

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: P333105-830

Luminaire Tested: **S124RDIW-S1195D1050U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333105-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIW-S1195D1050U830-4F0-1E-UDD-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8494.6 lumens
Efficiency: N/A
Efficacy: 126.0 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

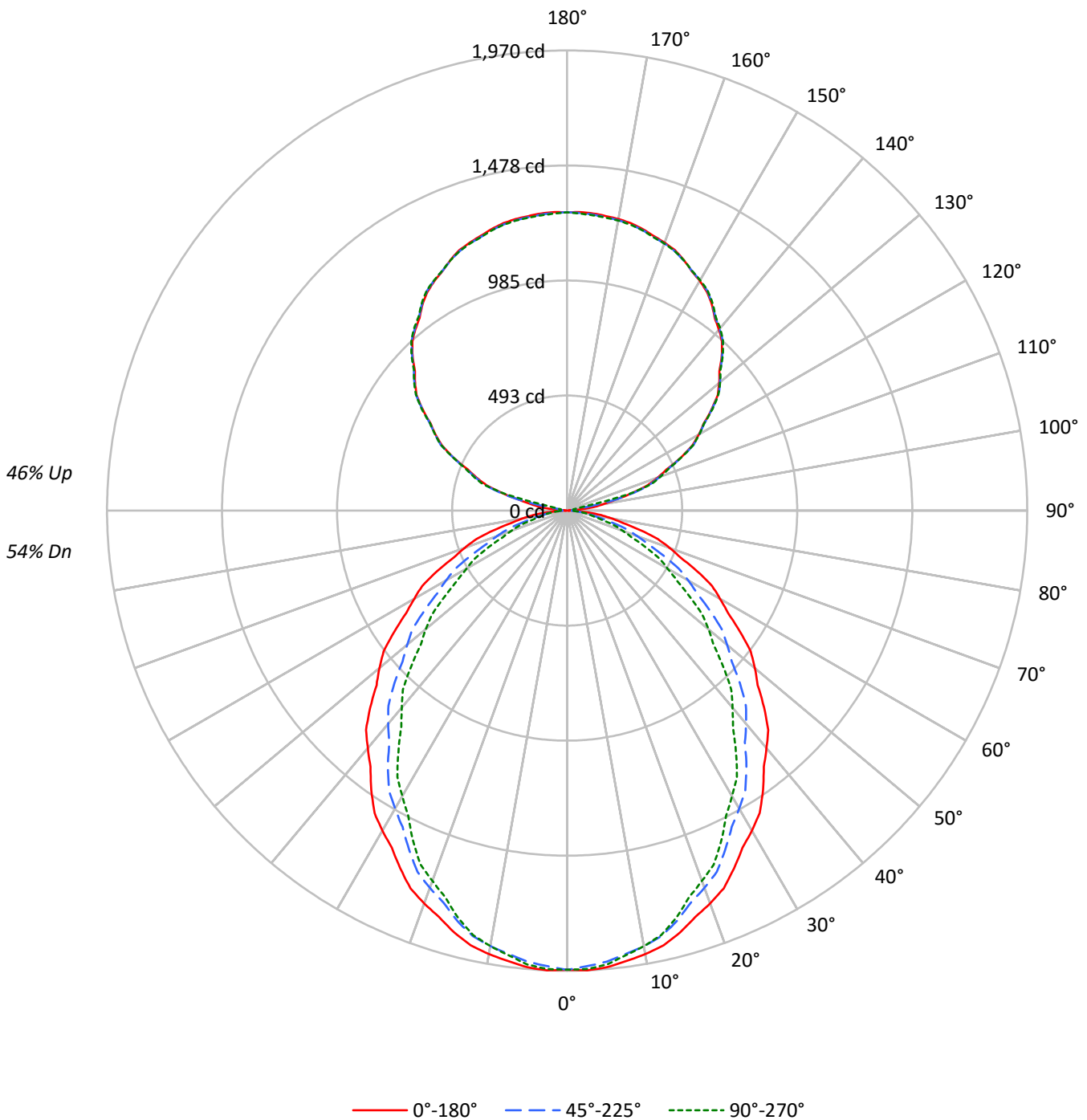
Input Watts (W): 67.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																				
0	108	108	108	108	100	100	100	100	85	85	85		72	72	72		59	59	59	54
1	99	95	91	87	92	88	85	82	75	73	71		64	62	60		53	52	51	46
2	90	83	77	72	83	77	72	67	66	62	59		56	53	51		47	45	43	39
3	82	73	66	60	76	68	62	57	59	54	50		50	46	43		42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43		45	41	37		38	35	32	29
5	69	58	50	44	64	54	47	42	47	41	37		40	36	33		34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	32		36	32	29		31	27	25	22
7	59	47	39	34	55	44	37	32	39	33	29		33	29	25		28	25	22	20
8	55	43	35	30	51	40	33	28	35	30	26		30	26	23		26	23	20	18
9	51	39	32	27	48	37	30	25	32	27	23		28	24	21		24	21	18	16
10	48	36	29	24	45	34	27	23	30	24	21		26	22	19		22	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15868	15868	15868
5°	15904	15709	15807
10°	15805	15521	15521
15°	15623	15195	15082
20°	15374	14766	14495
25°	15055	14264	13903
30°	14746	13736	13160
35°	14402	13186	12415
40°	13990	12562	11610
45°	13609	11942	10791
50°	13175	11228	9923
55°	12711	10486	8981
60°	12198	9671	8018
65°	11731	8653	7072
70°	11049	7532	6005
75°	10187	6245	4885
80°	8884	4761	4477
85°	7521	4326	4039



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.6	2.2
10°-20°	514.9	6.1
20°-30°	743.5	8.8
30°-40°	842.8	9.9
40°-50°	813.8	9.6
50°-60°	676.7	8.0
60°-70°	467.3	5.5
70°-80°	236.9	2.8
80°-90°	64.5	0.8
90°-100°	43.7	0.5
100°-110°	278.4	3.3
110°-120°	532.6	6.3
120°-130°	676.2	8.0
130°-140°	723.4	8.5
140°-150°	676.5	8.0
150°-160°	545.5	6.4
160°-170°	351.9	4.1
170°-180°	121.3	1.4
0°-30°	1443.1	17.0
0°-40°	2285.8	26.9
0°-60°	3776.4	44.5
0°-90°	4545.1	53.5
