

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: P333106

Luminaire Tested: **S124RDIW-S1195D1050U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333106
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S1195D1050U835-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8456.3 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

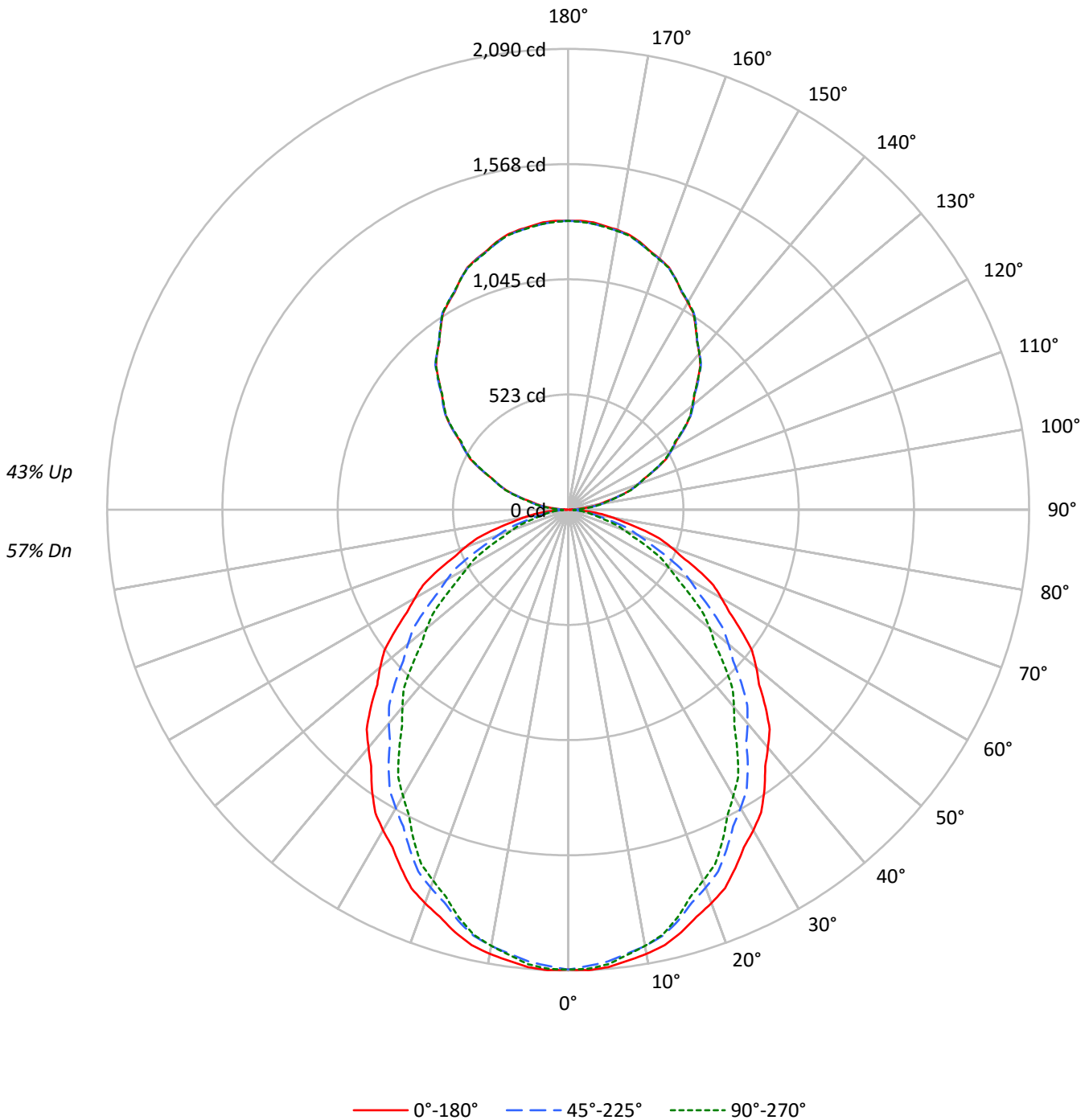
Input Watts (W): 67.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	63	63	63	57								
1	100	95	92	88	93	89	86	83	77	75	72	66	64	63	56	55	53	49								
2	91	84	78	73	85	78	73	68	68	64	60	58	55	53	49	47	45	41								
3	83	74	67	61	77	69	63	57	60	55	51	52	48	45	44	41	39	35								
4	76	66	58	52	71	61	54	49	54	48	44	46	42	39	40	36	34	30								
5	70	59	50	44	65	55	48	42	48	42	38	42	37	34	36	32	30	27								
6	65	53	45	39	60	49	42	37	43	38	33	38	33	30	33	29	26	24								
7	60	48	40	34	56	45	38	33	40	34	29	35	30	26	30	26	23	21								
8	56	43	36	30	52	41	34	29	36	30	26	32	27	24	27	24	21	19								
9	52	40	32	27	48	37	31	26	33	28	24	29	25	21	25	22	19	17								
10	49	36	29	24	45	34	28	23	31	25	21	27	23	19	24	20	17	16								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16835	16835	16835
5°	16874	16667	16771
10°	16768	16467	16467
15°	16575	16121	16002
20°	16311	15667	15378
25°	15973	15134	14750
30°	15645	14573	13962
35°	15281	13991	13172
40°	14842	13328	12318
45°	14439	12670	11449
50°	13978	11912	10528
55°	13485	11125	9529
60°	12943	10261	8507
65°	12445	9181	7503
70°	11722	7990	6371
75°	10808	6625	5181
80°	9428	5049	4751
85°	7984	4585	4289



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.9	2.3
10°-20°	546.3	6.5
20°-30°	788.8	9.3
30°-40°	894.2	10.6
40°-50°	863.5	10.2
50°-60°	718.0	8.5
60°-70°	495.8	5.9
70°-80°	251.3	3.0
80°-90°	68.4	0.8
90°-100°	86.4	1.0
100°-110°	255.9	3.0
110°-120°	434.4	5.1
120°-130°	572.8	6.8
130°-140°	643.3	7.6
140°-150°	632.1	7.5
150°-160°	531.7	6.3
160°-170°	353.7	4.2
170°-180°	123.9	1.5
0°-30°	1531.0	18.1
0°-40°	2425.2	28.7
0°-60°	4006.7	47.4
0°-90°	4822.1	57.0
90°-120°	776.7	9.2
90°-150°	2624.9	31.0
90°-180°	3634.0	43.0
