

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: P24519

Luminaire Tested: **MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OLK12**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P24519
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OLK12
Description: METALUX MPR3 2X4 AMBIENT/EXAM/READING LIGHT
Light Source: (4) 3500K LED LIGHT STRIPS
1UT217049835
Ballast/Driver: (2) 48W ADVANCE ELECTRONIC DRIVERS
LEDINTA2000C24DOM

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4963.5 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.12 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 1.35' x H: 0.1')
CIE Type: Direct

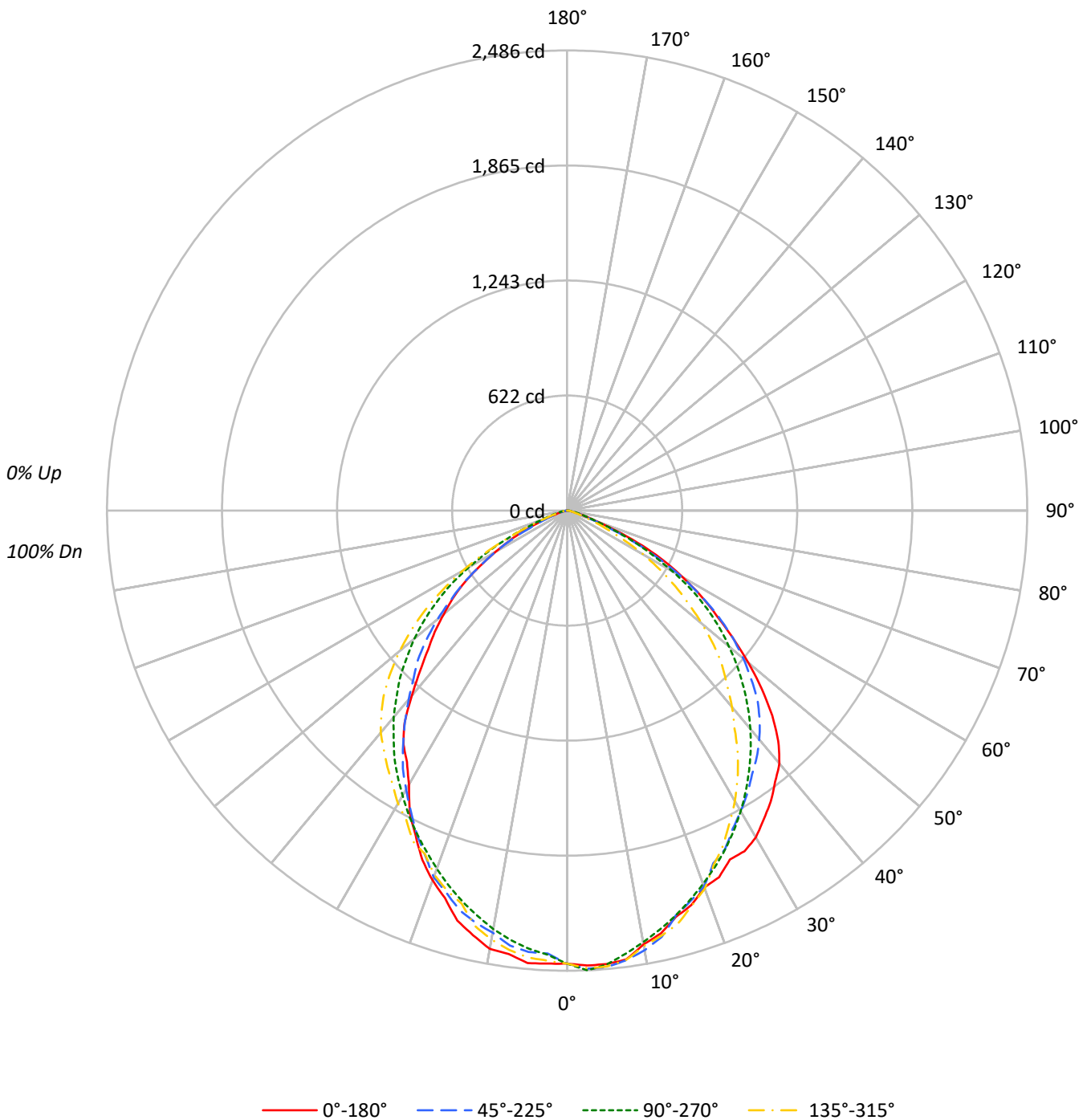
Input Watts (W): 68.8
Input Voltage (V): 120.05
Input Current (Ain): 0.574
Voltage Rise (V): NR
Power Factor: 0.9989
Total Harmonic Distortion (THDi): 7.18%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 3 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89					89			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77					77			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67					67			
4	88	77	69	64	85	76	69	63	73	67	62	71	66	61	69	65	61	59					59			
5	81	70	62	56	79	69	61	55	67	60	55	65	59	54	63	58	54	52					52			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46					46			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41					41			
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	10375	10375	10375	10375
5°	10395	10425	10374	10063
10°	10112	10095	10219	9790
15°	9777	9797	9868	9461
20°	9517	9498	9341	9110
25°	9405	9218	8758	8777
30°	9570	8906	8027	8441
35°	9438	8549	7586	8123
40°	9296	8159	6798	7728
45°	8747	7668	5939	7268
50°	7733	7079	5269	6690
55°	6567	6323	4529	5910
60°	5422	5102	3366	4771
65°	3878	3557	2151	3184
70°	1758	1776	970	1560
75°	790	994	467	891
80°	346	658	215	564
85°	100	456	100	341



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.5	4.6
10°-20°	635.8	12.8
20°-30°	914.4	18.4
30°-40°	1044.8	21.1
40°-50°	994.4	20.0
50°-60°	740.0	14.9
60°-70°	328.5	6.6
70°-80°	64.0	1.3
80°-90°	11.0	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°	1780.7	35.9
0°-40°	2825.6	56.9
0°-60°	4560.0	91.9
0°-90°	4963.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4963.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2447	2447	2447	2447	2447	
5°	2459	2461	2454	2376	2459	233
15°	2272	2264	2293	2186	2272	643
25°	2080	2020	1937	1923	2080	970
35°	1918	1714	1542	1628	1918	1199
45°	1567	1347	1064	1277	1567	1197
55°	982	921	677	860	982	884
65°	448	395	248	354	448	439
75°	62	73	36	65	62	77
85°	4	15	4	11	4	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3