90°-120°	854.7	10.1
90°-150°	2930.8	34.5
90°-180°	3949.0	46.5
0°-180°	8494.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1966	1966	1966	1966	1966	
5°	1963	1956	1938	1953	1951	186
15°	1869	1854	1818	1815	1805	526
25°	1690	1661	1601	1576	1561	778
35°	1461	1412	1338	1288	1260	913
45°	1192	1134	1046	975	945	919
55°	903	841	745	669	638	807
65°	614	548	453	391	370	606
75°	327	270	200	167	157	345
85°	81	53	47	44	44	91
90°	3	13	21	27	29	6
95°	52	22	21	26	28	68
105°	288	293	298	304	272	301
115°	537	539	539	540	540	528
125°	754	758	756	759	760	673
135°	936	935	939	941	942	721
145°	1079	1082	1082	1083	1085	674
155°	1183	1184	1181	1185	1182	545
165°	1248	1244	1243	1250	1242	353
175°	1277	1271	1272	1280	1269	122
180°	1277	1277	1277	1277	1277	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6
2.5°	1970.4	1969.3	1968.3	1967.2	1966.1	1964.2	1961.2	1958.2	1955.3	1952.4	1955.3
5°	1962.6	1961.2	1959.9	1958.6	1957.3	1954.6	1950.6	1946.5	1942.6	1938.5	1941.8
7.5°	1944.8	1943.4	1942.0	1940.6	1939.2	1935.9	1930.7	1925.5	1920.2	1915.1	1917.2
10°	1928.0	1926.3	1924.7	1923.0	1921.3	1917.4	1911.5	1905.4	1899.4	1893.4	1894.7
12.5°	1906.3	1904.4	1902.4	1900.4	1898.6	1894.0	1887.0	1879.9	1872.7	1865.7	1866.5
15°	1869.3	1866.2	1863.3	1860.3	1857.3	1851.5	1843.2	1834.8	1826.5	1818.1	1817.4
17.5°	1824.5	1820.0	1815.7	1811.4	1807.0	1799.9	1789.8	1779.8	1769.7	1759.7	1757.8
20°	1789.5	1785.2	1780.8	1776.5	1772.2	1764.3	1752.9	1741.5	1730.1	1718.8	1716.1
22.5°	1751.0	1746.2	1741.3	1736.4	1731.5	1723.0	1710.7	1698.6	1686.4	1674.2	1670.2
25°	1690.2	1684.1	1678.1	1672.2	1666.1	1656.2	1642.6	1628.8	1615.1	1601.4	1595.7
27.5°	1626.4	1618.8	1611.3	1603.7	1596.1	1585.1	1570.4	1555.8	1541.1	1526.4	1519.4
30°	1581.9	1573.5	1565.1	1556.7	1548.4	1536.3	1520.6	1504.9	1489.2	1473.5	1465.1
32.5°	1534.8	1525.4	1516.0	1506.6	1497.1	1484.3	1468.0	1451.8	1435.5	1419.3	1409.6
35°	1461.4	1450.7	1440.0	1429.3	1418.6	1404.9	1388.2	1371.5	1354.7	1338.0	1326.6
37.5°	1382.9	1371.8	1360.7	1349.7	1338.7	1323.9	1305.4	1286.9	1268.4	1249.8	1237.1
40°	1327.5	1316.4	1305.4	1294.4	1283.3	1268.3	1249.2	1230.1	1211.1	1192.0	1178.0
