

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: P#

Luminaire Tested: **LD4C35D010 EX4C359040 4LBSQLWWH**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P#  
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: LD4C35D010 EX4C359040 4LBSQLWWH  
Description: 4 INCH 3500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS  
AND 4LBSQLWW TRIM WITH H FINISH  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

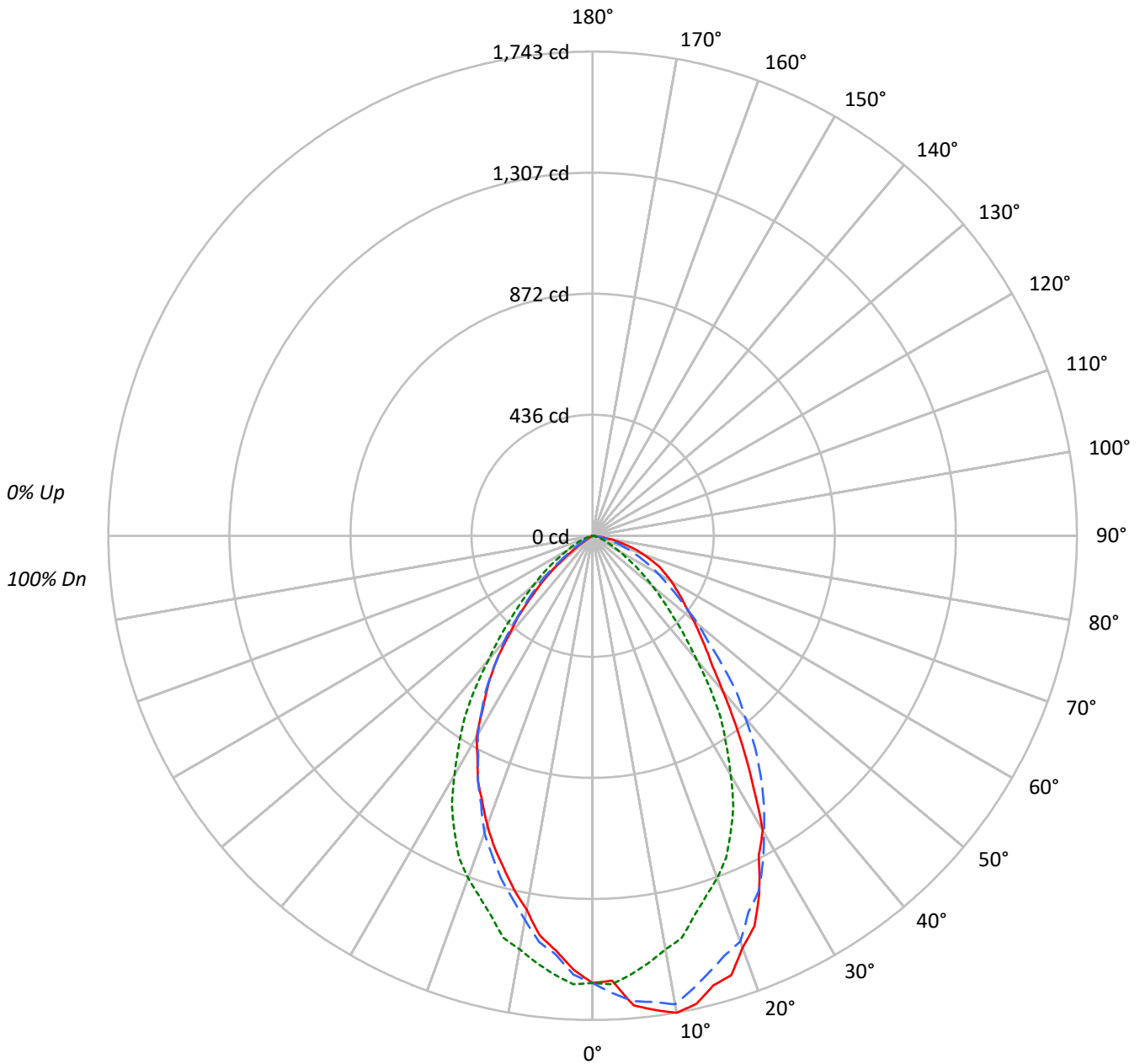
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2308.0 lumens  
Efficiency: N/A  
Efficacy: 57.1 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): 40.4  
Input Voltage (V):  
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									
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	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°	155357	155357	155357
5°	164367	153529	145296
10°	170814	148112	133925
15°	167400	141358	123617
20°	161970	134605	113791
25°	151083	125169	103802
30°	136384	110781	92932
35°	112337	94834	77094
40°	91684	73194	59338
45°	78776	55592	42683
50°	71287	42316	26960
55°	65607	30533	9740
60°	62969	20861	1486
65°	60822	14110	457
70°	54448	9789	564
75°	44625	5033	0
80°	27894	2167	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.9	6.5
10°-20°	406.4	17.6
20°-30°	542.7	23.5
30°-40°	515.2	22.3
40°-50°	356.1	15.4
50°-60°	196.8	8.5
60°-70°	97.7	4.2
70°-80°	38.5	1.7
80°-90°	3.7	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°	1100.0	47.7
0°-40°	1615.2	70.0
0°-60°	2168.1	93.9
0°-90°	2308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2308.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1610	1610	1610	1610	1610	
5°	1697	1682	1585	1514	1500	162
15°	1676	1626	1415	1276	1238	474
25°	1419	1413	1176	975	975	647
35°	954	1054	805	662	654	597
45°	577	662	407	334	313	450
55°	390	367	182	93	58	351
65°	266	193	62	2	2	259
75°	120	73	14	0	0	128
85°	0	2	0	0	0	11
90°	0	0	0	0	0	



TEST NUMBER: P#

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1
2.5°	1602.4	1646.8	1650.7	1646.8	1652.6	1650.7	1660.3	1650.7	1662.3	1644.9	1648.8
5°	1697.0	1679.6	1716.3	1697.0	1697.0	1695.1	1689.3	1687.3	1695.1	1670.0	1681.6
7.5°	1722.1	1747.2	1780.1	1739.5	1741.4	1741.4	1729.8	1726.0	1726.0	1679.6	1693.2
