	70.5	63.9
65°	147.5	129.4	113.1	96.7	91.8	83.6	75.4	67.2	60.6	52.5	45.9
67.5°	121.3	104.9	88.5	77.0	72.1	68.9	59.0	50.8	45.9	41.0	34.4
70°	95.0	83.6	70.5	60.6	55.7	50.8	44.2	39.4	32.8	29.5	24.6
72.5°	73.7	63.9	52.5	44.2	41.0	37.7	31.1	26.2	22.9	19.6	16.4
75°	52.5	44.2	37.7	29.5	27.9	26.2	21.4	18.0	14.7	11.5	9.9
77.5°	36.1	29.5	22.9	19.6	18.0	14.7	13.1	9.9	8.2	6.5	5.0
80°	19.6	14.7	11.5	9.9	8.2	6.5	6.5	5.0	3.3	3.3	1.6
82.5°	6.5	5.0	3.3	1.6	1.6	1.6	1.6	1.6	1.6	0.0	1.6
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°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	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°	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7
2.5°	1365.1	1347.1	1352.1	1352.1	1348.7	1348.7	1345.5	1340.6	1342.2	1332.3	1311.1
5°	1350.3	1327.4	1324.2	1327.4	1314.3	1311.1	1304.6	1314.3	1284.8	1296.3	1283.2
7.5°	1307.8	1286.5	1281.6	1293.1	1276.7	1266.7	1265.2	1278.2	1252.1	1238.9	1224.2
10°	1260.2	1252.1	1237.3	1229.1	1224.2	1225.8	1212.7	1196.3	1191.3	1188.1	1175.0
12.5°	1217.7	1199.6	1186.5	1176.7	1173.4	1173.4	1152.1	1148.8	1134.1	1130.8	1111.1
15°	1166.8	1145.6	1137.3	1124.2	1112.7	1119.3	1094.7	1088.1	1083.2	1062.0	1065.2
17.5°	1122.6	1099.6	1080.0	1071.8	1062.0	1052.1	1029.1	1034.1	1022.6	1022.6	993.1
20°	1065.2	1040.6	1025.8	1009.5	1009.5	996.3	980.1	981.6	966.8	952.2	925.9
22.5°	1004.6	978.3	960.3	953.7	937.3	934.1	914.5	909.5	889.8	891.5	868.6
25°	940.7	914.5	889.8	891.5	876.8	870.2	858.7	835.8	827.6	817.8	811.2
27.5°	865.3	847.2	826.0	824.3	796.5	798.1	783.3	776.8	757.1	762.1	747.2
30°	796.5	770.2	750.6	745.7	734.2	731.0	708.0	698.1	701.5	688.2	680.1
32.5°	726.0	686.7	678.5	668.6	662.1	653.9	637.5	644.1	629.2	632.6	619.5
35°	632.6	616.2	594.9	594.9	588.3	581.7	570.3	576.9	562.1	555.6	542.5
37.5°	553.9	539.2	517.9	524.5	513.0	503.1	493.2	494.9	481.7	480.2	467.0
40°	468.7	460.5	445.7	445.7	437.6	437.6	432.6	427.7	419.5	409.7	394.9
42.5°	388.4	381.9	375.2	377.0	365.5	375.2	362.2	370.4	344.1	342.5	332.6
45°	329.4	314.6	316.2	309.7	303.1	306.5	295.0	298.2	283.5	280.2	270.5
47.5°	267.1	262.2	252.4	249.1	249.1	244.1	239.2	237.6	231.1	222.9	209.7
50°	219.6	201.6	198.3	193.4	190.1	190.1	183.6	173.7	175.4	167.2	154.0
52.5°	172.1	157.3	150.7	149.1	142.6	139.4	131.1	124.6	119.6	116.4	108.2
55°	132.7	119.6	111.5	111.5	101.6	101.6	90.1	85.2	78.6	72.1	67.2
57.5°	100.0	93.4	85.2	78.6	75.4	67.2	60.6	52.5	47.5	37.7	31.1
60°	75.4	68.9	60.6	55.7	52.5	44.2	36.1	29.5	18.0	14.7	13.1
62.5°	55.7	49.1	41.0	37.7	34.4	27.9	19.6	9.9	5.0	5.0	5.0
65°	41.0	32.8	26.2	22.9	19.6	14.7	6.5	3.3	1.6	1.6	1.6
67.5°	27.9	21.4	14.7	13.1	9.9	5.0	1.6	1.6	1.6	1.6	1.6
70°	18.0	13.1	6.5	5.0	3.3	1.6	1.6	1.6	1.6	1.6	1.6
72.5°	11.5	6.5	3.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	6.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	3.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	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	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6
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: P563818

CATALOG NUMBER: LD4C30D010 EX4C309030 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7	1366.7
2.5°	1334.0	1322.5	1329.1	1314.3	1320.9	1332.3	1324.2	1327.4
5°	1288.1	1281.6	1273.3	1252.1	1268.4	1281.6	1275.0	1273.3
7.5°	1238.9	1216.0	1227.5	1220.9	1217.7	1230.7	1216.0	1232.3
10°	1188.1	1171.7	1170.2	1158.7	1158.7	1168.5	1170.2	1160.2
12.5°	1112.7	1104.6	1104.6	1102.9	1101.2	1111.1	1112.7	1107.8
15°	1058.7	1055.4	1047.2	1045.6	1035.7	1050.5	1052.1	1050.5
17.5°	993.1	994.7	986.6	986.6	993.1	998.0	985.0	998.0
20°	948.8	940.7	937.3	922.6	930.8	939.1	939.1	940.7
22.5°	885.0	871.8	876.8	868.6	863.6	875.1	875.1	880.1
25°	812.8	812.8	816.1	811.2	814.5	821.1	816.1	827.6
27.5°	744.0	750.6	750.6	744.0	747.2	767.0	775.1	762.1
30°	680.1	681.7	686.7	683.4	693.2	699.7	698.1	708.0
32.5°	608.0	616.2	619.5	614.6	617.8	632.6	624.4	622.7
35°	552.3	537.5	536.0	537.5	544.1	547.4	544.1	555.6
37.5°	472.0	467.0	460.5	462.1	467.0	473.6	477.0	485.1
40°	394.9	388.4	388.4	386.7	381.9	399.9	399.9	399.9
42.5°	327.7	326.1	318.0	318.0	324.5	329.4	326.1	337.6
45°	268.7	262.2	257.2	257.2	262.2	262.2	267.1	265.5
47.5°	211.5	204.9	206.5	201.6	206.5	213.0	204.9	206.5
50°	159.0	159.0	155.7	159.0	157.3	159.0	155.7	152.4
52.5°	108.2	122.9	124.6	118.0	103.2	90.1	81.9	88.5
55°	62.3	55.7	55.7	54.0	50.8	49.1	44.2	49.1
57.5°	31.1	27.9	27.9	27.9	26.2	24.6	21.4	21.4
60°	13.1	11.5	11.5	9.9	8.2	6.5	5.0	6.5
62.5°	5.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3
65°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
67.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)