42.5°	1274.5	1262.9	1251.3	1239.7	1228.2	1212.5	1192.6	1172.7	1152.9	1133.0	1118.7
45°	1192.0	1179.6	1167.2	1154.9	1142.6	1126.2	1106.3	1086.2	1066.1	1046.0	1029.6
47.5°	1106.8	1094.0	1081.3	1068.5	1055.7	1038.9	1018.0	997.1	976.3	955.5	938.4
50°	1049.0	1035.9	1022.9	1009.9	996.8	979.6	958.2	936.8	915.4	894.0	877.3
52.5°	990.0	977.2	964.5	951.7	939.0	921.5	899.7	877.7	855.7	833.8	816.8
55°	903.1	889.7	876.3	862.9	849.5	832.0	810.2	788.5	766.8	745.0	727.6
57.5°	816.9	803.0	789.1	775.2	761.3	743.7	722.3	700.8	679.4	658.0	640.4
60°	755.5	742.2	728.8	715.4	702.0	684.7	663.3	641.9	620.4	599.0	581.6
62.5°	700.1	686.3	672.3	658.5	644.5	626.6	604.6	582.7	560.7	538.9	522.7
65°	614.1	599.6	585.3	570.9	556.6	538.7	517.3	495.9	474.5	453.0	438.7
67.5°	524.6	510.9	497.1	483.3	469.6	452.7	432.8	413.0	393.1	373.2	360.9
70°	468.1	454.0	440.0	425.9	411.9	395.3	376.3	357.2	338.2	319.1	308.0
72.5°	407.8	395.2	382.5	369.8	357.0	341.7	323.7	305.7	287.7	269.7	260.2
75°	326.6	314.2	301.8	289.5	277.1	263.1	247.3	231.6	215.9	200.2	192.5
77.5°	244.1	233.7	223.1	212.6	202.1	190.5	177.8	165.1	152.4	139.7	135.2
80°	191.1	181.4	171.7	162.0	152.3	142.5	132.4	122.4	112.4	102.4	101.3
82.5°	145.4	136.5	127.6	118.7	109.8	102.5	96.7	91.0	85.2	79.5	78.7
85°	81.2	74.6	67.9	61.2	54.5	50.7	49.7	48.6	47.7	46.7	46.0
87.5°	28.3	26.6	24.9	23.3	21.6	20.7	20.8	20.9	21.0	21.0	21.0
90°	2.8	5.2	7.5	9.9	12.2	14.2	15.9	17.6	19.3	21.0	22.2
92.5°	12.1	12.2	12.3	12.4	12.5	13.5	15.2	16.9	18.6	20.3	21.5
95°	52.5	45.3	38.1	30.9	23.7	20.2	20.4	20.5	20.8	21.0	22.2
97.5°	111.5	116.0	120.6	125.1	129.5	120.0	96.2	72.6	48.9	25.2	25.4
100°	156.7	160.4	164.3	168.1	171.9	159.2	129.9	100.6	71.4	42.0	38.5
102.5°	207.1	209.8	212.6	215.5	218.2	217.7	214.0	210.1	206.2	202.5	163.5
105°	287.5	288.7	290.0	291.2	292.6	293.7	294.7	295.9	296.9	297.9	299.8
107.5°	362.1	362.8	363.4	364.0	364.7	365.7	367.1	368.6	370.0	371.5	372.4
110°	412.6	413.2	413.8	414.4	415.1	416.0	417.4	418.6	419.9	421.1	421.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	461.5	462.6	463.7	464.9	466.0	466.9	467.5	468.1	468.6	469.3	469.2
