

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: NEO-RAY

Report Number: P242834

Luminaire Tested: **S125DR-S1270D940-X4F0-XX-UDD-A-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242834
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125DR-S1270D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4393.1 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

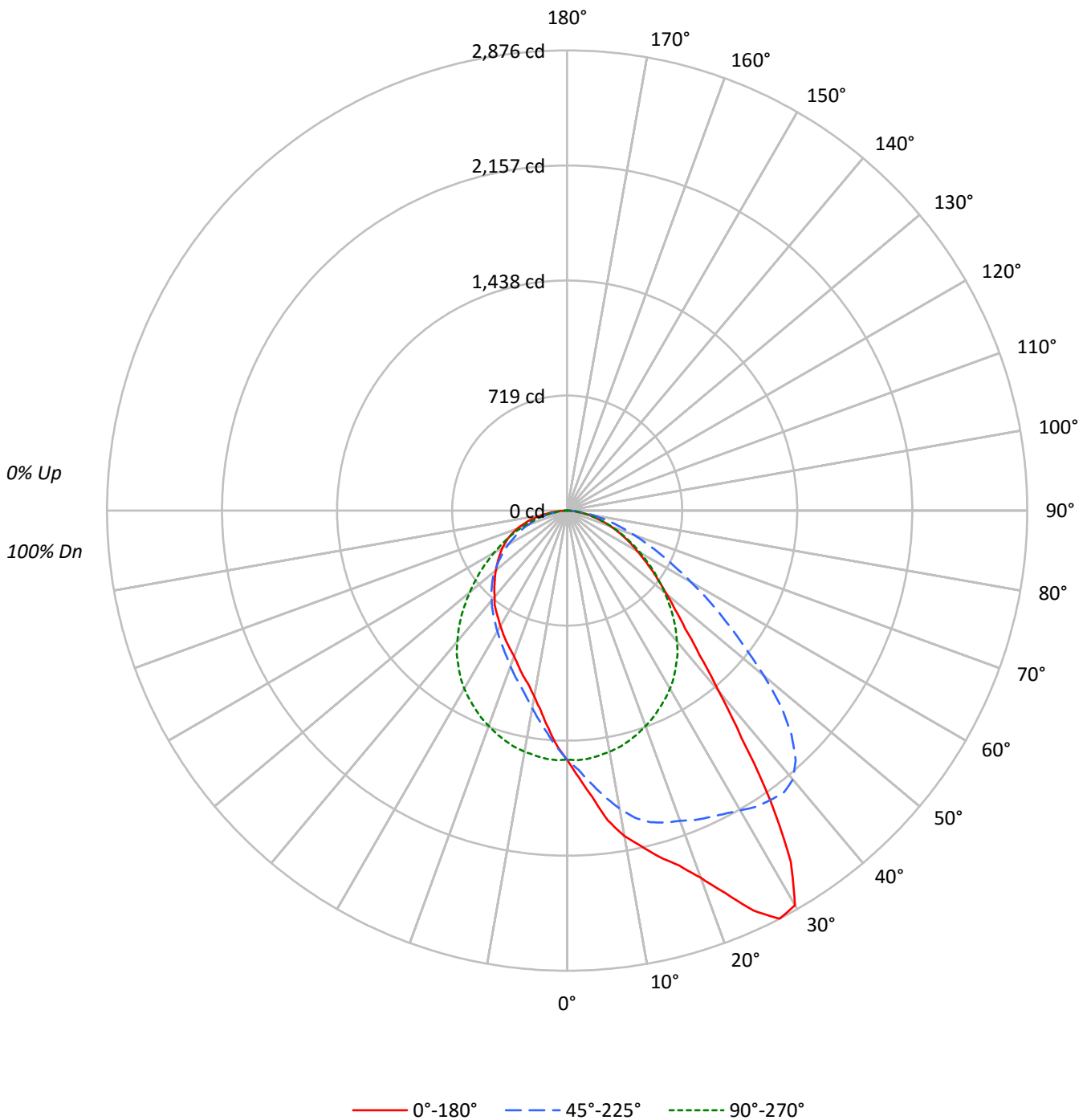
Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11065	11065	11065
5°	12813	11102	9721
10°	14907	11044	8517
15°	16501	10964	7857
20°	18472	10835	7327
25°	21639	10690	7068
30°	23372	10547	6844
35°	19218	10279	6696
40°	13659	9907	6535
45°	10494	9404	6442
50°	8957	8782	6430
55°	7975	8171	6484
60°	7194	7504	6650
65°	6645	6835	6823
70°	6041	6139	6920
75°	5336	5407	6860
80°	4490	4408	6275
85°	3555	3180	5064



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.8	3.4
10°-20°	446.3	10.2
20°-30°	724.9	16.5
30°-40°	885.9	20.2
40°-50°	803.7	18.3
50°-60°	640.2	14.6
60°-70°	445.9	10.1
70°-80°	237.5	5.4
80°-90°	58.9	1.3
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°	1321.0	30.1
0°-40°	2207.0	50.2
0°-60°	3650.9	83.1
0°-90°	4393.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4393.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1557	1557	1557	1557	1557	
5°	1796	1711	1556	1400	1362	180
15°	2243	2016	1490	1130	1068	641
25°	2759	2114	1363	947	901	1264
35°	2215	2210	1185	803	772	1359
45°	1044	1983	936	664	641	831
55°	644	1215	659	506	523	579
65°	395	644	406	342	406	392
75°	194	287	197	180	250	209
85°	44	58	39	42	62	51
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°	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8
2.5°	1669.1	1666.4	1663.8	1658.5	1662.5	1651.2	1646.0	1636.7	1625.5	1621.5	1616.9
5°	1795.9	1799.3	1802.6	1788.7	1790.0	1780.8	1759.6	1742.4	1728.6	1710.7	1698.2
7.5°	1953.2	1943.3	1944.0	1935.4	1920.2	1907.6	1887.1	1858.7	1833.0	1803.9	1778.8
10°	2065.5	2066.2	2060.3	2049.7	2033.2	2021.3	1992.2	1964.4	1930.7	1891.1	1862.7
12.5°	2150.1	2153.4	2145.5	2130.3	2124.3	2094.0	2072.8	2038.4	1996.8	1967.1	1920.2
15°	2242.6	2235.4	2230.1	2212.2	2198.4	2170.6	2134.3	2099.9	2056.3	2016.0	1975.7