0°-180°	8456.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2085	2085	2085	2085	2085	
5°	2082	2075	2057	2072	2070	197
15°	1983	1967	1929	1925	1915	559
25°	1793	1762	1699	1672	1656	826
35°	1550	1498	1420	1367	1336	968
45°	1265	1204	1110	1034	1003	975
55°	958	892	790	710	677	857
65°	652	581	481	415	393	643
75°	346	287	212	177	166	366
85°	86	56	50	46	46	97
90°	3	14	22	28	30	8
95°	61	70	77	80	80	68
105°	236	237	241	244	247	250
115°	442	442	440	439	438	435
125°	643	643	642	640	638	573
135°	830	835	836	834	831	642
145°	1008	1012	1013	1012	1009	631
155°	1155	1155	1154	1158	1154	531
165°	1257	1254	1252	1258	1254	354
175°	1308	1303	1302	1308	1302	124
180°	1310	1310	1310	1310	1310	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4
2.5°	2090.5	2089.4	2088.3	2087.1	2086.0	2083.9	2080.8	2077.6	2074.5	2071.4	2074.5
5°	2082.2	2080.8	2079.4	2078.0	2076.6	2073.7	2069.5	2065.2	2061.0	2056.7	2060.2
7.5°	2063.4	2061.9	2060.4	2058.9	2057.4	2053.9	2048.4	2042.9	2037.3	2031.8	2034.1
10°	2045.5	2043.7	2042.0	2040.2	2038.4	2034.3	2028.0	2021.6	2015.2	2008.8	2010.2
12.5°	2022.5	2020.5	2018.4	2016.3	2014.3	2009.5	2002.0	1994.5	1986.9	1979.4	1980.3
15°	1983.2	1980.0	1976.9	1973.7	1970.5	1964.4	1955.6	1946.7	1937.8	1928.9	1928.2
17.5°	1935.7	1931.0	1926.4	1921.8	1917.2	1909.6	1898.9	1888.3	1877.6	1867.0	1865.0
20°	1898.6	1894.0	1889.4	1884.8	1880.2	1871.8	1859.8	1847.7	1835.6	1823.6	1820.7
22.5°	1857.7	1852.6	1847.4	1842.2	1837.0	1828.0	1815.0	1802.1	1789.2	1776.3	1772.0
25°	1793.2	1786.8	1780.4	1774.1	1767.7	1757.2	1742.7	1728.1	1713.6	1699.0	1693.0
27.5°	1725.5	1717.5	1709.5	1701.5	1693.4	1681.7	1666.1	1650.6	1635.0	1619.5	1612.0
30°	1678.3	1669.4	1660.5	1651.6	1642.8	1630.0	1613.3	1596.6	1580.0	1563.3	1554.4
32.5°	1628.4	1618.4	1608.4	1598.4	1588.4	1574.8	1557.5	1540.3	1523.0	1505.8	1495.5
35°	1550.5	1539.1	1527.8	1516.4	1505.1	1490.5	1472.8	1455.1	1437.3	1419.6	1407.5
37.5°	1467.2	1455.4	1443.7	1432.0	1420.3	1404.6	1385.0	1365.3	1345.7	1326.0	1312.5
40°	1408.4	1396.7	1385.0	1373.3	1361.5	1345.6	1325.4	1305.1	1284.9	1264.7	1249.8