115°	536.7	537.3	538.0	538.6	539.2	539.4	539.2	539.0	538.9	538.6	539.0
117.5°	604.5	605.3	606.1	607.0	607.8	608.5	609.0	609.4	609.9	610.4	610.3
120°	650.4	651.2	652.1	652.9	653.7	654.0	653.8	653.7	653.4	653.2	653.7
122.5°	693.1	693.6	694.1	694.7	695.1	695.6	695.9	696.2	696.4	696.7	697.0
125°	754.4	755.3	756.1	757.0	757.8	758.0	757.6	757.1	756.8	756.3	757.0
127.5°	812.5	812.7	812.9	813.1	813.3	813.9	814.9	815.9	816.8	817.8	817.7
130°	849.9	850.2	850.4	850.6	850.7	851.2	851.9	852.4	853.1	853.8	853.9
132.5°	884.3	884.7	885.0	885.4	885.8	886.5	887.2	888.1	888.8	889.7	889.9
135°	935.9	935.7	935.5	935.2	935.0	935.4	936.2	937.1	937.9	938.8	939.1
137.5°	981.5	981.6	981.7	981.8	981.8	982.3	983.3	984.2	985.1	986.1	986.6
140°	1011.3	1011.7	1012.2	1012.6	1013.0	1013.4	1013.9	1014.3	1014.7	1015.1	1015.8
142.5°	1038.0	1038.8	1039.5	1040.4	1041.1	1041.6	1041.9	1042.1	1042.4	1042.6	1043.1
145°	1079.1	1079.8	1080.3	1081.0	1081.7	1081.9	1081.9	1081.9	1081.9	1081.9	1082.2
147.5°	1111.7	1113.0	1114.2	1115.3	1116.5	1117.0	1116.8	1116.6	1116.3	1116.2	1116.3
150°	1135.5	1136.3	1137.2	1138.0	1138.9	1139.2	1139.0	1138.8	1138.5	1138.3	1138.3
152.5°	1155.3	1156.0	1156.7	1157.3	1158.0	1158.2	1157.8	1157.4	1157.1	1156.7	1157.0
155°	1183.2	1183.5	1183.6	1183.8	1184.0	1183.8	1183.2	1182.6	1181.9	1181.3	1182.1
157.5°	1206.7	1206.5	1206.5	1206.3	1206.2	1205.8	1205.0	1204.3	1203.6	1202.9	1204.0
160°	1220.4	1219.8	1219.2	1218.5	1217.9	1217.5	1217.3	1217.0	1216.8	1216.6	1217.9
162.5°	1232.7	1231.9	1231.1	1230.2	1229.5	1228.9	1228.7	1228.5	1228.3	1228.0	1229.4
165°	1248.1	1247.1	1246.0	1244.9	1243.9	1243.4	1243.4	1243.4	1243.4	1243.4	1245.1
167.5°	1260.4	1259.2	1258.2	1257.1	1255.9	1255.4	1255.2	1255.1	1255.0	1254.8	1256.7
170°	1267.2	1265.9	1264.7	1263.4	1262.2	1261.6	1261.8	1262.1	1262.3	1262.4	1264.1
172.5°	1271.8	1270.5	1269.2	1268.0	1266.7	1266.2	1266.4	1266.6	1266.9	1267.1	1268.8
175°	1276.8	1275.5	1274.2	1273.0	1271.7	1271.2	1271.4	1271.6	1271.8	1272.1	1273.9
177.5°	1279.0	1277.9	1276.7	1275.5	1274.3	1273.9	1274.2	1274.6	1274.9	1275.3	1276.6
180°	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6	1965.6
