

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: P332695

Luminaire Tested: **S124DIP-S1195D810U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332695
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: S124DIP-S1195D810U835-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7921.4 lumens
Efficiency: N/A
Efficacy: 130.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Direct

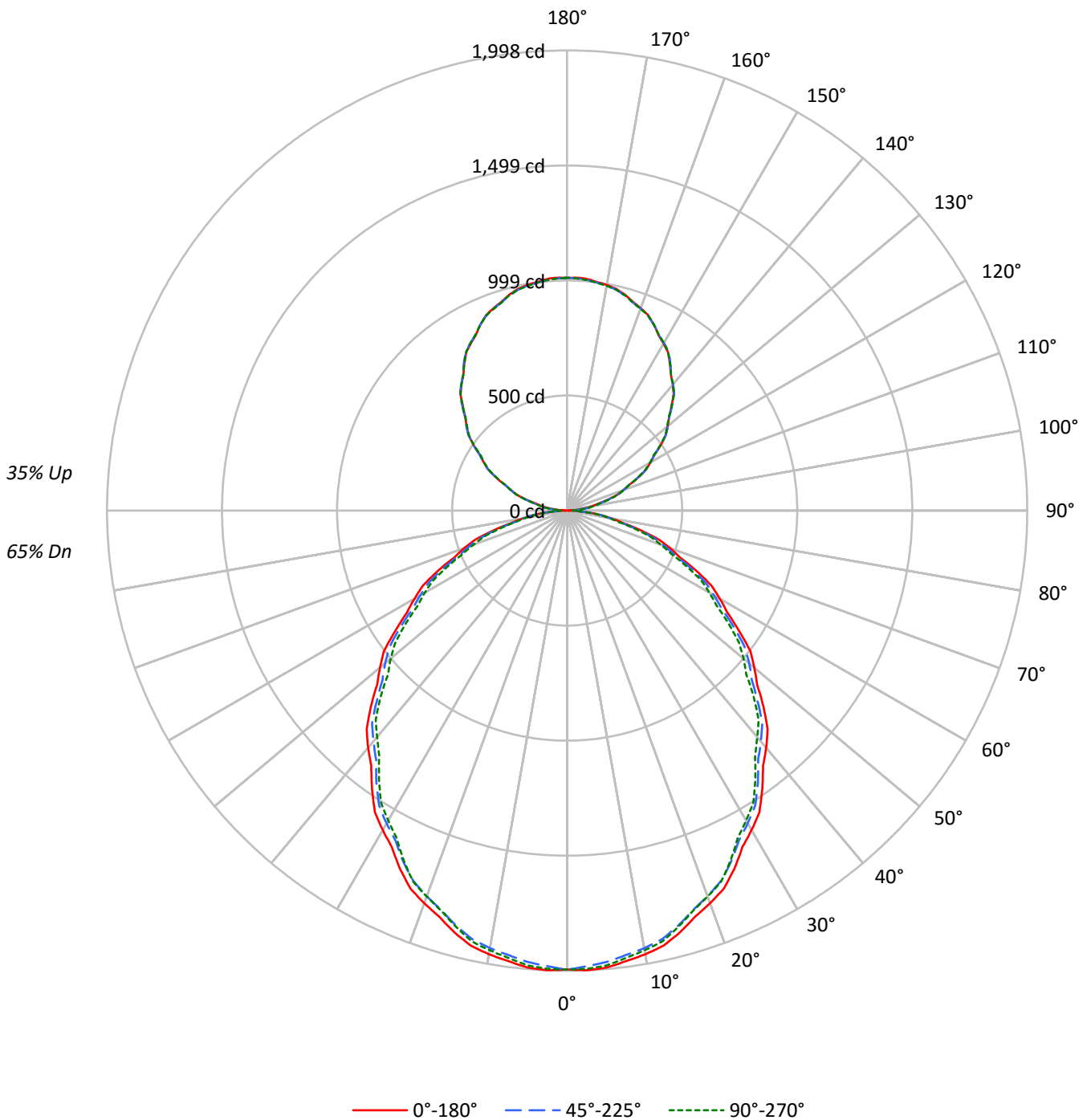
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	70	70	70	65
1	101	97	93	89	95	91	87	84	80	78	75	70	68	67	61	60	59	54
2	92	84	78	73	86	79	74	69	70	66	62	62	59	56	54	52	49	45
3	84	74	67	61	79	70	63	58	62	57	52	55	51	47	48	45	42	38
4	77	66	58	51	72	62	55	49	55	49	45	49	44	40	43	39	36	33
5	71	59	50	44	66	55	48	42	49	43	39	44	39	35	39	35	32	29
6	65	53	44	38	61	50	42	37	45	38	34	40	35	31	35	31	28	25
7	60	48	39	34	56	45	38	32	41	34	30	36	31	27	32	28	25	22
8	56	43	35	30	53	41	34	29	37	31	27	33	28	24	29	25	22	20
9	52	40	32	27	49	38	31	26	34	28	24	30	26	22	27	23	20	18
10	49	36	29	24	46	35	28	23	31	26	22	28	23	20	25	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16088	16088	16088
5°	16136	15943	16058
10°	16035	15813	15891
15°	15841	15588	15628
20°	15584	15309	15323
25°	15291	14991	14949
30°	14930	14618	14483
35°	14557	14226	14038
40°	14169	13782	13529
45°	13764	13345	13089
50°	13317	12955	12554
55°	12833	12451	12047
60°	12350	11885	11525
65°	11805	11347	10890
70°	11195	10629	10213
75°	10259	9763	9513
80°	9131	8759	8536
85°	7984	7688	7540



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.7	2.4
10°-20°	528.8	6.7
20°-30°	778.3	9.8
30°-40°	904.8	11.4
40°-50°	904.8	11.4
50°-60°	791.5	10.0
60°-70°	587.8	7.4
70°-80°	333.9	4.2
80°-90°	99.4	1.3
90°-100°	66.7	0.8
100°-110°	197.5	2.5
110°-120°	335.2	4.2
120°-130°	442.0	5.6
130°-140°	496.4	6.3
140°-150°	487.8	6.2
150°-160°	410.3	5.2
160°-170°	273.0	3.4
170°-180°	95.6	1.2
0°-30°	1494.7	18.9
0°-40°	2399.5	30.3
0°-60°	4095.8	51.7
0°-90°	5116.9	64.6
90°-120°	599.4	7.6
90°-150°	2025.7	25.6
90°-180°	2805.0	35.4