10°	1743.4	1727.9	1745.3	1729.8	1743.4	1741.4	1749.1	1724.0	1741.4	1714.4	1712.5
12.5°	1726.0	1720.2	1743.4	1718.3	1710.6	1712.5	1702.8	1697.0	1702.8	1671.9	1670.0
15°	1675.8	1681.6	1716.3	1689.3	1685.4	1681.6	1670.0	1650.7	1666.2	1623.7	1625.6
17.5°	1658.4	1648.8	1654.6	1631.4	1637.2	1633.3	1631.4	1614.0	1610.1	1583.1	1583.1
20°	1577.4	1598.5	1598.5	1583.1	1583.1	1581.2	1556.1	1571.5	1554.1	1546.4	1554.1
22.5°	1521.3	1523.3	1523.3	1509.7	1511.7	1504.0	1490.5	1480.8	1490.5	1480.8	1465.3
25°	1419.1	1422.9	1446.1	1420.9	1417.1	1424.8	1413.2	1407.4	1405.5	1382.4	1413.2
27.5°	1295.5	1334.0	1332.1	1322.5	1334.0	1318.6	1312.9	1314.7	1320.6	1318.6	1326.3
30°	1224.1	1229.8	1235.6	1227.9	1229.8	1224.1	1224.1	1225.9	1241.4	1235.6	1233.7
32.5°	1079.2	1098.5	1114.0	1114.0	1115.9	1121.7	1119.8	1160.3	1170.0	1150.7	1146.8
35°	953.7	967.3	980.7	982.7	1007.8	1009.7	1011.7	1023.2	1050.2	1056.1	1054.1
37.5°	834.1	847.5	851.4	868.8	882.3	895.8	911.3	926.7	949.9	969.2	959.5
40°	727.9	733.6	743.3	751.0	778.0	778.0	785.7	816.7	841.8	857.2	855.2
42.5°	639.1	641.0	648.7	662.2	687.3	681.5	687.3	708.6	745.2	747.2	768.4
45°	577.3	575.3	581.1	583.0	598.5	606.2	610.1	625.5	656.4	660.2	662.2
47.5°	521.3	519.3	529.0	532.9	538.6	546.3	546.3	548.3	559.9	569.6	561.8
50°	474.9	474.9	474.9	478.8	488.5	486.5	488.5	496.2	501.9	498.1	496.2
52.5°	424.7	432.4	438.2	440.2	442.1	442.1	444.1	440.2	438.2	432.4	420.9
55°	390.0	397.7	397.7	397.7	397.7	405.4	395.8	397.7	397.7	382.3	366.8
57.5°	355.3	363.0	368.7	361.0	368.7	361.0	357.2	355.3	351.3	335.9	312.8
60°	326.3	330.2	328.2	326.3	330.2	324.3	320.5	312.8	308.9	287.7	272.2
62.5°	293.5	295.4	297.3	293.5	289.6	287.7	279.9	268.4	260.6	243.3	229.7
65°	266.4	260.6	258.7	256.8	252.9	247.1	241.4	227.8	222.0	206.6	193.0
67.5°	225.9	224.0	227.8	222.0	212.4	212.4	206.6	195.0	181.5	171.9	158.3
70°	193.0	191.1	187.3	181.5	179.6	171.9	171.9	158.3	154.5	137.1	125.5
72.5°	158.3	158.3	152.5	146.7	140.9	137.1	135.2	125.5	119.7	110.1	100.4
75°	119.7	119.7	117.8	111.9	108.1	104.2	102.3	94.6	88.8	79.2	73.4
77.5°	84.9	84.9	77.2	73.4	75.3	71.4	67.5	65.7	63.7	57.9	50.2
80°	50.2	48.3	42.5	44.4	42.5	42.5	40.5	38.6	34.7	30.9	27.0
82.5°	13.5	15.4	15.4	15.4	17.4	13.5	13.5	13.5	15.4	15.4	9.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