2.5°	1958.2	1961.2	1964.2	1965.5	1965.2	1964.9	1964.6	1964.4
5°	1945.2	1948.5	1951.9	1953.2	1952.6	1951.9	1951.3	1950.6
7.5°	1919.3	1921.5	1923.6	1924.1	1923.1	1922.0	1920.9	1919.9
10°	1896.0	1897.3	1898.8	1898.8	1897.3	1896.0	1894.7	1893.4
12.5°	1867.3	1868.1	1868.9	1868.3	1866.5	1864.6	1862.7	1860.9
15°	1816.8	1816.1	1815.4	1813.9	1811.6	1809.2	1806.9	1804.6
17.5°	1756.0	1754.1	1752.2	1749.5	1746.0	1742.4	1738.9	1735.3
20°	1713.4	1710.7	1708.1	1704.6	1700.3	1695.9	1691.5	1687.2
22.5°	1666.2	1662.2	1658.2	1654.4	1650.9	1647.3	1643.8	1640.2
25°	1590.0	1584.3	1578.7	1574.1	1570.7	1567.4	1564.1	1560.8
27.5°	1512.4	1505.3	1498.4	1492.4	1487.6	1482.8	1478.0	1473.2
30°	1456.7	1448.4	1440.0	1433.1	1427.8	1422.5	1417.1	1411.7
32.5°	1399.9	1390.2	1380.4	1373.1	1368.0	1362.9	1357.8	1352.7
35°	1315.2	1303.9	1292.5	1283.8	1277.8	1271.8	1265.7	1259.7
37.5°	1224.4	1211.6	1199.0	1189.6	1183.6	1177.5	1171.6	1165.5
40°	1163.9	1149.9	1135.9	1125.8	1119.7	1113.7	1107.8	1101.7
42.5°	1104.4	1090.1	1075.7	1065.5	1059.1	1052.9	1046.6	1040.3
45°	1013.2	996.8	980.4	969.2	963.3	957.2	951.2	945.2
47.5°	921.4	904.5	887.5	875.6	869.0	862.4	855.7	849.1
50°	860.5	843.9	827.1	815.6	809.3	802.9	796.5	790.1
52.5°	799.8	782.9	765.8	754.0	747.4	740.8	734.1	727.5
55°	710.2	692.9	675.4	663.5	657.2	650.8	644.5	638.1
57.5°	622.7	605.0	587.4	576.2	571.4	566.5	561.7	556.9
60°	564.2	546.9	529.4	518.1	512.7	507.4	502.0	496.6
62.5°	506.7	490.7	474.6	464.4	460.1	455.9	451.6	447.3
65°	424.2	409.9	395.5	386.3	382.3	378.2	374.3	370.2
67.5°	348.6	336.1	323.8	315.4	310.9	306.5	302.1	297.7
70°	297.0	286.0	274.9	267.8	264.4	261.1	257.7	254.4
72.5°	250.8	241.4	232.0	225.7	222.6	219.6	216.5	213.4
75°	184.8	177.1	169.4	164.6	162.6	160.5	158.5	156.6
77.5°	130.7	126.2	121.8	119.2	118.6	118.0	117.4	116.8
80°	100.4	99.3	98.3	97.6	97.4	97.0	96.7	96.3
82.5°	78.0	77.3	76.5	76.0	75.7	75.3	75.0	74.6
85°	45.3	44.7	44.0	43.6	43.6	43.6	43.6	43.6
87.5°	21.0	21.0	21.0	21.2	21.5	21.9	22.2	22.6
90°	23.6	24.8	26.1	27.0	27.3	27.8	28.2	28.7
92.5°	22.8	24.0	25.4	26.0	26.1	26.2	26.3	26.4
95°	23.6	24.8	26.1	26.9	27.1	27.2	27.5	27.7