17.5°	2324.6	2330.5	2321.9	2308.7	2267.7	2235.4	2190.4	2146.8	2094.6	2044.4	1997.5
20°	2442.2	2447.5	2432.3	2403.8	2352.3	2319.9	2255.8	2195.0	2132.3	2062.9	2010.0
22.5°	2588.9	2582.3	2560.4	2513.5	2470.6	2403.8	2333.1	2255.8	2173.2	2092.6	2018.0
25°	2759.3	2731.6	2719.0	2665.5	2606.7	2518.8	2423.7	2315.3	2217.5	2113.8	2023.9
27.5°	2875.6	2864.4	2846.6	2802.9	2735.6	2635.8	2523.4	2393.9	2262.4	2135.6	2022.6
30°	2847.9	2849.2	2850.5	2838.6	2799.0	2728.3	2616.6	2474.6	2310.7	2163.3	2027.2
32.5°	2602.1	2631.8	2660.2	2697.2	2721.0	2721.7	2662.2	2537.3	2367.5	2195.0	2024.6
35°	2214.9	2222.1	2296.8	2370.8	2471.2	2549.2	2601.4	2544.6	2402.5	2210.2	2022.6
37.5°	1790.7	1827.0	1883.2	1966.4	2117.1	2240.0	2401.2	2456.7	2390.0	2222.8	2021.9
40°	1472.2	1505.2	1538.9	1624.2	1746.4	1903.7	2093.3	2255.2	2292.8	2195.0	2002.1
42.5°	1226.4	1250.8	1289.1	1348.0	1445.1	1579.9	1758.9	1982.9	2136.2	2114.4	1960.5
45°	1044.0	1060.5	1089.6	1140.5	1214.5	1323.5	1483.4	1714.7	1916.2	1982.9	1889.8
47.5°	914.5	915.2	938.9	975.3	1031.4	1131.9	1251.5	1441.8	1659.2	1813.1	1791.3
50°	810.1	806.8	824.6	855.0	897.3	958.8	1071.8	1216.5	1423.3	1603.7	1653.9
52.5°	720.2	721.6	730.8	751.3	785.0	835.2	912.5	1039.4	1208.5	1394.9	1500.6
55°	643.6	640.9	653.5	668.7	694.5	728.8	789.6	889.4	1032.8	1215.1	1338.0
57.5°	569.6	576.8	582.1	592.7	615.2	639.0	693.1	769.8	888.1	1049.9	1180.1
60°	506.1	513.4	517.4	527.9	545.1	565.0	604.6	664.1	759.9	894.7	1023.5
62.5°	449.3	454.6	455.3	464.5	477.7	496.9	526.0	573.5	644.2	757.9	883.4
65°	395.1	395.1	397.8	407.7	414.3	431.5	455.3	491.6	552.4	644.2	751.9
67.5°	342.3	345.6	344.9	349.5	355.5	370.0	387.9	418.3	466.5	535.9	625.1
70°	290.7	293.4	292.7	296.0	302.6	311.2	325.1	353.5	385.9	443.4	517.4
72.5°	244.5	245.1	243.2	247.8	251.1	258.4	274.2	286.1	315.8	362.1	419.6
75°	194.3	195.6	196.9	199.5	203.5	207.5	215.4	230.6	250.4	286.8	325.8
77.5°	154.6	151.3	155.3	154.6	156.6	159.9	167.2	175.8	192.9	217.4	249.8
80°	109.7	110.3	110.3	111.0	114.3	116.3	122.2	128.2	140.7	157.9	179.1
82.5°	72.7	74.7	73.3	74.7	77.3	78.6	81.3	85.9	91.8	104.4	118.3
85°	43.6	40.3	41.6	42.9	42.9	43.6	46.3	48.2	52.2	57.5	63.4
87.5°	15.9	17.2	17.8	17.8	18.5	18.5	21.1	21.1	23.1	25.1	27.8