0°-180°	7921.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1993	1993	1993	1993	1993	
5°	1991	1984	1967	1984	1982	189
15°	1895	1888	1865	1874	1870	534
25°	1717	1705	1683	1684	1678	789
35°	1477	1465	1444	1433	1424	923
45°	1206	1194	1169	1152	1146	929
55°	912	906	885	866	856	816
65°	618	610	594	578	570	612
75°	329	321	313	307	305	350
85°	86	86	83	83	81	95
90°	2	11	17	22	24	8
95°	47	54	59	62	62	52
105°	182	183	186	188	191	193
115°	341	341	339	338	338	336
125°	496	496	496	494	492	442
135°	640	645	645	643	641	495
145°	778	781	782	781	779	487
155°	891	891	890	893	890	410
165°	970	968	966	971	968	273
175°	1009	1006	1005	1010	1005	96
180°	1011	1011	1011	1011	1011	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8
2.5°	1997.9	1997.1	1996.2	1995.4	1994.5	1992.5	1989.4	1986.3	1983.2	1980.1	1982.9
5°	1991.2	1989.8	1988.4	1987.0	1985.6	1982.9	1979.0	1975.1	1971.2	1967.3	1971.2
7.5°	1972.7	1971.3	1969.9	1968.4	1967.0	1964.2	1959.8	1955.5	1951.2	1946.8	1950.0
10°	1956.1	1954.7	1953.3	1951.8	1950.4	1947.4	1942.8	1938.2	1933.6	1929.0	1931.8
12.5°	1934.4	1933.0	1931.5	1930.1	1928.7	1925.5	1920.7	1915.8	1910.9	1906.0	1909.1
15°	1895.4	1894.0	1892.6	1891.2	1889.7	1886.4	1881.0	1875.7	1870.4	1865.1	1867.2
17.5°	1848.5	1846.7	1844.9	1843.2	1841.4	1838.0	1832.9	1827.9	1822.9	1817.8	1819.2
20°	1814.0	1812.2	1810.4	1808.7	1806.9	1803.3	1798.0	1792.7	1787.4	1782.0	1783.1
22.5°	1776.9	1774.6	1772.3	1769.9	1767.6	1763.7	1758.4	1753.1	1747.8	1742.4	1744.4
25°	1716.6	1714.1	1711.6	1709.1	1706.6	1702.9	1697.9	1693.0	1688.0	1683.0	1683.4
27.5°	1647.6	1645.0	1642.5	1639.9	1637.4	1633.8	1629.2	1624.6	1620.0	1615.3	1614.5
30°	1601.6	1598.8	1595.9	1593.1	1590.3	1586.5	1581.9	1577.3	1572.7	1568.1	1566.7
32.5°	1553.1	1550.5	1548.0	1545.4	1542.8	1539.1	1534.2	1529.3	1524.4	1519.5	1517.8
35°	1477.1	1474.6	1472.1	1469.6	1467.1	1463.4	1458.4	1453.5	1448.5	1443.5	1441.0
37.5°	1396.9	1394.6	1392.4	1390.1	1387.8	1384.0	1378.7	1373.4	1368.0	1362.7	1360.0
40°	1344.5	1341.7	1338.8	1336.0	1333.2	1329.1	1323.8	1318.4	1313.1	1307.8	1304.2
