

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: FAIL-SAFE

Report Number: P837734

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-2LO-30-120-EDD**

Issue Date: 5/21/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P837734
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-2LO-30-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

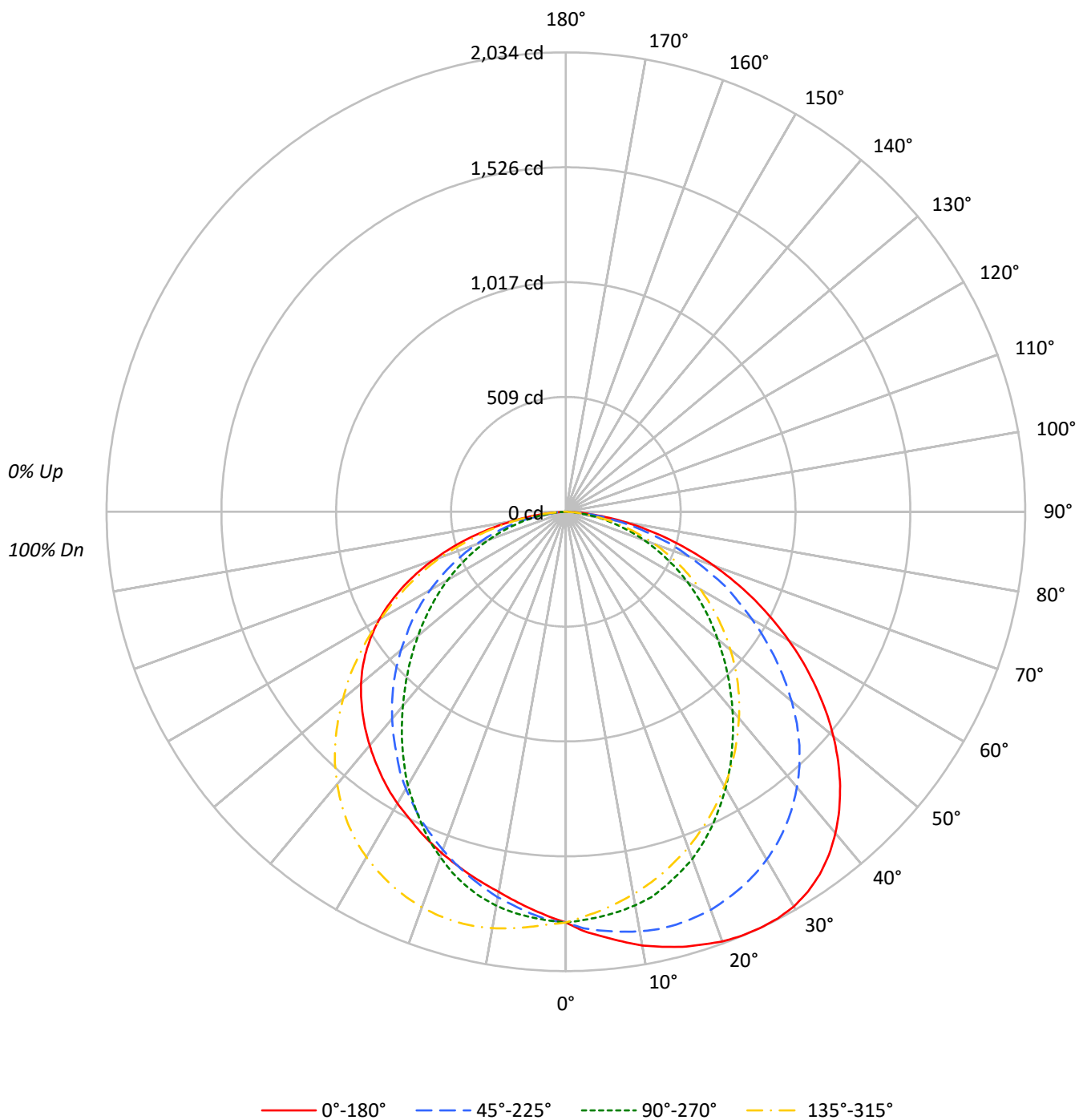
Lumens per Lamp: N/A
Luminaire Lumens: 5335.9 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): 120
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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84		
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	4894	4894	4894	4894
5°	5101	4859	4767	4867
10°	5328	4834	4671	4841
15°	5556	4773	4625	4774
20°	5799	4686	4605	4659
25°	6039	4555	4604	4508
30°	6272	4396	4635	4348
35°	6439	4216	4681	4149
40°	6524	4034	4747	3943
45°	6537	3851	4839	3754
50°	6476	3675	4957	3577
55°	6341	3511	5067	3414
60°	6142	3341	5135	3253
65°	5868	3144	5108	3072
70°	5481	2914	4927	2861
75°	4931	2598	4522	2585
80°	4181	2176	3800	2208
85°	2908	1442	2411	1479

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.7	3.2
10°-20°	500.0	9.4
20°-30°	766.3	14.4
30°-40°	931.8	17.5
40°-50°	968.7	18.2
50°-60°	875.0	16.4
60°-70°	665.2	12.5
70°-80°	370.9	7.0
80°-90°	85.4	1.6
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°	1439.0	27.0
0°-40°	2370.8	44.4
0°-60°	4214.5	79.0
0°-90°	5335.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5335.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1819	1819	1819	1819	1819	
5°	1888	1799	1765	1802	1888	182
15°	1994	1713	1660	1714	1994	565
25°	2034	1534	1551	1518	2034	939
35°	1960	1283	1425	1263	1960	1224
45°	1718	1012	1272	986	1718	1323
55°	1352	748	1080	728	1352	1207
65°	922	494	802	482	922	911
75°	474	250	435	249	474	504
85°	94	47	78	48	94	119
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7
2.5°	1859.0	1831.9	1832.3	1856.1	1837.8	1846.7	1821.3	1831.0	1828.1	1830.2	1809.4
5°	1888.3	1859.0	1858.6	1879.0	1858.6	1862.4	1830.2	1836.6	1827.2	1821.3	1798.8