87.5°	2.0	3.9	7.7	7.7	7.7	7.7	7.7	5.8	5.8	5.8	3.9
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°	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1
2.5°	1629.5	1627.5	1629.5	1615.9	1646.8	1623.7	1619.8	1615.9	1629.5	1615.9	1596.6
5°	1664.2	1644.9	1639.1	1633.3	1650.7	1623.7	1617.9	1619.8	1610.1	1585.1	1587.0
7.5°	1675.8	1658.4	1641.0	1604.4	1619.8	1614.0	1598.5	1587.0	1571.5	1550.3	1546.4
10°	1679.6	1660.3	1635.2	1623.7	1600.5	1592.8	1587.0	1567.7	1548.4	1511.7	1502.0
12.5°	1668.1	1644.9	1614.0	1604.4	1587.0	1561.9	1548.4	1529.0	1511.7	1482.7	1461.5
15°	1617.9	1598.5	1588.9	1556.1	1548.4	1532.9	1505.9	1478.9	1453.8	1415.1	1403.5
17.5°	1560.0	1552.3	1542.6	1517.5	1515.6	1500.1	1475.0	1451.8	1419.1	1359.1	1339.9
20°	1500.1	1500.1	1469.2	1459.6	1478.9	1447.9	1428.7	1407.4	1339.9	1310.9	1276.2
22.5°	1455.7	1434.5	1417.1	1401.7	1403.5	1384.3	1357.3	1314.7	1289.6	1254.9	1214.4
25°	1368.8	1376.5	1338.0	1332.1	1338.0	1293.5	1280.0	1245.2	1208.5	1175.7	1144.9
27.5°	1314.7	1293.5	1268.5	1247.2	1247.2	1229.8	1191.2	1183.5	1127.5	1096.6	1058.0
30°	1233.7	1218.2	1197.0	1166.1	1162.3	1148.7	1117.9	1098.5	1040.6	994.3	973.0
32.5°	1131.3	1125.6	1108.2	1073.5	1061.9	1046.4	1007.8	975.0	948.0	895.8	870.7
35°	1058.0	1036.8	1000.1	971.1	961.4	934.4	903.5	880.4	851.4	805.1	772.3
37.5°	948.0	926.7	891.9	857.2	857.2	830.2	787.7	764.6	724.0	696.9	669.9
40°	851.4	824.4	789.7	749.1	743.3	704.6	687.3	648.7	623.6	581.1	577.3
42.5°	743.3	718.2	687.3	656.4	633.2	614.0	569.6	540.6	513.6	492.3	486.5
45°	644.8	612.0	585.0	546.3	523.2	500.0	471.1	451.8	430.5	407.4	393.8
47.5°	559.9	532.9	494.2	459.5	436.4	424.7	391.9	370.7	353.3	337.9	328.2
50°	473.0	440.2	419.0	380.3	376.5	349.4	322.4	305.0	295.4	281.9	268.4
52.5°	407.4	376.5	347.5	318.6	303.1	293.5	268.4	251.0	237.5	227.8	220.1
55°	343.6	316.6	293.5	264.5	254.8	241.4	212.4	208.5	195.0	181.5	171.9
57.5°	295.4	270.3	243.3	224.0	206.6	197.0	173.7	158.3	150.6	139.0	129.3
60°	251.0	224.0	202.7	179.6	171.9	158.3	140.9	127.5	117.8	108.1	98.5
62.5°	210.4	187.3	164.1	144.8	133.2	125.5	111.9	100.4	90.8	83.1	75.3
65°	173.7	152.5	133.2	113.9	108.1	98.5	88.8	79.2	71.4	61.8	54.1
67.5°	142.9	123.6	104.2	90.8	84.9	81.1	69.5	59.8	54.1	48.3	40.5