2.5°	2459.9	2462.4	2468.7	2474.9	2482.5	2486.2	2488.7	2481.2	2476.2	2477.4	2483.7
5°	2458.6	2466.2	2469.9	2476.2	2483.7	2487.5	2487.5	2482.5	2474.9	2474.9	2478.7
7.5°	2446.1	2452.4	2453.6	2458.6	2468.7	2472.4	2473.7	2466.2	2454.9	2449.8	2451.1
10°	2379.6	2393.4	2389.6	2402.2	2428.5	2437.3	2434.8	2431.0	2418.5	2411.0	2408.4
12.5°	2339.5	2343.2	2343.2	2347.0	2348.2	2347.0	2345.7	2349.5	2357.0	2359.5	2358.3
15°	2271.7	2286.8	2286.8	2310.6	2319.4	2316.9	2308.1	2288.0	2269.2	2265.4	2284.3
17.5°	2234.1	2234.1	2232.8	2229.1	2221.5	2216.5	2224.1	2232.8	2230.3	2212.8	2200.2
20°	2166.3	2170.1	2168.9	2190.2	2195.2	2185.2	2167.6	2140.0	2135.0	2161.3	2155.1
22.5°	2143.8	2142.5	2136.2	2126.2	2111.2	2097.4	2104.9	2108.6	2082.3	2063.5	2084.8
25°	2079.8	2081.0	2069.8	2066.0	2069.8	2066.0	2043.4	2018.3	2023.3	2018.3	1995.8
27.5°	2074.8	2076.0	2067.3	2047.2	2022.1	1994.5	1982.0	1980.7	1948.1	1938.0	1950.6
30°	2038.4	2037.1	2022.1	1998.3	1976.9	1970.7	1941.8	1904.2	1892.9	1875.3	1869.1
32.5°	1976.9	1976.9	1970.7	1968.2	1949.3	1919.2	1887.9	1872.8	1822.6	1811.4	1800.1
35°	1918.0	1919.2	1906.7	1890.4	1870.3	1859.0	1851.5	1806.3	1773.7	1741.1	1734.8
37.5°	1846.5	1845.2	1826.4	1806.3	1795.0	1791.3	1771.2	1751.1	1711.0	1682.2	1652.0
40°	1783.8	1778.7	1756.2	1737.3	1722.3	1701.0	1678.4	1668.4	1643.3	1614.4	1589.3
42.5°	1688.4	1684.7	1668.4	1655.8	1640.8	1616.9	1601.9	1573.0	1564.2	1540.4	1505.3
45°	1566.7	1568.0	1551.7	1547.9	1535.4	1522.8	1509.0	1481.4	1462.6	1455.1	1430.0
47.5°	1426.3	1427.5	1418.7	1416.2	1404.9	1406.2	1397.4	1379.8	1362.3	1349.7	1335.9
50°	1275.7	1273.2	1266.9	1268.2	1263.2	1273.2	1264.4	1264.4	1250.6	1241.9	1230.6
52.5°	1125.2	1120.2	1112.7	1115.2	1111.4	1125.2	1123.9	1127.7	1130.2	1125.2	1118.9
55°	982.2	972.2	963.4	965.9	964.6	973.4	972.2	983.4	993.5	997.2	992.2
57.5°	855.5	844.2	825.4	817.9	821.6	822.9	824.1	832.9	846.7	856.8	846.7
60°	721.3	707.5	694.9	684.9	678.6	677.4	676.1	682.4	693.7	708.7	702.5
62.5°	594.6	577.0	558.2	544.4	536.9	535.6	526.8	525.6	536.9	550.7	548.2
65°	447.8	432.8	417.7	405.2	395.1	390.1	378.8	378.8	382.6	390.1	388.9
67.5°	293.5	283.5	276.0	271.0	264.7	260.9	248.4	242.1	240.8	247.1	258.4
70°	170.6	163.1	161.8	159.3	158.1	155.5	146.8	141.7	140.5	143.0	153.0
72.5°	100.4	97.8	95.3	94.1	91.6	90.3	86.6	85.3	86.6	87.8	92.8
75°	61.5	59.0	59.0	57.7	57.7	56.4	55.2	55.2	56.4	57.7	60.2
77.5°	35.1	35.1	35.1	35.1	35.1	35.1	36.4	36.4	37.6	38.9	41.4
80°	20.1	20.1	20.1	21.3	21.3	22.6	22.6	23.8	25.1	26.3	27.6
82.5°	10.0	10.0	10.0	11.3	12.5	13.8	13.8	15.1	16.3	17.6	18.8
85°	3.8	5.0	5.0	6.3	7.5	7.5	8.8	10.0	10.0	11.3	11.3