42.5°	1352.2	1339.9	1327.6	1315.3	1303.1	1286.4	1265.3	1244.2	1223.2	1202.1	1186.9
45°	1264.7	1251.5	1238.4	1225.3	1212.2	1194.9	1173.7	1152.4	1131.1	1109.8	1092.4
47.5°	1174.3	1160.7	1147.2	1133.6	1120.1	1102.2	1080.1	1057.9	1035.8	1013.7	995.6
50°	1113.0	1099.1	1085.3	1071.5	1057.6	1039.3	1016.6	993.9	971.2	948.5	930.8
52.5°	1050.4	1036.8	1023.3	1009.7	996.2	977.7	954.5	931.2	907.9	884.6	866.6
55°	958.1	943.9	929.7	915.5	901.3	882.7	859.6	836.6	813.5	790.4	772.0
57.5°	866.7	852.0	837.2	822.5	807.7	789.0	766.3	743.5	720.8	698.1	679.4
60°	801.6	787.4	773.2	759.0	744.8	726.4	703.7	681.0	658.2	635.5	617.1
62.5°	742.8	728.1	713.3	698.6	683.8	664.8	641.5	618.2	594.9	571.7	554.6
65°	651.5	636.2	621.0	605.7	590.5	571.5	548.8	526.1	503.4	480.6	465.4
67.5°	556.6	542.0	527.4	512.8	498.2	480.3	459.2	438.2	417.1	396.0	382.9
70°	496.6	481.7	466.8	451.9	437.0	419.4	399.2	379.0	358.8	338.5	326.8
72.5°	432.7	419.3	405.8	392.3	378.8	362.5	343.4	324.3	305.2	286.1	276.1
75°	346.5	333.4	320.2	307.1	294.0	279.1	262.4	245.7	229.1	212.4	204.2
77.5°	259.0	247.9	236.7	225.6	214.4	202.1	188.6	175.2	161.7	148.2	143.4
80°	202.8	192.5	182.2	171.9	161.6	151.2	140.5	129.9	119.2	108.6	107.5
82.5°	154.3	144.8	135.4	125.9	116.5	108.7	102.6	96.5	90.4	84.3	83.5
85°	86.2	79.1	72.0	64.9	57.8	53.8	52.7	51.6	50.6	49.5	48.8
87.5°	30.0	28.2	26.4	24.7	22.9	22.0	22.1	22.2	22.3	22.3	22.3
90°	3.0	5.5	8.0	10.5	12.9	15.1	16.9	18.7	20.5	22.3	23.6
92.5°	21.7	24.5	27.4	30.2	33.0	35.1	36.3	37.6	38.9	40.1	40.9
95°	60.8	62.8	64.8	66.9	68.9	70.7	72.3	73.8	75.4	77.0	77.7
97.5°	106.2	107.8	109.4	111.0	112.7	114.4	116.2	118.1	119.9	121.8	122.6
100°	141.8	142.7	143.6	144.5	145.4	146.9	148.9	150.9	153.0	155.0	155.4
102.5°	179.1	179.5	179.8	180.2	180.5	181.6	183.5	185.3	187.2	189.0	189.7
105°	236.0	236.3	236.5	236.7	236.9	237.5	238.4	239.3	240.2	241.1	241.8
107.5°	295.8	296.1	296.3	296.6	296.9	297.1	297.2	297.4	297.5	297.6	298.3
110°	336.3	336.8	337.2	337.7	338.1	338.2	338.0	337.8	337.6	337.3	336.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	378.5	378.6	378.7	378.7	378.8	378.7	378.3	377.9	377.5	377.1	377.0