70°	111.9	98.5	83.1	71.4	65.7	59.8	52.1	46.4	38.6	34.7	29.0
72.5°	86.9	75.3	61.8	52.1	48.3	44.4	36.7	30.9	27.0	23.1	19.3
75°	61.8	52.1	44.4	34.7	32.8	30.9	25.1	21.3	17.4	13.5	11.6
77.5°	42.5	34.7	27.0	23.1	21.3	17.4	15.4	11.6	9.7	7.7	5.8
80°	23.1	17.4	13.5	11.6	9.7	7.7	7.7	5.8	3.9	3.9	2.0
82.5°	7.7	5.8	3.9	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0
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°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	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°	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1
2.5°	1608.2	1587.0	1592.8	1592.8	1588.9	1588.9	1585.1	1579.3	1581.2	1569.6	1544.5
5°	1590.8	1563.8	1560.0	1563.8	1548.4	1544.5	1536.8	1548.4	1513.6	1527.1	1511.7
7.5°	1540.7	1515.6	1509.7	1523.3	1504.0	1492.3	1490.5	1505.9	1475.0	1459.6	1442.2
10°	1484.6	1475.0	1457.6	1447.9	1442.2	1444.1	1428.7	1409.4	1403.5	1399.7	1384.3
12.5°	1434.5	1413.2	1397.8	1386.2	1382.4	1382.4	1357.3	1353.4	1336.0	1332.1	1309.0
15°	1374.6	1349.5	1339.9	1324.4	1310.9	1318.6	1289.6	1281.9	1276.2	1251.1	1254.9
17.5°	1322.5	1295.5	1272.3	1262.6	1251.1	1239.5	1212.4	1218.2	1204.7	1204.7	1170.0
20°	1254.9	1225.9	1208.5	1189.3	1189.3	1173.8	1154.5	1156.4	1139.0	1121.7	1090.8
22.5°	1183.5	1152.6	1131.3	1123.6	1104.3	1100.5	1077.3	1071.5	1048.3	1050.2	1023.2
25°	1108.2	1077.3	1048.3	1050.2	1032.9	1025.2	1011.7	984.7	975.0	963.4	955.7
27.5°	1019.4	998.1	973.0	971.1	938.3	940.2	922.9	915.1	891.9	897.8	880.4
30°	938.3	907.4	884.2	878.5	864.9	861.1	834.1	822.4	826.3	810.8	801.2
32.5°	855.2	809.0	799.3	787.7	780.0	770.3	751.0	758.7	741.3	745.2	729.8
35°	745.2	725.9	700.8	700.8	693.1	685.4	671.9	679.6	662.2	654.5	639.1
37.5°	652.5	635.2	610.1	617.8	604.3	592.7	581.1	583.0	567.6	565.7	550.2
40°	552.2	542.5	525.2	525.2	515.5	515.5	509.7	503.9	494.2	482.6	465.3
42.5°	457.5	449.8	442.1	444.1	430.5	442.1	426.7	436.4	405.4	403.5	391.9
45°	388.0	370.7	372.6	364.9	357.2	361.0	347.5	351.3	334.0	330.2	318.6
47.5°	314.7	308.9	297.3	293.5	293.5	287.7	281.9	279.9	272.2	262.5	247.1
50°	258.7	237.5	233.6	227.8	224.0	224.0	216.3	204.7	206.6	197.0	181.5
52.5°	202.7	185.3	177.6	175.7	168.0	164.1	154.5	146.7	140.9	137.1	127.5
55°	156.3	140.9	131.3	131.3	119.7	119.7	106.2	100.4	92.7	84.9	79.2