42.5°	1288.3	1286.6	1284.9	1283.2	1281.5	1277.7	1271.8	1265.9	1260.0	1254.1	1250.0
45°	1205.6	1203.1	1200.6	1198.1	1195.7	1191.6	1185.9	1180.2	1174.5	1168.9	1165.0
47.5°	1119.0	1117.3	1115.6	1113.9	1112.2	1108.8	1103.5	1098.3	1093.0	1087.8	1083.4
50°	1060.3	1058.9	1057.4	1056.0	1054.6	1051.4	1046.4	1041.5	1036.5	1031.5	1026.6
52.5°	1002.8	1001.1	999.4	997.7	996.0	992.5	987.3	982.0	976.8	971.5	967.1
55°	911.8	910.7	909.7	908.6	907.5	904.5	899.5	894.6	889.6	884.6	880.4
57.5°	824.9	823.7	822.5	821.3	820.1	817.0	812.1	807.2	802.3	797.4	793.4
60°	764.9	763.1	761.3	759.6	757.8	754.6	750.0	745.4	740.7	736.1	732.9
62.5°	706.1	704.6	703.1	701.6	700.2	697.0	692.1	687.2	682.3	677.4	674.5
65°	618.0	616.2	614.4	612.6	610.9	608.2	604.7	601.1	597.6	594.0	590.5
67.5°	529.2	527.6	525.9	524.3	522.7	520.1	516.7	513.3	509.9	506.5	503.1
70°	474.3	471.8	469.3	466.8	464.3	461.7	458.8	456.0	453.1	450.3	447.5
72.5°	415.5	413.0	410.5	408.0	405.6	403.2	400.9	398.6	396.4	394.1	391.8
75°	328.9	327.2	325.4	323.6	321.8	320.1	318.3	316.5	314.8	313.0	311.6
77.5°	246.2	245.4	244.7	243.9	243.1	241.9	240.4	238.8	237.3	235.7	235.3
80°	196.4	195.3	194.3	193.2	192.2	191.3	190.6	189.8	189.1	188.4	187.7
82.5°	147.9	147.4	146.9	146.4	145.9	145.6	145.4	145.3	145.1	145.0	144.6
85°	86.2	86.2	86.2	86.2	86.2	85.9	85.2	84.5	83.7	83.0	83.0
87.5°	33.7	33.8	33.9	34.0	34.1	34.1	34.1	34.1	34.1	34.1	34.3
90°	2.3	4.3	6.2	8.1	10.0	11.6	13.0	14.4	15.8	17.2	18.2
92.5°	16.7	18.9	21.1	23.3	25.5	27.1	28.0	29.0	30.0	31.0	31.6
95°	46.9	48.5	50.0	51.6	53.2	54.6	55.8	57.0	58.2	59.4	59.9
97.5°	81.9	83.2	84.4	85.7	86.9	88.3	89.7	91.1	92.5	94.0	94.6
100°	109.5	110.1	110.8	111.5	112.2	113.4	114.9	116.5	118.0	119.6	120.0
102.5°	138.2	138.5	138.8	139.1	139.3	140.2	141.6	143.0	144.5	145.9	146.4
105°	182.2	182.3	182.5	182.7	182.9	183.3	184.0	184.7	185.4	186.1	186.6
107.5°	228.3	228.5	228.7	228.9	229.1	229.3	229.4	229.5	229.6	229.7	230.2
110°	259.6	259.9	260.2	260.6	260.9	261.0	260.9	260.7	260.5	260.3	260.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	292.1	292.1	292.2	292.3	292.4	292.2	291.9	291.6	291.3	291.0	290.9