115°	441.7	441.7	441.7	441.7	441.7	441.5	441.0	440.6	440.1	439.7	439.4
117.5°	501.3	501.4	501.6	501.8	502.0	501.9	501.6	501.3	501.0	500.6	499.9
120°	541.0	541.9	542.8	543.7	544.6	544.7	544.0	543.3	542.7	542.0	540.9
122.5°	582.3	582.7	583.0	583.4	583.7	583.8	583.4	583.1	582.8	582.5	581.7
125°	643.3	643.3	643.3	643.3	643.3	643.2	642.9	642.7	642.5	642.3	641.8
127.5°	698.6	699.3	699.9	700.6	701.3	701.5	701.1	700.7	700.4	700.0	699.6
130°	737.5	738.2	738.8	739.5	740.2	740.5	740.5	740.5	740.5	740.5	740.1
132.5°	777.2	777.7	778.2	778.7	779.2	779.3	779.2	779.0	778.8	778.6	778.2
135°	829.7	831.0	832.4	833.7	835.1	835.8	835.8	835.8	835.8	835.8	835.3
137.5°	886.8	887.4	888.1	888.7	889.3	889.8	890.2	890.6	890.9	891.3	890.7
140°	924.9	925.4	925.8	926.3	926.7	926.9	926.9	926.9	926.9	926.9	926.7
142.5°	959.8	960.2	960.7	961.1	961.6	961.7	961.5	961.3	961.2	961.0	960.9
145°	1008.0	1008.9	1009.8	1010.7	1011.6	1012.1	1012.4	1012.6	1012.8	1013.0	1012.8
147.5°	1055.8	1056.9	1058.0	1059.0	1060.1	1060.6	1060.4	1060.2	1060.0	1059.8	1059.7
150°	1085.0	1085.9	1086.8	1087.7	1088.6	1089.0	1089.0	1089.0	1089.0	1089.0	1089.0
152.5°	1112.5	1113.1	1113.6	1114.1	1114.7	1115.0	1115.2	1115.4	1115.6	1115.8	1116.3
155°	1154.9	1154.9	1154.9	1154.9	1154.9	1154.8	1154.5	1154.3	1154.1	1153.9	1154.8
157.5°	1190.5	1190.1	1189.7	1189.3	1188.9	1188.7	1188.6	1188.6	1188.5	1188.5	1189.2
160°	1211.6	1211.4	1211.1	1210.9	1210.7	1210.5	1210.2	1210.0	1209.8	1209.6	1210.2
162.5°	1231.0	1230.5	1229.9	1229.3	1228.7	1228.3	1228.1	1227.9	1227.6	1227.4	1228.6
165°	1257.2	1256.5	1255.8	1255.2	1254.5	1253.9	1253.5	1253.0	1252.6	1252.1	1253.5
167.5°	1277.2	1276.3	1275.4	1274.4	1273.5	1273.0	1273.1	1273.1	1273.1	1273.2	1274.5
170°	1288.6	1287.5	1286.3	1285.2	1284.1	1283.6	1283.9	1284.1	1284.3	1284.5	1285.9
172.5°	1296.7	1295.7	1294.8	1293.9	1292.9	1292.5	1292.5	1292.6	1292.6	1292.6	1294.2
175°	1307.8	1306.7	1305.6	1304.5	1303.3	1302.7	1302.4	1302.2	1302.0	1301.8	1303.3
177.5°	1311.5	1310.6	1309.7	1308.8	1307.9	1307.4	1307.4	1307.4	1307.4	1307.4	1308.7
180°	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4	2085.4