57.5°	117.8	110.1	100.4	92.7	88.8	79.2	71.4	61.8	56.0	44.4	36.7
60°	88.8	81.1	71.4	65.7	61.8	52.1	42.5	34.7	21.3	17.4	15.4
62.5°	65.7	57.9	48.3	44.4	40.5	32.8	23.1	11.6	5.8	5.8	5.8
65°	48.3	38.6	30.9	27.0	23.1	17.4	7.7	3.9	2.0	2.0	2.0
67.5°	32.8	25.1	17.4	15.4	11.6	5.8	2.0	2.0	2.0	2.0	2.0
70°	21.3	15.4	7.7	5.8	3.9	2.0	2.0	2.0	2.0	2.0	2.0
72.5°	13.5	7.7	3.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	3.9	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.0	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	2.0	2.0	2.0
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: P#

CATALOG NUMBER: LD4C35D010 EX4C359040 4LBSQLWWH

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1	1610.1
2.5°	1571.5	1558.0	1565.7	1548.4	1556.1	1569.6	1560.0	1563.8
5°	1517.5	1509.7	1500.1	1475.0	1494.3	1509.7	1502.0	1500.1
7.5°	1459.6	1432.5	1446.1	1438.3	1434.5	1449.9	1432.5	1451.8
10°	1399.7	1380.4	1378.5	1365.0	1365.0	1376.5	1378.5	1366.9
12.5°	1310.9	1301.3	1301.3	1299.3	1297.3	1309.0	1310.9	1305.1
15°	1247.2	1243.3	1233.7	1231.8	1220.2	1237.5	1239.5	1237.5
17.5°	1170.0	1171.9	1162.3	1162.3	1170.0	1175.7	1160.3	1175.7
20°	1117.9	1108.2	1104.3	1086.9	1096.6	1106.3	1106.3	1108.2
22.5°	1042.5	1027.1	1032.9	1023.2	1017.4	1031.0	1031.0	1036.8
25°	957.6	957.6	961.4	955.7	959.5	967.3	961.4	975.0
27.5°	876.5	884.2	884.2	876.5	880.4	903.5	913.2	897.8
30°	801.2	803.1	809.0	805.1	816.7	824.4	822.4	834.1
32.5°	716.3	725.9	729.8	724.0	727.9	745.2	735.6	733.6
35°	650.6	633.2	631.4	633.2	641.0	644.8	641.0	654.5
37.5°	556.0	550.2	542.5	544.4	550.2	558.0	561.8	571.4
40°	465.3	457.5	457.5	455.6	449.8	471.1	471.1	471.1
42.5°	386.1	384.2	374.6	374.6	382.3	388.0	384.2	397.7
45°	316.6	308.9	303.1	303.1	308.9	308.9	314.7	312.8
47.5°	249.1	241.4	243.3	237.5	243.3	251.0	241.4	243.3
50°	187.3	187.3	183.4	187.3	185.3	187.3	183.4	179.6
52.5°	127.5	144.8	146.7	139.0	121.6	106.2	96.5	104.2
55°	73.4	65.7	65.7	63.7	59.8	57.9	52.1	57.9
57.5°	36.7	32.8	32.8	32.8	30.9	29.0	25.1	25.1
60°	15.4	13.5	13.5	11.6	9.7	7.7	5.8	7.7
62.5°	5.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9
65°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
67.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)