87.5°	1.3	2.5	2.5	3.8	3.8	5.0	6.3	6.3	7.5	7.5	8.8
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3
2.5°	2485.0	2485.0	2483.7	2483.7	2487.5	2488.7	2485.0	2486.2	2483.7	2486.2	2488.7
5°	2479.9	2476.2	2472.4	2468.7	2467.4	2466.2	2458.6	2461.1	2456.1	2459.9	2464.9
7.5°	2448.6	2444.8	2438.6	2434.8	2431.0	2426.0	2416.0	2414.7	2408.4	2416.0	2423.5
10°	2407.2	2402.2	2395.9	2393.4	2388.4	2382.1	2369.6	2367.1	2362.0	2368.3	2379.6
12.5°	2354.5	2350.7	2344.5	2343.2	2338.2	2330.7	2320.6	2318.1	2311.9	2321.9	2335.7
15°	2296.8	2293.0	2285.5	2286.8	2283.0	2275.5	2264.2	2264.2	2260.4	2273.0	2288.0
17.5°	2211.5	2232.8	2225.3	2227.8	2225.3	2217.8	2205.2	2206.5	2206.5	2224.1	2239.1
20°	2140.0	2151.3	2163.8	2165.1	2163.8	2156.3	2145.0	2146.3	2146.3	2170.1	2177.6
22.5°	2096.1	2074.8	2099.9	2101.1	2099.9	2093.6	2081.0	2084.8	2087.3	2111.2	2108.6
25°	2017.1	2018.3	2012.1	2034.6	2032.1	2028.4	2017.1	2019.6	2024.6	2048.4	2039.7
27.5°	1931.8	1954.4	1944.3	1960.6	1961.9	1959.4	1955.6	1949.3	1965.6	1976.9	1971.9
30°	1876.6	1856.5	1881.6	1872.8	1887.9	1882.9	1880.3	1875.3	1892.9	1897.9	1900.4
32.5°	1803.8	1792.5	1806.3	1791.3	1810.1	1803.8	1801.3	1796.3	1816.4	1813.9	1823.9
35°	1709.7	1724.8	1706.0	1716.0	1724.8	1721.0	1718.5	1713.5	1734.8	1727.3	1739.9
37.5°	1643.3	1628.2	1623.2	1634.5	1633.2	1635.7	1634.5	1628.2	1649.5	1639.5	1648.3
40°	1551.7	1544.2	1542.9	1540.4	1536.6	1545.4	1545.4	1540.4	1558.0	1549.2	1554.2
42.5°	1475.2	1463.9	1445.1	1437.5	1441.3	1452.6	1452.6	1446.3	1460.1	1452.6	1455.1
45°	1383.6	1364.8	1348.5	1341.0	1346.0	1356.0	1356.0	1347.2	1356.0	1351.0	1347.2
47.5°	1295.8	1274.5	1255.7	1243.1	1244.4	1253.1	1254.4	1246.9	1250.6	1241.9	1233.1
50°	1203.0	1170.4	1147.8	1132.7	1134.0	1145.3	1151.5	1141.5	1142.8	1131.5	1116.4
52.5°	1097.6	1067.5	1043.7	1027.4	1024.8	1044.9	1044.9	1034.9	1032.4	1019.8	999.8
55°	975.9	950.8	930.8	917.0	911.9	930.8	930.8	920.7	917.0	900.7	874.3
57.5°	848.0	829.2	811.6	796.5	792.8	809.1	809.1	796.5	791.5	772.7	743.9
60°	707.5	694.9	681.1	667.3	659.8	671.1	669.8	657.3	649.8	631.0	602.1
62.5°	555.7	548.2	538.1	525.6	521.8	530.6	530.6	521.8	513.0	490.5	462.9
65°	400.2	400.2	400.2	397.6	398.9	407.7	406.4	395.1	387.6	368.8	341.2
67.5°	263.4	274.7	281.0	279.7	277.2	281.0	276.0	265.9	262.2	247.1	228.3
70°	160.6	171.9	178.1	176.9	173.1	174.4	170.6	164.3	163.1	153.0	141.7
72.5°	96.6	102.9	107.9	110.4	110.4	112.9	110.4	106.6	105.4	100.4	91.6
75°	62.7	66.5	70.2	72.8	72.8	75.3	75.3	72.8	71.5	67.7	62.7
77.5°	42.6	45.2	47.7	48.9	50.2	52.7	51.4	50.2	50.2	46.4	42.6
80°	28.9	30.1	31.4	33.9	33.9	35.1	35.1	35.1	35.1	32.6	30.1
82.5°	18.8	20.1	21.3	22.6	22.6	23.8	23.8	23.8	23.8	21.3	20.1