7.5°	1919.3	1890.0	1887.0	1904.9	1878.1	1875.2	1839.5	1839.5	1822.6	1807.7	1786.5
10°	1949.8	1919.7	1915.9	1929.5	1896.4	1886.6	1843.3	1836.6	1814.1	1792.0	1769.1
12.5°	1972.7	1942.2	1939.2	1947.7	1910.4	1892.6	1843.3	1830.2	1797.1	1766.1	1748.3
15°	1994.4	1963.0	1954.9	1959.2	1916.3	1892.6	1837.4	1817.0	1774.6	1733.9	1713.1
17.5°	2009.6	1979.5	1971.5	1971.0	1919.3	1885.3	1824.7	1796.7	1745.8	1696.6	1675.8
20°	2024.9	1994.8	1984.6	1977.0	1918.4	1875.6	1806.0	1768.3	1708.9	1653.7	1636.3
22.5°	2032.6	2001.6	1990.6	1979.1	1912.9	1857.8	1783.1	1735.2	1667.3	1601.5	1587.1
25°	2033.8	2002.0	1990.1	1973.6	1901.9	1836.6	1753.4	1695.3	1619.3	1546.4	1534.1
27.5°	2030.4	1995.6	1983.8	1963.8	1885.3	1810.7	1718.2	1649.9	1568.4	1487.8	1474.7
30°	2018.6	1983.3	1971.9	1946.0	1862.0	1778.9	1679.6	1599.4	1512.0	1426.3	1414.9
32.5°	1994.8	1960.4	1951.1	1925.2	1836.6	1741.9	1634.6	1545.1	1449.6	1367.8	1350.8
35°	1960.0	1925.6	1919.7	1892.6	1800.9	1697.8	1585.4	1485.7	1383.5	1299.9	1283.3
37.5°	1914.6	1885.8	1876.9	1850.1	1758.9	1647.8	1529.0	1421.2	1316.0	1226.1	1215.9
40°	1857.3	1830.2	1823.4	1799.6	1710.1	1592.2	1467.9	1354.6	1246.4	1162.9	1148.4
42.5°	1792.0	1766.6	1762.7	1738.1	1649.9	1530.7	1401.7	1285.5	1173.9	1093.3	1078.9
45°	1717.8	1693.2	1692.3	1669.0	1584.1	1462.4	1332.1	1215.5	1103.0	1019.5	1011.8
47.5°	1635.9	1613.8	1613.8	1592.2	1510.7	1387.3	1260.4	1142.5	1031.8	957.9	944.4
50°	1546.8	1526.0	1519.6	1509.0	1429.7	1305.4	1184.9	1071.2	961.3	890.9	877.8
52.5°	1451.8	1433.9	1438.2	1418.7	1341.9	1220.1	1108.6	991.0	890.5	826.4	813.3
55°	1351.6	1326.2	1330.0	1322.8	1250.2	1132.3	1022.9	924.9	820.9	760.7	748.4
57.5°	1247.7	1214.6	1228.2	1223.9	1152.7	1042.4	944.4	849.8	751.8	696.2	684.3
60°	1141.2	1109.4	1123.4	1119.6	1052.6	952.4	863.3	775.5	683.0	632.5	620.7
62.5°	1031.8	1002.5	1015.2	1012.2	950.7	860.4	782.7	702.1	613.9	568.5	557.5
65°	921.5	893.5	904.9	902.8	845.9	777.2	700.0	626.2	544.3	504.9	493.8
67.5°	808.6	782.7	793.3	793.3	741.2	675.4	616.9	549.4	476.0	442.1	431.9
70°	696.6	672.4	681.8	680.9	636.8	583.3	532.9	472.6	406.9	378.9	370.4