115°	340.9	340.9	340.9	340.9	340.9	340.7	340.3	340.0	339.6	339.3	339.1
117.5°	386.8	387.0	387.1	387.2	387.4	387.3	387.1	386.8	386.6	386.4	385.8
120°	417.5	418.2	418.9	419.6	420.3	420.3	419.8	419.3	418.8	418.3	417.4
122.5°	449.4	449.6	449.9	450.2	450.5	450.5	450.3	450.0	449.8	449.5	448.9
125°	496.4	496.4	496.4	496.4	496.4	496.3	496.2	496.0	495.8	495.7	495.3
127.5°	539.1	539.6	540.2	540.7	541.2	541.3	541.0	540.8	540.5	540.2	539.9
130°	569.1	569.7	570.2	570.7	571.2	571.5	571.5	571.5	571.5	571.5	571.1
132.5°	599.8	600.2	600.6	600.9	601.3	601.4	601.3	601.2	601.0	600.9	600.5
135°	640.3	641.3	642.4	643.4	644.5	645.0	645.0	645.0	645.0	645.0	644.6
137.5°	684.4	684.9	685.3	685.8	686.3	686.7	687.0	687.3	687.5	687.8	687.4
140°	713.8	714.1	714.5	714.8	715.2	715.3	715.3	715.3	715.3	715.3	715.2
142.5°	740.7	741.0	741.4	741.7	742.1	742.2	742.0	741.9	741.7	741.6	741.6
145°	777.9	778.6	779.3	780.0	780.7	781.1	781.3	781.4	781.6	781.8	781.6
147.5°	814.8	815.6	816.4	817.3	818.1	818.5	818.3	818.2	818.0	817.9	817.8
150°	837.3	838.0	838.7	839.4	840.1	840.4	840.4	840.4	840.4	840.4	840.4
152.5°	858.6	859.0	859.4	859.8	860.2	860.5	860.6	860.8	860.9	861.1	861.5
155°	891.2	891.2	891.2	891.2	891.2	891.1	891.0	890.8	890.6	890.5	891.1
157.5°	918.8	918.4	918.1	917.8	917.5	917.3	917.3	917.3	917.2	917.2	917.7
160°	935.0	934.8	934.7	934.5	934.3	934.1	934.0	933.8	933.6	933.5	934.0
162.5°	950.0	949.6	949.1	948.7	948.2	947.9	947.7	947.6	947.4	947.2	948.2
165°	970.2	969.7	969.2	968.6	968.1	967.7	967.3	967.0	966.6	966.3	967.3
167.5°	985.7	984.9	984.2	983.5	982.8	982.4	982.4	982.5	982.5	982.5	983.6
170°	994.4	993.6	992.7	991.8	991.0	990.6	990.8	991.0	991.1	991.3	992.3
172.5°	1000.7	1000.0	999.2	998.5	997.8	997.4	997.5	997.5	997.5	997.6	998.7
175°	1009.3	1008.4	1007.5	1006.7	1005.8	1005.3	1005.1	1004.9	1004.8	1004.6	1005.8
177.5°	1012.1	1011.4	1010.7	1010.0	1009.3	1009.0	1009.0	1009.0	1009.0	1009.0	1009.9
180°	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8	1992.8
2.5°	1985.7	1988.6	1991.4	1992.7	1992.4	1992.1	1991.8	1991.5