85°	12.5	12.5	13.8	15.1	15.1	15.1	15.1	15.1	15.1	13.8	13.8
87.5°	8.8	8.8	8.8	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3
2.5°	2485.0	2482.5	2481.2	2479.9	2477.4	2474.9	2468.7	2466.2	2466.2	2472.4	2471.2
5°	2462.4	2462.4	2463.6	2468.7	2471.2	2472.4	2471.2	2469.9	2473.7	2478.7	2477.4
7.5°	2427.3	2431.0	2437.3	2443.6	2447.3	2447.3	2442.3	2436.0	2437.3	2438.6	2436.0
10°	2388.4	2394.6	2395.9	2394.6	2390.9	2388.4	2389.6	2394.6	2407.2	2418.5	2421.0
12.5°	2344.5	2343.2	2336.9	2333.2	2340.7	2353.3	2359.5	2362.0	2368.3	2367.1	2365.8
15°	2293.0	2281.8	2279.2	2291.8	2304.3	2310.6	2298.1	2291.8	2299.3	2306.8	2313.1
17.5°	2234.1	2222.8	2237.8	2245.4	2241.6	2237.8	2239.1	2235.3	2230.3	2209.0	2207.7
20°	2167.6	2176.4	2186.4	2176.4	2173.9	2173.9	2151.3	2128.7	2131.2	2133.7	2142.5
22.5°	2108.6	2122.4	2116.2	2111.2	2101.1	2071.0	2058.5	2054.7	2050.9	2040.9	2038.4
25°	2050.9	2053.5	2047.2	2033.4	2000.8	1994.5	1975.7	1951.8	1955.6	1961.9	1955.6
27.5°	1987.0	1976.9	1969.4	1934.3	1925.5	1900.4	1884.1	1877.8	1865.3	1845.2	1840.2
30°	1907.9	1900.4	1867.8	1854.0	1823.9	1812.6	1796.3	1762.4	1757.4	1747.4	1702.2
32.5°	1820.1	1807.6	1778.7	1753.7	1737.3	1713.5	1683.4	1660.8	1615.7	1613.2	1620.7
35°	1736.1	1703.5	1684.7	1657.1	1639.5	1608.1	1565.5	1532.9	1529.1	1504.0	1519.1
37.5°	1640.8	1610.6	1578.0	1563.0	1535.4	1486.5	1461.4	1432.5	1431.3	1432.5	1435.0
40°	1534.1	1507.8	1485.2	1453.8	1420.0	1386.1	1354.8	1351.0	1338.4	1329.7	1329.7
42.5°	1428.8	1399.9	1374.8	1347.2	1314.6	1278.2	1266.9	1250.6	1231.8	1196.7	1198.0
45°	1322.1	1295.8	1269.5	1233.1	1199.2	1185.4	1165.3	1127.7	1106.4	1075.0	1071.3
47.5°	1203.0	1177.9	1146.5	1118.9	1103.9	1073.8	1037.4	1009.8	983.4	972.2	960.9
50°	1088.8	1063.7	1038.6	1008.5	984.7	949.6	915.7	896.9	874.3	863.0	855.5
52.5°	969.7	944.6	911.9	890.6	861.8	826.6	806.6	785.3	768.9	756.4	753.9
55°	849.2	820.4	792.8	766.4	735.1	713.8	692.4	676.1	662.3	653.5	653.5
57.5°	720.0	691.2	664.8	641.0	618.4	594.6	579.5	562.0	557.0	550.7	548.2
60°	579.5	558.2	535.6	515.6	494.2	477.9	461.6	452.8	445.3	430.3	425.2
62.5°	436.5	419.0	401.4	388.9	367.5	353.7	343.7	332.4	327.4	321.1	324.9
65°	317.4	298.5	278.5	267.2	247.1	237.1	229.6	230.8	234.6	229.6	233.3
67.5°	213.2	198.2	181.9	168.1	154.3	151.8	150.5	148.0	154.3	151.8	151.8
70°	131.7	122.9	111.6	105.4	97.8	96.6	95.3	95.3	94.1	91.6	91.6
72.5°	85.3	79.0	72.8	67.7	64.0	61.5	60.2	57.7	57.7	57.7	57.7
75°	57.7	53.9	50.2	47.7	43.9	41.4	40.1	38.9	40.1	40.1	40.1
77.5°	40.1	37.6	35.1	32.6	31.4	28.9	27.6	26.3	25.1	23.8	25.1
80°	27.6	26.3	23.8	22.6	21.3	20.1	18.8	17.6	16.3	16.3	15.1