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°	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8
2.5°	1612.9	1608.3	1603.0	1593.8	1582.5	1576.6	1567.3	1561.4	1549.5	1539.6	1529.0
5°	1683.0	1665.8	1649.9	1629.4	1607.0	1592.4	1575.3	1556.1	1536.3	1515.8	1493.3
7.5°	1753.0	1724.6	1693.5	1661.2	1629.4	1599.7	1572.0	1543.5	1517.8	1485.4	1458.3
10°	1823.7	1785.4	1744.4	1696.2	1649.3	1608.3	1566.7	1530.3	1493.3	1453.7	1418.7
12.5°	1894.4	1840.2	1778.1	1723.9	1665.1	1613.6	1562.7	1513.8	1464.9	1420.0	1377.7
15°	1920.2	1875.2	1821.7	1746.4	1683.0	1614.9	1550.1	1490.0	1433.9	1385.0	1333.4
17.5°	1945.3	1887.8	1831.0	1758.3	1675.7	1602.3	1529.0	1463.6	1401.5	1340.0	1293.1
20°	1951.2	1891.8	1831.6	1760.9	1675.7	1588.5	1515.1	1432.5	1364.5	1300.4	1239.6
22.5°	1949.2	1879.9	1813.1	1739.8	1657.2	1578.6	1486.1	1401.5	1326.1	1263.4	1199.3
25°	1934.7	1862.7	1780.8	1707.4	1625.5	1540.2	1450.4	1363.2	1287.8	1215.8	1153.0
27.5°	1926.1	1834.9	1745.1	1660.5	1581.9	1503.2	1416.0	1326.1	1243.6	1170.2	1112.1
30°	1907.0	1804.5	1700.1	1610.9	1529.7	1453.7	1372.4	1285.2	1198.0	1126.6	1063.2
32.5°	1889.8	1766.2	1654.5	1555.4	1468.2	1394.9	1321.5	1239.6	1154.3	1081.7	1018.2
35°	1866.7	1728.6	1602.3	1492.7	1400.8	1324.8	1262.1	1184.7	1106.1	1036.1	975.3
37.5°	1839.6	1679.7	1546.2	1431.9	1332.1	1252.8	1193.3	1133.2	1054.6	985.9	931.7
40°	1806.5	1626.8	1483.4	1365.8	1261.4	1178.1	1124.0	1067.8	1005.0	942.2	884.1
42.5°	1764.9	1579.2	1420.0	1291.1	1188.0	1107.4	1049.9	1004.4	950.8	893.3	840.5
45°	1712.0	1519.8	1350.6	1214.5	1110.1	1030.1	971.3	935.6	894.0	838.5	792.9
47.5°	1642.0	1452.4	1277.9	1137.2	1029.5	955.5	899.3	864.3	833.9	790.3	747.3
50°	1542.2	1375.0	1198.0	1058.5	950.8	876.2	825.3	794.2	769.1	737.4	702.4
52.5°	1430.5	1277.9	1119.3	981.9	875.5	802.2	752.6	726.2	706.4	685.9	651.5
55°	1311.0	1178.8	1028.1	897.3	798.9	726.8	683.2	659.4	642.3	625.1	603.9
57.5°	1182.1	1075.1	937.0	814.7	723.5	656.1	615.2	590.7	576.8	567.6	554.4
60°	1044.7	956.1	841.1	732.1	643.6	585.4	545.8	527.9	516.7	509.4	500.2
62.5°	917.1	848.4	744.0	646.9	572.2	518.0	483.7	466.5	455.9	453.3	446.0
65°	792.3	736.1	648.2	565.6	499.5	452.6	422.9	406.4	399.8	395.8	396.5
67.5°	666.7	630.4	557.0	484.3	430.2	388.5	364.1	351.5	348.2	342.3	342.3