72.5°	583.8	562.5	571.0	570.2	533.3	498.9	448.9	396.7	339.4	316.9	309.3
75°	474.3	454.4	462.4	461.6	431.5	399.2	365.7	322.4	273.2	257.5	249.9
77.5°	369.9	349.6	356.4	356.4	334.3	311.0	284.2	250.7	215.9	199.0	193.5
80°	269.8	260.1	256.7	257.1	242.2	227.0	213.4	181.2	155.7	144.2	140.4
82.5°	177.3	169.3	165.9	166.7	158.2	148.9	140.4	117.9	101.0	94.2	92.1
85°	94.2	88.2	85.3	87.4	85.7	80.6	76.4	61.1	50.5	47.9	46.7
87.5°	29.7	25.9	23.8	31.4	26.7	23.8	22.9	18.2	14.0	14.0	13.6
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7
2.5°	1816.2	1816.2	1799.6	1795.8	1794.1	1796.3	1779.7	1776.7	1800.5	1792.4	1774.2
5°	1801.8	1800.9	1777.6	1773.3	1773.3	1770.8	1752.1	1747.9	1771.6	1764.9	1744.9
7.5°	1784.0	1781.4	1753.8	1750.9	1746.6	1744.9	1724.1	1721.2	1741.5	1737.3	1718.6
10°	1762.3	1759.8	1727.1	1725.0	1720.3	1716.9	1697.4	1695.3	1716.1	1709.3	1694.4
12.5°	1733.9	1729.2	1695.7	1693.6	1689.8	1688.5	1669.4	1668.6	1691.5	1684.7	1669.0
15°	1696.6	1692.7	1655.4	1656.3	1656.7	1656.7	1641.4	1640.6	1663.0	1660.1	1643.1
17.5°	1655.4	1650.3	1614.7	1617.2	1620.2	1623.6	1611.7	1613.8	1637.6	1633.8	1618.5
20°	1608.7	1603.6	1568.9	1576.1	1582.4	1589.2	1581.6	1587.5	1609.6	1607.9	1596.4
22.5°	1556.6	1551.5	1519.2	1530.3	1540.9	1553.6	1550.2	1557.0	1580.3	1579.9	1569.7
25°	1492.9	1494.2	1465.8	1479.3	1497.2	1515.0	1516.3	1527.3	1553.2	1550.6	1541.3
27.5°	1433.5	1435.2	1405.1	1428.0	1451.8	1474.7	1480.2	1495.5	1521.8	1519.6	1511.6
30°	1371.2	1373.3	1344.0	1375.4	1404.3	1432.3	1444.1	1464.9	1491.6	1491.6	1483.2
32.5°	1306.3	1310.1	1279.5	1321.5	1355.0	1387.7	1408.5	1430.1	1460.7	1459.8	1452.6
35°	1239.6	1243.9	1215.9	1269.3	1302.9	1342.7	1368.6	1397.5	1424.6	1425.0	1419.5
37.5°	1171.8	1176.9	1151.4	1209.9	1248.1	1295.2	1328.3	1357.2	1387.3	1389.0	1383.9
40°	1104.3	1109.8	1087.8	1144.2	1192.6	1245.2	1283.3	1317.3	1350.4	1351.2	1347.8
42.5°	1036.9	1042.8	1026.2	1081.4	1136.1	1192.6	1237.5	1276.1	1310.1	1312.2	1308.4
45°	971.1	976.2	964.3	1024.6	1077.2	1138.7	1190.4	1234.1	1268.5	1271.5	1270.2