5°	1975.1	1979.0	1982.9	1984.5	1983.8	1983.1	1982.4	1981.6
7.5°	1953.1	1956.2	1959.3	1960.7	1960.3	1959.8	1959.4	1959.0
10°	1934.6	1937.5	1940.3	1941.4	1940.7	1940.0	1939.2	1938.5
12.5°	1912.2	1915.3	1918.5	1919.5	1918.5	1917.5	1916.5	1915.5
15°	1869.3	1871.5	1873.6	1874.1	1873.1	1872.0	1870.9	1869.9
17.5°	1820.5	1821.9	1823.2	1823.5	1822.8	1822.1	1821.4	1820.7
20°	1784.2	1785.2	1786.3	1786.5	1785.8	1785.1	1784.4	1783.6
22.5°	1746.3	1748.2	1750.1	1750.4	1749.2	1747.9	1746.6	1745.3
25°	1683.8	1684.1	1684.5	1683.9	1682.5	1681.1	1679.7	1678.3
27.5°	1613.6	1612.8	1611.9	1610.6	1608.8	1607.1	1605.3	1603.5
30°	1565.2	1563.8	1562.4	1560.8	1559.0	1557.3	1555.5	1553.7
32.5°	1516.1	1514.4	1512.7	1511.0	1509.2	1507.4	1505.7	1503.9
35°	1438.6	1436.1	1433.6	1431.5	1429.7	1427.9	1426.1	1424.4
37.5°	1357.3	1354.6	1351.9	1349.4	1347.1	1344.7	1342.4	1340.0
40°	1300.7	1297.1	1293.6	1290.9	1289.2	1287.4	1285.6	1283.8
42.5°	1245.9	1241.8	1237.7	1235.0	1233.8	1232.6	1231.4	1230.2
45°	1161.1	1157.2	1153.3	1150.8	1149.7	1148.6	1147.6	1146.5
47.5°	1079.0	1074.6	1070.2	1066.6	1063.9	1061.2	1058.5	1055.8
50°	1021.6	1016.6	1011.7	1008.1	1006.0	1003.9	1001.7	999.6
52.5°	962.7	958.3	953.9	950.4	947.7	945.0	942.3	939.6
55°	876.1	871.9	867.6	864.4	862.3	860.2	858.0	855.9
57.5°	789.4	785.3	781.3	778.2	776.2	774.1	772.0	770.0
60°	729.7	726.6	723.4	720.9	719.1	717.3	715.6	713.8
62.5°	671.5	668.6	665.7	663.4	661.6	659.8	658.1	656.3
65°	586.9	583.4	579.8	577.2	575.4	573.6	571.8	570.1
67.5°	499.7	496.3	492.9	490.9	490.4	489.9	489.4	488.9
70°	444.6	441.8	438.9	437.0	435.9	434.9	433.8	432.7
72.5°	389.6	387.3	385.0	383.3	382.3	381.2	380.1	379.1
75°	310.1	308.7	307.3	306.4	306.1	305.7	305.3	305.0
77.5°	234.8	234.4	234.0	233.3	232.4	231.5	230.5	229.6
80°	187.0	186.3	185.6	185.1	184.7	184.3	184.0	183.6
82.5°	144.1	143.7	143.3	142.9	142.5	142.2	141.8	141.5
85°	83.0	83.0	83.0	82.9	82.5	82.1	81.8	81.4
87.5°	34.5	34.7	34.9	35.1	35.1	35.2	35.3	35.3
90°	19.3	20.3	21.4	22.1	22.4	22.8	23.1	23.5
92.5°	32.2	32.8	33.5	33.9	34.1	34.3	34.5	34.7