82.5°	18.8	17.6	17.6	16.3	15.1	13.8	12.5	12.5	11.3	10.0	10.0
85°	12.5	12.5	11.3	11.3	11.3	10.0	8.8	8.8	7.5	6.3	6.3
87.5°	8.8	8.8	8.8	8.8	8.8	7.5	7.5	6.3	6.3	5.0	5.0
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: P24519

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OLK12

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3
2.5°	2467.4	2462.4	2459.9	2449.8	2436.0	2423.5	2417.2	2418.5	2421.0	2417.2	2409.7
5°	2473.7	2468.7	2466.2	2453.6	2439.8	2428.5	2421.0	2427.3	2427.3	2422.2	2414.7
7.5°	2429.8	2427.3	2427.3	2416.0	2398.4	2387.1	2380.9	2387.1	2387.1	2379.6	2378.3
10°	2418.5	2416.0	2418.5	2404.7	2390.9	2375.8	2368.3	2372.1	2364.5	2350.7	2336.9
12.5°	2360.8	2359.5	2360.8	2349.5	2336.9	2321.9	2318.1	2324.4	2321.9	2313.1	2308.1
15°	2313.1	2309.4	2309.4	2293.0	2283.0	2273.0	2265.4	2275.5	2266.7	2251.6	2240.4
17.5°	2209.0	2207.7	2209.0	2195.2	2181.4	2170.1	2168.9	2172.6	2176.4	2182.7	2187.7
20°	2142.5	2138.8	2136.2	2126.2	2107.4	2098.6	2102.4	2103.6	2093.6	2082.3	2079.8
22.5°	2043.4	2048.4	2049.7	2043.4	2025.9	2010.8	2004.5	2005.8	1998.3	2002.0	2007.0
25°	1945.6	1941.8	1940.6	1936.8	1914.2	1906.7	1919.2	1925.5	1918.0	1907.9	1904.2
27.5°	1841.5	1846.5	1847.7	1841.5	1821.4	1810.1	1812.6	1807.6	1798.8	1812.6	1825.2
30°	1695.9	1707.2	1714.8	1709.7	1687.2	1669.6	1668.4	1679.6	1698.5	1713.5	1709.7
32.5°	1606.9	1608.1	1615.7	1609.4	1586.8	1575.5	1585.6	1583.1	1571.8	1580.5	1614.4
35°	1529.1	1542.9	1554.2	1541.7	1525.4	1510.3	1499.0	1482.7	1473.9	1492.7	1485.2
37.5°	1428.8	1440.1	1452.6	1442.6	1427.5	1409.9	1406.2	1399.9	1402.4	1391.1	1391.1
40°	1299.6	1304.6	1314.6	1304.6	1290.8	1278.2	1288.3	1300.8	1300.8	1303.3	1308.3
42.5°	1177.9	1180.4	1186.7	1175.4	1176.6	1155.3	1167.8	1170.4	1174.1	1204.2	1209.2
45°	1060.0	1063.7	1075.0	1063.7	1052.4	1042.4	1048.7	1044.9	1056.2	1080.0	1095.1
47.5°	952.1	957.1	967.1	969.7	960.9	938.3	943.3	935.8	939.5	959.6	979.7
50°	846.7	854.2	866.8	869.3	858.0	836.7	840.4	832.9	832.9	849.2	873.1
52.5°	746.4	760.2	775.2	779.0	768.9	745.1	737.6	735.1	732.6	746.4	753.9
55°	652.3	662.3	674.9	677.4	671.1	648.5	644.8	636.0	629.7	646.0	647.3
57.5°	534.4	541.9	555.7	558.2	550.7	539.4	534.4	533.1	539.4	533.1	536.9
60°	422.7	431.5	445.3	447.8	441.5	420.2	419.0	412.7	422.7	427.8	426.5
62.5°	332.4	333.7	347.5	348.7	343.7	333.7	322.4	314.9	312.3	307.3	309.8
65°	237.1	235.8	247.1	248.4	245.9	239.6	232.1	230.8	223.3	215.8	213.2
67.5°	146.8	150.5	156.8	158.1	156.8	154.3	149.3	146.8	150.5	149.3	140.5
70°	92.8	90.3	94.1	94.1	94.1	91.6	92.8	90.3	87.8	91.6	91.6
72.5°	57.7	56.4	57.7	59.0	57.7	57.7	56.4	55.2	55.2	57.7	52.7
75°	38.9	36.4	36.4	36.4	36.4	35.1	38.9	41.4	42.6	33.9	35.1