47.5°	905.8	910.4	899.8	955.0	1015.6	1081.0	1140.8	1189.2	1225.6	1229.0	1228.2
50°	841.7	845.5	834.1	891.8	952.0	1021.6	1083.9	1139.9	1180.7	1184.1	1183.6
52.5°	778.1	781.9	772.1	832.8	887.5	960.9	1028.8	1089.5	1129.8	1134.9	1135.7
55°	716.5	718.2	710.6	768.7	821.8	898.6	976.6	1035.6	1075.9	1080.1	1082.7
57.5°	655.0	655.5	649.1	704.7	755.6	834.1	915.9	977.9	1016.1	1020.3	1024.1
60°	593.9	593.5	586.3	640.2	689.0	766.6	851.9	913.4	950.3	954.1	959.2
62.5°	533.3	532.0	525.6	575.3	621.1	697.9	783.6	843.0	878.2	880.7	887.5
65°	473.0	471.8	465.8	511.6	553.2	626.6	710.6	767.0	798.9	802.2	801.0
67.5°	413.6	411.1	406.4	447.6	485.3	553.2	633.8	687.7	714.0	717.0	725.0
70°	354.2	351.3	340.7	384.4	417.5	478.1	553.2	601.2	623.2	626.2	624.9
72.5°	295.7	292.7	281.3	321.6	349.6	402.6	469.6	509.5	528.6	531.2	531.2
75°	238.8	237.2	229.9	260.5	283.8	327.1	383.9	417.0	431.9	434.9	434.0
77.5°	184.1	182.8	175.6	201.9	220.2	252.4	298.2	324.1	335.2	338.5	345.8
80°	131.9	131.5	120.1	145.9	154.0	181.2	214.7	234.6	240.5	245.2	250.3
82.5°	84.4	84.8	73.4	95.5	98.8	116.2	137.0	149.3	153.6	157.4	161.2
85°	41.2	42.8	36.5	50.5	50.9	59.8	68.7	73.4	75.1	78.1	81.5
87.5°	10.6	12.3	6.8	14.4	12.7	16.5	19.1	20.4	19.9	22.1	23.3
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7
2.5°	1780.1	1793.7	1786.9	1809.0	1817.5	1803.9	1827.6	1828.1	1811.1	1831.0	1842.1
5°	1752.6	1766.6	1762.3	1785.2	1795.8	1784.0	1812.8	1818.3	1801.8	1824.3	1842.1
7.5°	1724.6	1741.1	1735.6	1758.9	1771.6	1762.3	1793.3	1802.2	1789.5	1814.1	1837.8
10°	1700.4	1714.4	1708.4	1733.0	1744.1	1736.4	1767.0	1783.5	1771.6	1801.8	1830.2
12.5°	1676.6	1688.1	1681.3	1701.6	1712.3	1702.5	1739.8	1755.1	1746.6	1778.0	1814.5
15°	1646.1	1658.8	1649.5	1667.7	1675.8	1667.3	1697.8	1724.1	1713.5	1747.9	1788.2
17.5°	1622.7	1629.9	1617.2	1631.6	1636.3	1624.9	1655.8	1681.7	1674.1	1711.4	1758.1
20°	1596.9	1602.8	1585.0	1593.0	1592.6	1578.2	1606.6	1632.1	1627.0	1668.1	1721.2
22.5°	1568.0	1571.0	1550.2	1551.9	1551.0	1527.3	1552.7	1578.6	1576.5	1618.1	1677.5
25°	1537.5	1537.9	1511.2	1510.3	1501.0	1473.0	1495.5	1524.7	1518.4	1563.3	1625.7