70°	553.7	527.9	468.5	407.0	360.1	329.7	308.6	295.4	292.1	289.4	288.8
72.5°	453.9	432.1	382.6	336.3	295.4	269.6	253.1	246.5	240.5	239.2	239.2
75°	356.2	343.6	302.6	263.6	234.6	216.1	204.2	196.9	192.9	192.3	192.9
77.5°	268.9	257.0	228.6	199.5	180.4	165.9	154.6	152.6	147.3	148.0	146.7
80°	190.3	183.0	166.5	144.7	129.5	117.6	112.3	107.7	106.4	104.4	106.4
82.5°	124.9	117.0	107.0	95.1	83.3	77.3	72.0	71.4	70.7	70.0	70.0
85°	68.1	68.7	62.1	51.5	46.3	42.3	39.0	39.0	38.3	37.7	38.3
87.5°	29.1	27.8	25.1	23.1	19.8	17.8	17.2	17.8	15.9	15.2	15.9
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8	1556.8
2.5°	1523.1	1515.8	1509.8	1496.6	1489.4	1479.4	1471.5	1480.1	1470.9	1474.8	1468.9
5°	1482.1	1463.6	1450.4	1431.2	1414.7	1399.5	1388.3	1386.3	1381.0	1378.3	1370.4
7.5°	1433.2	1412.0	1390.2	1366.5	1346.6	1325.5	1312.9	1301.0	1293.8	1284.5	1277.3
10°	1390.9	1359.8	1333.4	1303.0	1276.6	1253.5	1235.0	1225.7	1217.1	1204.6	1199.9
12.5°	1338.7	1306.3	1272.6	1239.6	1214.5	1188.0	1172.9	1157.7	1152.4	1137.8	1137.2
15°	1299.1	1250.8	1219.1	1186.1	1151.0	1129.9	1116.7	1101.5	1094.9	1085.0	1077.7
17.5°	1250.2	1206.6	1166.9	1133.2	1101.5	1084.3	1067.1	1056.6	1045.3	1038.1	1026.2
20°	1196.0	1155.0	1115.4	1079.0	1055.9	1035.4	1022.2	1012.3	1000.4	997.1	985.2
22.5°	1150.4	1104.1	1066.5	1037.4	1011.6	987.8	973.3	967.4	960.1	948.2	948.2
25°	1100.2	1053.3	1020.9	990.5	968.0	946.9	937.0	928.4	920.4	913.2	910.5
27.5°	1057.9	1016.3	976.6	948.9	929.7	909.9	901.3	890.0	884.1	878.2	870.2
30°	1012.9	970.0	936.3	909.9	888.7	871.5	862.3	855.0	849.7	844.5	840.5
32.5°	966.7	927.7	895.3	869.6	848.4	836.5	828.6	824.0	818.0	811.4	806.1
35°	927.0	883.4	851.7	829.3	812.7	802.8	793.6	788.9	782.3	782.3	777.1
37.5°	880.1	841.8	813.4	792.9	778.4	769.1	758.6	755.9	751.3	748.6	746.7
40°	839.2	804.1	777.7	757.2	741.4	734.1	726.2	720.9	718.2	714.9	713.6
42.5°	796.9	763.8	738.7	720.2	707.0	701.1	693.8	690.5	684.5	679.9	679.3
45°	753.9	721.6	698.4	683.2	671.3	664.1	659.4	651.5	648.9	643.6	642.9
47.5°	714.3	682.6	659.4	646.9	636.3	631.0	623.8	615.2	611.9	608.6	607.9
50°	668.7	640.3	619.1	607.2	597.3	588.7	581.5	576.2	574.2	574.2	575.5
52.5°	622.4	599.3	582.1	566.9	557.7	548.4	541.8	539.2	535.9	539.8	542.5