2.5°	2077.6	2080.8	2083.9	2085.3	2085.0	2084.7	2084.4	2084.2
5°	2063.8	2067.3	2070.9	2072.3	2071.6	2070.9	2070.2	2069.5
7.5°	2036.3	2038.6	2040.9	2041.4	2040.3	2039.2	2038.0	2036.9
10°	2011.6	2013.0	2014.5	2014.5	2013.0	2011.6	2010.2	2008.8
12.5°	1981.1	1982.0	1982.8	1982.2	1980.3	1978.3	1976.3	1974.3
15°	1927.5	1926.8	1926.1	1924.5	1922.0	1919.5	1917.1	1914.6
17.5°	1863.0	1861.0	1859.0	1856.2	1852.4	1848.6	1844.9	1841.1
20°	1817.9	1815.0	1812.2	1808.5	1803.9	1799.3	1794.6	1790.0
22.5°	1767.8	1763.5	1759.3	1755.3	1751.5	1747.7	1744.0	1740.2
25°	1686.9	1680.9	1674.9	1670.1	1666.5	1663.0	1659.4	1655.9
27.5°	1604.6	1597.1	1589.7	1583.4	1578.3	1573.2	1568.1	1563.0
30°	1545.5	1536.7	1527.8	1520.5	1514.8	1509.2	1503.5	1497.8
32.5°	1485.2	1474.9	1464.6	1456.8	1451.4	1446.0	1440.6	1435.2
35°	1395.4	1383.4	1371.3	1362.1	1355.7	1349.3	1342.9	1336.5
37.5°	1299.0	1285.5	1272.1	1262.1	1255.7	1249.3	1243.0	1236.6
40°	1234.9	1220.0	1205.1	1194.4	1188.0	1181.6	1175.3	1168.9
42.5°	1171.7	1156.5	1141.3	1130.4	1123.7	1117.1	1110.4	1103.7
45°	1075.0	1057.6	1040.2	1028.3	1022.0	1015.6	1009.2	1002.8
47.5°	977.6	959.6	941.6	929.0	922.0	915.0	907.9	900.9
50°	913.0	895.3	877.5	865.3	858.6	851.8	845.1	838.3
52.5°	848.6	830.6	812.5	800.0	793.0	786.0	778.9	771.9
55°	753.5	735.1	716.6	704.0	697.3	690.5	683.8	677.0
57.5°	660.7	641.9	623.2	611.3	606.2	601.0	595.9	590.8
60°	598.6	580.2	561.7	549.7	544.0	538.3	532.6	526.9
62.5°	537.6	520.6	503.5	492.7	488.2	483.7	479.1	474.6
65°	450.1	434.9	419.6	409.8	405.6	401.3	397.1	392.8
67.5°	369.8	356.6	343.5	334.6	329.9	325.2	320.5	315.8
70°	315.1	303.4	291.7	284.1	280.5	277.0	273.4	269.9
72.5°	266.1	256.1	246.1	239.5	236.2	233.0	229.7	226.4
75°	196.1	187.9	179.7	174.6	172.5	170.3	168.2	166.1
77.5°	138.7	133.9	129.2	126.5	125.8	125.2	124.6	123.9
80°	106.5	105.4	104.3	103.6	103.3	102.9	102.6	102.2
82.5°	82.8	82.0	81.2	80.6	80.3	79.9	79.6	79.2
85°	48.1	47.4	46.7	46.3	46.3	46.3	46.3	46.3
87.5°	22.3	22.3	22.3	22.5	22.8	23.2	23.6	24.0
90°	25.0	26.3	27.7	28.6	29.0	29.5	29.9	30.4
92.5°	41.7	42.5	43.4	43.9	44.2	44.4	44.7	45.0
95°	78.3	79.0	79.7	80.0	80.0	80.0	80.0	80.0