95°	60.5	61.0	61.5	61.8	61.8	61.8	61.8	61.8
97.5°	95.2	95.8	96.5	96.8	96.8	96.8	96.8	96.8
100°	120.3	120.7	121.0	121.2	121.2	121.2	121.2	121.2
102.5°	146.9	147.3	147.8	148.1	148.3	148.4	148.6	148.7
105°	187.1	187.6	188.1	188.7	189.2	189.7	190.2	190.8
107.5°	230.7	231.1	231.6	231.9	231.8	231.8	231.8	231.7
110°	259.6	259.3	258.9	259.0	259.6	260.1	260.6	261.1



TEST NUMBER: P332695

CATALOG NUMBER: S124DIP-S1195D810U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	290.8	290.8	290.7	290.7	290.8	290.9	291.0	291.1
115°	338.9	338.8	338.6	338.4	338.3	338.1	337.9	337.7
117.5°	385.2	384.6	384.0	383.5	383.2	382.8	382.5	382.1
120°	416.5	415.6	414.8	414.5	414.9	415.2	415.6	415.9
122.5°	448.3	447.8	447.2	446.6	445.9	445.3	444.7	444.1
125°	495.0	494.6	494.3	493.9	493.6	493.2	492.9	492.5
127.5°	539.5	539.2	538.8	538.5	538.2	538.0	537.7	537.4
130°	570.8	570.4	570.1	569.6	568.9	568.2	567.5	566.8
132.5°	600.2	599.8	599.5	599.2	598.9	598.6	598.3	598.1
135°	644.3	643.9	643.6	643.1	642.6	642.1	641.6	641.1
137.5°	686.9	686.5	686.0	685.8	685.9	686.0	686.1	686.3
140°	715.0	714.8	714.6	714.5	714.3	714.1	713.9	713.8
142.5°	741.5	741.5	741.5	741.4	741.4	741.4	741.3	741.3
145°	781.4	781.3	781.1	780.7	780.2	779.7	779.2	778.7
147.5°	817.6	817.5	817.3	817.2	817.0	816.8	816.7	816.5
150°	840.4	840.4	840.4	840.3	840.2	840.0	839.8	839.6
152.5°	861.9	862.3	862.7	862.7	862.3	861.8	861.4	860.9
155°	891.8	892.5	893.2	893.2	892.5	891.8	891.1	890.5
157.5°	918.2	918.8	919.3	919.2	918.7	918.1	917.5	916.9
160°	934.5	935.0	935.5	935.4	934.5	933.6	932.8	931.9
162.5°	949.1	950.0	951.0	951.0	950.1	949.3	948.4	947.5
165°	968.4	969.4	970.5	970.6	969.9	969.2	968.5	967.9
167.5°	984.6	985.7	986.7	986.7	985.6	984.5	983.5	982.4
170°	993.4	994.4	995.5	995.4	994.2	993.0	991.7	990.5
172.5°	999.9	1001.1	1002.3	1002.3	1001.1	999.8	998.6	997.4
175°	1007.0	1008.2	1009.5	1009.5	1008.2	1007.0	1005.8	1004.6
177.5°	1010.9	1011.9	1012.9	1012.8	1011.7	1010.6	1009.5	1008.3
180°	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8

(END OF REPORT)