27.5°	1507.3	1503.1	1470.9	1463.2	1448.4	1414.9	1434.8	1461.1	1457.3	1501.4	1570.6
30°	1475.1	1469.6	1430.1	1416.1	1394.5	1355.9	1372.4	1397.0	1399.2	1437.8	1510.3
32.5°	1444.6	1430.6	1386.9	1366.5	1339.3	1294.4	1303.3	1328.3	1331.7	1370.7	1445.4
35°	1405.1	1395.8	1341.9	1307.1	1280.4	1231.2	1240.5	1257.9	1263.0	1301.2	1377.1
37.5°	1367.8	1352.9	1295.6	1253.2	1218.9	1167.1	1169.6	1187.5	1192.6	1231.2	1306.3
40°	1329.2	1307.9	1246.4	1196.8	1157.3	1103.0	1100.1	1118.7	1122.6	1160.3	1228.2
42.5°	1288.0	1262.6	1193.4	1139.1	1093.7	1038.6	1032.6	1048.7	1053.0	1089.9	1156.5
45°	1246.4	1215.9	1139.1	1079.7	1030.1	973.6	967.7	980.0	986.4	1021.2	1085.2
47.5°	1202.3	1166.7	1083.1	1016.9	965.6	909.2	901.9	914.2	919.3	953.7	1014.4
50°	1156.1	1112.8	1025.4	952.4	901.5	845.9	835.3	849.8	854.4	886.7	946.1
52.5°	1105.2	1057.2	963.9	887.5	836.6	783.6	770.9	784.9	790.4	821.8	876.5
55°	1051.3	999.5	901.9	827.7	772.6	720.8	710.2	715.7	727.6	757.3	808.2
57.5°	990.6	939.3	836.6	761.1	708.1	658.4	649.5	654.6	665.6	694.5	740.3
60°	926.1	871.8	770.0	694.5	643.2	596.1	588.0	592.7	604.5	630.9	673.3
62.5°	862.5	801.4	701.3	626.2	579.5	535.8	533.7	532.0	543.0	568.5	605.8
65°	785.3	726.7	629.6	558.3	515.9	476.4	467.9	471.8	482.4	505.7	544.7
67.5°	702.5	649.5	556.2	490.4	452.7	417.5	410.2	411.9	423.0	443.3	477.3
70°	614.7	568.1	481.1	422.1	390.3	357.2	352.5	353.0	363.6	381.4	411.1
72.5°	522.7	480.7	405.2	354.7	328.4	304.6	300.4	295.3	305.0	320.3	345.8
75°	428.9	392.0	329.6	288.5	267.7	247.8	243.9	238.8	248.6	261.8	281.7
77.5°	334.3	304.6	256.2	224.4	208.3	193.5	190.1	184.5	194.3	204.1	219.8
80°	241.8	220.2	191.3	157.8	152.3	142.5	139.2	133.2	142.5	148.9	160.8
82.5°	156.1	141.7	125.2	101.8	101.0	93.8	92.1	85.3	93.8	97.6	106.5
85°	78.9	72.1	67.9	51.8	53.5	48.8	48.4	41.2	47.9	49.6	54.7
87.5°	22.5	23.8	21.2	12.7	16.1	15.3	15.3	11.0	15.3	15.3	17.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P837734

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-2LO-30-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7	1818.7