77.5°	25.1	22.6	22.6	22.6	22.6	23.8	23.8	21.3	22.6	22.6	22.6
80°	13.8	13.8	12.5	12.5	12.5	12.5	12.5	12.5	13.8	13.8	15.1
82.5°	8.8	7.5	7.5	6.3	6.3	7.5	7.5	7.5	8.8	8.8	10.0
85°	5.0	5.0	3.8	3.8	3.8	3.8	5.0	5.0	5.0	6.3	6.3
87.5°	3.8	2.5	2.5	1.3	2.5	2.5	2.5	2.5	3.8	3.8	3.8
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: P24519

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OLK12

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3
2.5°	2402.2	2395.9	2389.6	2385.9	2385.9	2388.4	2389.6	2398.4	2400.9	2403.4	2402.2
5°	2403.4	2393.4	2383.4	2375.8	2372.1	2372.1	2368.3	2372.1	2372.1	2373.3	2375.8
7.5°	2370.8	2369.6	2362.0	2353.3	2347.0	2345.7	2336.9	2335.7	2334.4	2335.7	2339.5
10°	2320.6	2315.6	2310.6	2308.1	2313.1	2313.1	2305.6	2300.6	2293.0	2293.0	2295.6
12.5°	2293.0	2280.5	2261.7	2249.1	2257.9	2270.5	2268.0	2259.2	2246.6	2240.4	2241.6
15°	2231.6	2236.6	2225.3	2209.0	2197.7	2207.7	2214.0	2210.3	2195.2	2185.2	2186.4
17.5°	2175.1	2166.3	2163.8	2161.3	2150.0	2143.8	2150.0	2155.1	2141.3	2127.5	2125.0
20°	2091.1	2107.4	2096.1	2087.3	2094.8	2091.1	2081.0	2088.6	2081.0	2063.5	2058.5
22.5°	1998.3	2009.5	2028.4	2020.8	2018.3	2030.9	2015.8	2014.6	2014.6	1995.8	1990.7
25°	1915.5	1924.2	1920.5	1941.8	1941.8	1955.6	1950.6	1938.0	1946.8	1929.3	1923.0
27.5°	1818.9	1830.2	1835.2	1836.4	1867.8	1870.3	1887.9	1864.0	1876.6	1862.8	1854.0
30°	1731.1	1739.9	1739.9	1753.7	1775.0	1798.8	1802.6	1791.3	1793.8	1786.3	1777.5
32.5°	1620.7	1652.0	1655.8	1672.1	1684.7	1713.5	1718.5	1714.8	1709.7	1713.5	1703.5
35°	1514.1	1545.4	1568.0	1575.5	1599.4	1616.9	1639.5	1639.5	1628.2	1637.0	1628.2
37.5°	1412.5	1438.8	1462.6	1491.5	1501.5	1527.9	1549.2	1542.9	1532.9	1545.4	1539.1
40°	1303.3	1330.9	1361.0	1387.4	1408.7	1427.5	1445.1	1451.3	1448.8	1461.4	1458.9
42.5°	1219.3	1226.8	1251.9	1284.5	1304.6	1324.6	1346.0	1356.0	1351.0	1362.3	1362.3
45°	1127.7	1139.0	1140.2	1171.6	1203.0	1220.5	1241.9	1258.2	1259.4	1272.0	1277.0
47.5°	1002.3	1031.1	1048.7	1066.2	1088.8	1116.4	1139.0	1150.3	1152.8	1165.3	1174.1
50°	890.6	913.2	932.0	955.9	979.7	1002.3	1023.6	1039.9	1051.2	1067.5	1078.8
52.5°	781.5	790.3	815.4	840.4	859.3	890.6	913.2	923.2	939.5	957.1	972.2
55°	666.1	683.6	689.9	725.0	742.6	768.9	796.5	806.6	824.1	843.0	860.5
57.5°	557.0	560.7	578.3	600.9	628.5	641.0	663.6	697.4	705.0	725.0	745.1
60°	436.5	451.6	456.6	476.7	498.0	515.6	526.8	562.0	569.5	593.3	614.7
62.5°	327.4	331.2	332.4	352.5	366.3	386.4	392.6	425.2	439.0	461.6	481.7
65°	218.3	222.0	215.8	237.1	245.9	265.9	278.5	307.3	316.1	336.2	353.7
67.5°	139.2	135.5	133.0	144.3	155.5	170.6	189.4	200.7	204.5	219.5	230.8