97.5°	25.4	25.6	25.7	25.9	26.1	26.3	26.5	26.8
100°	34.8	31.2	27.6	25.9	26.1	26.3	26.5	26.8
102.5°	124.6	85.7	46.8	27.3	27.3	27.4	27.4	27.5
105°	301.8	303.7	305.6	302.7	295.1	287.5	279.8	272.2
107.5°	373.3	374.3	375.2	376.1	376.9	377.7	378.5	379.3
110°	422.0	422.4	422.8	423.4	424.0	424.6	425.3	425.9



TEST NUMBER: P333105-830

CATALOG NUMBER: S124RDIW-S1195D1050U830-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	469.1	469.0	468.9	469.3	470.1	470.9	471.7	472.5
115°	539.4	539.9	540.3	540.5	540.5	540.5	540.5	540.5
117.5°	610.2	610.2	610.1	610.0	609.9	609.8	609.7	609.6
120°	654.0	654.5	654.9	654.9	654.5	654.0	653.7	653.2
122.5°	697.3	697.5	697.8	697.7	697.3	696.8	696.4	696.0
125°	757.6	758.3	758.8	759.3	759.5	759.7	760.0	760.2
127.5°	817.6	817.5	817.3	817.2	817.0	816.8	816.6	816.5
130°	854.1	854.4	854.6	854.7	854.7	854.7	854.7	854.7
132.5°	890.0	890.3	890.5	890.5	890.3	890.1	890.0	889.9
135°	939.6	940.0	940.5	940.8	941.3	941.7	942.2	942.5
137.5°	987.0	987.5	988.0	988.2	988.0	987.9	987.8	987.6
140°	1016.4	1017.0	1017.7	1018.1	1018.3	1018.5	1018.7	1019.0
142.5°	1043.6	1044.1	1044.5	1044.7	1044.8	1044.8	1044.9	1044.9
145°	1082.4	1082.6	1082.8	1083.2	1083.5	1084.0	1084.4	1084.9
147.5°	1116.5	1116.6	1116.8	1117.0	1117.3	1117.5	1117.7	1117.9
150°	1138.3	1138.3	1138.3	1138.4	1138.6	1138.9	1139.1	1139.3
152.5°	1157.3	1157.6	1158.0	1158.1	1158.0	1157.8	1157.7	1157.6
155°	1183.0	1183.8	1184.7	1184.8	1184.1	1183.6	1182.9	1182.2
157.5°	1205.0	1206.2	1207.3	1207.3	1206.2	1205.0	1204.0	1202.9
160°	1219.2	1220.4	1221.7	1221.7	1220.4	1219.2	1217.9	1216.6
162.5°	1230.6	1231.9	1233.1	1233.1	1231.6	1230.2	1228.8	1227.3
165°	1246.8	1248.5	1250.2	1250.0	1248.1	1246.2	1244.3	1242.4
167.5°	1258.6	1260.5	1262.3	1262.2	1260.1	1257.9	1255.8	1253.7
170°	1265.8	1267.5	1269.2	1269.0	1266.9	1264.8	1262.6	1260.6
172.5°	1270.5	1272.1	1273.8	1273.6	1271.2	1268.9	1266.7	1264.3
175°	1275.8	1277.7	1279.7	1279.3	1276.8	1274.2	1271.7	1269.1
177.5°	1278.0	1279.3	1280.7	1280.3	1278.3	1276.3	1274.2	1272.2
180°	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8

(END OF REPORT)