97.5°	123.4	124.2	125.0	125.4	125.4	125.4	125.4	125.4
100°	155.9	156.3	156.8	157.0	157.0	157.0	157.0	157.0
102.5°	190.3	190.9	191.6	192.0	192.1	192.3	192.5	192.7
105°	242.5	243.1	243.8	244.5	245.2	245.8	246.5	247.2
107.5°	298.9	299.5	300.2	300.4	300.4	300.4	300.3	300.3
110°	336.4	336.0	335.5	335.7	336.3	337.0	337.7	338.4



TEST NUMBER: P333106

CATALOG NUMBER: S124RDIW-S1195D1050U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	376.9	376.8	376.7	376.7	376.9	377.0	377.1	377.3
115°	439.2	439.0	438.8	438.5	438.3	438.1	437.9	437.6
117.5°	499.1	498.3	497.6	497.0	496.5	496.1	495.6	495.2
120°	539.7	538.6	537.5	537.1	537.6	538.0	538.5	538.9
122.5°	581.0	580.2	579.4	578.6	577.8	577.0	576.2	575.4
125°	641.4	640.9	640.5	640.0	639.6	639.1	638.7	638.2
127.5°	699.1	698.7	698.2	697.8	697.4	697.1	696.7	696.4
130°	739.6	739.2	738.7	738.1	737.2	736.3	735.4	734.5
132.5°	777.7	777.3	776.8	776.4	776.1	775.7	775.3	775.0
135°	834.9	834.4	834.0	833.4	832.7	832.0	831.4	830.7
137.5°	890.1	889.5	888.9	888.7	888.8	889.0	889.1	889.2
140°	926.5	926.3	926.0	925.8	925.6	925.4	925.1	924.9
142.5°	960.9	960.8	960.8	960.7	960.7	960.7	960.6	960.6
145°	1012.6	1012.4	1012.1	1011.7	1011.0	1010.3	1009.7	1009.0
147.5°	1059.5	1059.3	1059.1	1058.9	1058.7	1058.5	1058.2	1058.0
150°	1089.0	1089.0	1089.0	1088.9	1088.7	1088.5	1088.2	1088.0
152.5°	1116.8	1117.4	1117.9	1117.9	1117.3	1116.7	1116.1	1115.6
155°	1155.7	1156.6	1157.5	1157.5	1156.6	1155.7	1154.8	1153.9
157.5°	1189.9	1190.5	1191.2	1191.2	1190.4	1189.6	1188.9	1188.1
160°	1210.9	1211.6	1212.3	1212.0	1210.9	1209.8	1208.7	1207.5
162.5°	1229.8	1231.0	1232.3	1232.3	1231.2	1230.1	1228.9	1227.8
165°	1254.8	1256.2	1257.5	1257.7	1256.8	1255.9	1255.0	1254.1
167.5°	1275.9	1277.2	1278.6	1278.6	1277.2	1275.8	1274.4	1273.0
170°	1287.2	1288.6	1289.9	1289.8	1288.3	1286.7	1285.1	1283.5
172.5°	1295.7	1297.2	1298.8	1298.7	1297.2	1295.6	1294.0	1292.4
175°	1304.9	1306.5	1308.1	1308.1	1306.5	1304.9	1303.3	1301.8
177.5°	1310.0	1311.2	1312.5	1312.4	1310.9	1309.5	1308.1	1306.6
180°	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9	1309.9

(END OF REPORT)