70°	91.6	85.3	82.8	89.1	95.3	104.1	116.7	124.2	127.9	136.7	144.3
72.5°	53.9	53.9	57.7	59.0	62.7	67.7	75.3	81.5	84.0	90.3	94.1
75°	36.4	36.4	38.9	41.4	42.6	46.4	51.4	55.2	57.7	61.5	65.2
77.5°	23.8	25.1	26.3	27.6	30.1	32.6	35.1	37.6	41.4	42.6	45.2
80°	16.3	16.3	17.6	18.8	20.1	21.3	23.8	25.1	27.6	28.9	30.1
82.5°	10.0	11.3	11.3	12.5	13.8	13.8	15.1	16.3	17.6	18.8	20.1
85°	6.3	7.5	7.5	8.8	8.8	8.8	8.8	10.0	11.3	11.3	11.3
87.5°	5.0	5.0	5.0	5.0	5.0	6.3	6.3	6.3	6.3	6.3	6.3
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: P24519

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OLK12

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3
2.5°	2402.2	2404.7	2404.7	2405.9	2407.2	2417.2	2427.3	2433.5	2433.5	2434.8	2437.3
5°	2375.8	2383.4	2387.1	2390.9	2394.6	2404.7	2414.7	2421.0	2423.5	2426.0	2431.0
7.5°	2343.2	2350.7	2354.5	2357.0	2359.5	2369.6	2380.9	2388.4	2393.4	2399.7	2407.2
10°	2296.8	2304.3	2308.1	2313.1	2316.9	2325.7	2339.5	2348.2	2353.3	2360.8	2370.8
12.5°	2242.9	2251.6	2256.7	2260.4	2265.4	2275.5	2286.8	2296.8	2299.3	2289.3	2280.5
15°	2186.4	2196.5	2199.0	2204.0	2207.7	2216.5	2225.3	2215.3	2199.0	2210.3	2231.6
17.5°	2125.0	2133.7	2140.0	2143.8	2146.3	2153.8	2133.7	2136.2	2153.8	2175.1	2180.1
20°	2058.5	2069.8	2076.0	2081.0	2083.6	2063.5	2067.3	2091.1	2094.8	2078.5	2096.1
22.5°	1990.7	2003.3	2008.3	2013.3	2002.0	1993.2	2018.3	2012.1	2008.3	2037.1	2058.5
25°	1924.2	1935.5	1938.0	1943.1	1918.0	1938.0	1935.5	1938.0	1970.7	1961.9	1971.9
27.5°	1854.0	1865.3	1867.8	1862.8	1855.3	1867.8	1856.5	1889.1	1882.9	1901.7	1931.8
30°	1780.0	1792.5	1795.0	1780.0	1792.5	1775.0	1801.3	1793.8	1827.7	1839.0	1860.3
32.5°	1706.0	1714.8	1722.3	1701.0	1706.0	1712.3	1714.8	1739.9	1754.9	1780.0	1823.9
35°	1629.5	1640.8	1638.2	1629.5	1614.4	1634.5	1639.5	1665.8	1692.2	1719.8	1764.9
37.5°	1539.1	1550.4	1539.1	1542.9	1544.2	1542.9	1565.5	1591.8	1627.0	1669.6	1698.5
40°	1458.9	1468.9	1451.3	1437.5	1455.1	1466.4	1477.7	1522.8	1566.7	1590.6	1620.7
42.5°	1362.3	1376.1	1363.5	1352.2	1362.3	1373.6	1403.7	1446.3	1485.2	1510.3	1525.4
45°	1277.0	1284.5	1268.2	1256.9	1270.7	1284.5	1313.4	1362.3	1398.7	1408.7	1435.0
47.5°	1172.9	1181.6	1169.1	1164.1	1170.4	1192.9	1226.8	1269.5	1292.0	1307.1	1333.4
50°	1078.8	1082.5	1063.7	1053.7	1066.2	1092.6	1134.0	1159.1	1181.6	1194.2	1215.5
52.5°	972.2	968.4	955.9	954.6	964.6	988.5	1026.1	1044.9	1062.5	1070.0	1081.3
55°	860.5	858.0	851.7	837.9	851.7	874.3	905.7	917.0	934.5	933.3	938.3
57.5°	746.4	742.6	735.1	723.8	735.1	751.4	776.5	786.5	797.8	789.0	792.8
60°	614.7	609.6	603.4	597.1	609.6	622.2	641.0	648.5	654.8	642.3	644.8
62.5°	480.4	472.9	467.9	462.9	471.7	481.7	498.0	500.5	506.8	495.5	499.3