2.5°	1820.4	1827.6	1829.3	1828.9	1833.6	1859.0	1850.6	1859.0
5°	1824.7	1840.8	1845.0	1851.0	1858.6	1887.5	1878.1	1888.3
7.5°	1827.2	1851.4	1860.7	1872.2	1884.5	1916.7	1909.1	1919.3
10°	1827.2	1858.6	1872.2	1891.3	1907.8	1945.2	1938.0	1949.8
12.5°	1819.6	1859.9	1879.0	1905.7	1926.9	1967.2	1964.3	1972.7
15°	1803.9	1853.5	1879.8	1914.2	1940.5	1985.5	1984.2	1994.4
17.5°	1782.7	1842.5	1874.3	1917.6	1950.7	2001.2	2004.1	2009.6
20°	1755.9	1821.7	1863.3	1916.3	1957.9	2013.5	2017.3	2024.9
22.5°	1720.7	1796.7	1846.7	1910.8	1958.7	2018.6	2025.3	2032.6
25°	1679.2	1766.6	1825.1	1900.2	1954.5	2018.1	2027.5	2033.8
27.5°	1631.6	1727.5	1797.5	1883.2	1942.6	2011.3	2022.8	2030.4
30°	1576.5	1685.9	1766.1	1861.2	1926.5	1998.6	2010.9	2018.6
32.5°	1519.6	1640.1	1728.8	1832.7	1903.2	1978.3	1988.9	1994.8
35°	1457.7	1584.6	1683.8	1796.3	1873.0	1945.6	1953.6	1960.0
37.5°	1390.3	1524.3	1632.5	1755.1	1830.6	1900.2	1907.4	1914.6
40°	1320.7	1461.1	1574.8	1704.6	1780.1	1844.6	1852.3	1857.3
42.5°	1250.7	1391.1	1513.3	1645.2	1720.3	1782.3	1786.9	1792.0
45°	1179.8	1318.6	1444.1	1579.5	1653.7	1711.8	1713.5	1717.8
47.5°	1107.7	1243.5	1368.2	1504.4	1577.8	1630.8	1632.5	1635.9
50°	1035.2	1168.4	1287.2	1423.3	1495.0	1551.0	1543.4	1546.8
52.5°	963.9	1089.5	1210.8	1335.9	1406.8	1456.4	1458.6	1451.8
55°	893.9	1012.2	1123.8	1244.3	1311.8	1350.4	1349.1	1351.6
57.5°	823.0	934.2	1036.4	1146.7	1212.5	1249.0	1256.6	1247.7
60°	750.9	855.3	946.9	1046.6	1110.2	1140.8	1149.7	1141.2
62.5°	679.2	775.1	858.2	945.2	1004.2	1041.9	1041.1	1031.8
65°	607.5	694.5	768.7	842.6	893.9	931.6	929.9	921.5
67.5°	541.3	613.0	679.6	739.5	784.0	809.9	818.8	808.6
70°	468.4	530.3	588.9	636.8	673.7	697.0	705.5	696.6
72.5°	395.4	448.0	489.2	535.4	563.8	583.3	592.2	583.8
75°	323.3	366.5	400.1	436.1	456.1	472.6	482.8	474.3
77.5°	253.3	286.8	313.5	339.8	362.7	366.5	375.5	369.9
80°	186.7	210.8	230.4	247.8	264.3	266.0	273.2	269.8
82.5°	124.3	140.4	145.5	163.8	174.4	172.7	179.9	177.3
85°	65.8	75.5	84.4	89.9	95.9	90.4	96.7	94.2
87.5°	22.1	23.3	20.4	28.8	31.8	27.2	31.0	29.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)