55°	577.5	553.1	539.8	526.0	516.7	506.1	502.8	501.5	499.5	504.8	507.5
57.5°	529.3	512.8	496.9	482.4	474.4	467.8	462.5	461.9	465.8	467.2	475.1
60°	483.7	463.9	450.0	439.4	429.5	425.5	424.2	422.9	425.5	432.8	444.0
62.5°	433.5	418.3	403.1	395.8	389.2	381.9	381.9	383.2	389.2	397.8	409.0
65°	384.6	370.7	360.8	351.5	345.6	341.6	342.9	345.6	351.5	362.8	375.3
67.5°	334.3	325.1	315.8	307.3	301.3	302.0	302.6	305.9	313.2	326.4	338.3
70°	286.1	275.5	268.3	265.0	260.3	257.7	261.7	268.3	274.2	286.1	296.0
72.5°	237.9	229.3	224.0	222.0	220.7	218.7	219.4	226.6	235.2	247.1	259.0
75°	190.3	187.0	183.0	180.4	178.4	179.7	181.0	187.7	194.3	206.8	220.0
77.5°	147.3	143.4	140.7	140.1	138.8	139.4	142.7	148.0	154.6	163.9	174.4
80°	105.1	103.7	102.4	101.8	101.8	102.4	107.7	111.0	117.0	125.5	133.5
82.5°	69.4	68.7	68.7	68.7	69.4	69.4	72.0	76.6	81.3	87.2	93.8
85°	40.3	39.0	41.0	41.6	40.3	42.3	43.6	46.3	48.2	51.5	54.8
87.5°	16.5	17.8	17.2	17.8	17.8	19.2	18.5	21.1	22.5	23.8	23.1
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: P242834

CATALOG NUMBER: S125DR-S1270D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1556.8	1556.8	1556.8	1556.8
2.5°	1464.9	1469.5	1465.6	1470.9
5°	1367.1	1361.2	1365.1	1362.5
7.5°	1276.6	1271.3	1263.4	1260.7
10°	1192.7	1185.4	1184.7	1180.1
12.5°	1131.2	1124.6	1115.4	1114.0
15°	1073.7	1068.5	1063.8	1067.8
17.5°	1024.8	1020.2	1018.9	1014.9
20°	979.2	975.9	977.3	968.7
22.5°	942.9	935.6	934.3	934.3
25°	904.6	901.3	898.0	901.3
27.5°	870.9	867.6	866.3	866.9
30°	840.5	833.9	834.5	833.9
32.5°	807.5	803.5	802.2	800.8
35°	775.1	775.1	771.8	771.8
37.5°	745.3	744.7	742.7	744.0
40°	711.0	710.3	708.3	704.4
42.5°	677.9	675.3	674.6	674.0
45°	642.9	642.9	641.6	640.9
47.5°	608.6	609.9	612.5	611.9
50°	578.2	578.8	580.8	581.5
52.5°	544.5	549.1	551.7	551.1
55°	513.4	518.0	522.7	523.3
57.5°	482.4	488.3	492.9	494.2
60°	450.6	459.2	465.2	467.8
62.5°	420.2	430.2	436.1	436.1
65°	386.5	396.5	401.7	405.7
67.5°	351.5	361.4	366.7	370.0
70°	312.5	322.5	330.4	333.0
72.5°	274.2	282.8	288.8	292.1
75°	228.6	240.5	246.5	249.8
77.5°	185.0	196.9	200.2	202.2
80°	141.4	148.0	152.6	153.3
82.5°	100.4	105.7	106.4	108.4
85°	59.5	62.1	62.8	62.1
87.5°	24.4	23.8	23.8	25.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)