65°	351.2	348.7	347.5	339.9	342.5	342.5	350.0	352.5	357.5	348.7	356.2
67.5°	228.3	228.3	230.8	227.0	229.6	225.8	225.8	219.5	222.0	215.8	224.5
70°	143.0	141.7	143.0	140.5	140.5	138.0	135.5	130.5	129.2	125.4	130.5
72.5°	94.1	92.8	92.8	89.1	87.8	85.3	84.0	80.3	80.3	77.8	79.0
75°	64.0	64.0	62.7	60.2	57.7	55.2	55.2	52.7	52.7	50.2	50.2
77.5°	45.2	43.9	42.6	41.4	38.9	38.9	36.4	35.1	35.1	32.6	32.6
80°	30.1	30.1	28.9	27.6	26.3	25.1	23.8	23.8	22.6	21.3	20.1
82.5°	20.1	18.8	18.8	17.6	17.6	16.3	15.1	13.8	13.8	12.5	12.5
85°	11.3	11.3	11.3	11.3	10.0	10.0	8.8	8.8	7.5	7.5	6.3
87.5°	6.3	6.3	6.3	6.3	6.3	6.3	5.0	5.0	5.0	3.8	3.8
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: P24519

CATALOG NUMBER: MPR3-G-LD3-UNV-XX/XX/HI-ED3C-S68I/OLK12

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3	2447.3
2.5°	2442.3	2448.6	2457.4	2451.1	2453.6	2454.9	2459.9
5°	2437.3	2446.1	2453.6	2448.6	2452.4	2454.9	2458.6
7.5°	2418.5	2431.0	2437.3	2432.3	2437.3	2442.3	2446.1
10°	2382.1	2387.1	2387.1	2375.8	2377.1	2379.6	2379.6
12.5°	2288.0	2304.3	2315.6	2316.9	2325.7	2333.2	2339.5
15°	2257.9	2271.7	2278.0	2269.2	2270.5	2273.0	2271.7
17.5°	2171.4	2173.9	2195.2	2202.7	2216.5	2227.8	2234.1
20°	2125.0	2147.5	2167.6	2151.3	2153.8	2158.8	2166.3
22.5°	2056.0	2064.7	2087.3	2101.1	2119.9	2135.0	2143.8
25°	2007.0	2034.6	2043.4	2038.4	2056.0	2073.5	2079.8
27.5°	1938.0	1964.4	1999.5	2025.9	2050.9	2064.7	2074.8
30°	1906.7	1936.8	1953.1	1975.7	2004.5	2027.1	2038.4
32.5°	1847.7	1889.1	1926.8	1934.3	1946.8	1965.6	1976.9
35°	1808.8	1818.9	1844.0	1860.3	1884.1	1906.7	1918.0
37.5°	1723.5	1749.9	1763.7	1777.5	1803.8	1832.7	1846.5
40°	1638.2	1660.8	1692.2	1706.0	1733.6	1766.2	1783.8
42.5°	1555.5	1578.0	1609.4	1623.2	1642.0	1670.9	1688.4
45°	1463.9	1480.2	1506.5	1514.1	1527.9	1551.7	1566.7
47.5°	1356.0	1362.3	1376.1	1384.9	1393.6	1411.2	1426.3
50°	1224.3	1230.6	1235.6	1236.8	1241.9	1258.2	1275.7
52.5°	1082.5	1085.1	1086.3	1086.3	1091.3	1107.6	1125.2
55°	934.5	934.5	940.8	937.0	945.8	964.6	982.2
57.5°	787.8	785.3	797.8	791.5	814.1	835.4	855.5
60°	641.0	648.5	658.6	664.8	684.9	701.2	721.3
62.5°	498.0	506.8	524.3	526.8	553.2	574.5	594.6
65°	356.2	371.3	386.4	391.4	414.0	429.0	447.8
67.5°	230.8	244.6	258.4	258.4	272.2	278.5	293.5
70°	135.5	144.3	153.0	151.8	159.3	160.6	170.6
72.5°	80.3	85.3	90.3	94.1	94.1	100.4	100.4
75°	51.4	52.7	55.2	57.7	56.4	57.7	61.5
77.5°	31.4	32.6	33.9	32.6	33.9	36.4	35.1
80°	18.8	18.8	18.8	18.8	18.8	20.1	20.1
82.5°	11.3	11.3	10.0	10.0	10.0	10.0	10.0
85°	6.3	6.3	5.0	5.0	5.0	3.8	3.8
87.5°	3.8	3.8	2.5	2.5	2.5	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)