

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: P332714

Luminaire Tested: **S124DIP-S1195D1205U835-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332714
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D1205U835-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9418.8 lumens
Efficiency: N/A
Efficacy: 131.4 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: General Diffuse

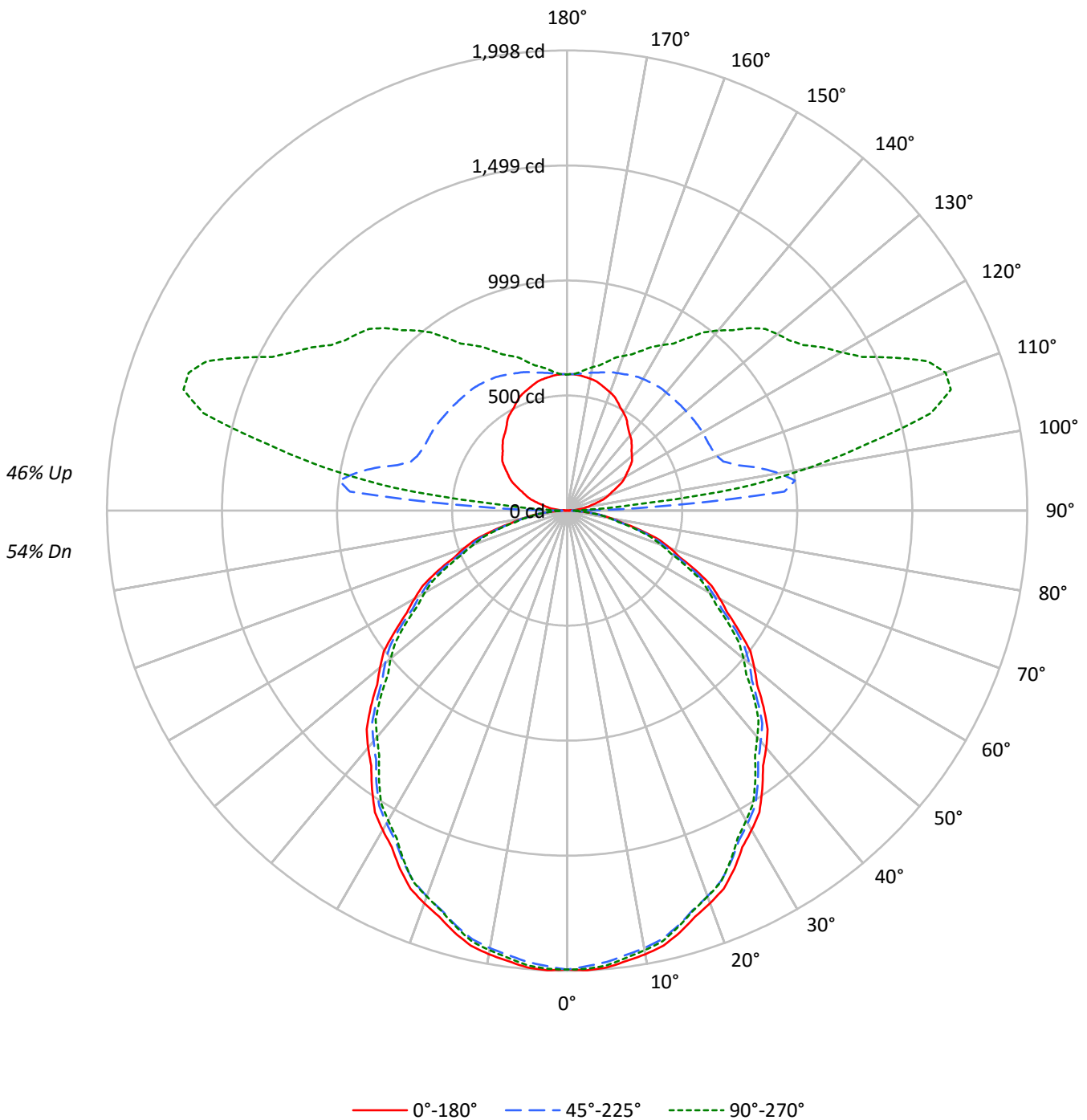
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54
1	99	94	90	87	91	88	84	81	75	73	70	64	62	60	53	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	47	45	43	38
3	82	72	65	59	76	67	61	56	58	53	49	49	46	43	41	39	36	32
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31	28
5	69	57	49	43	64	53	46	41	46	40	36	40	35	32	33	30	27	24
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	21	19
8	55	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	23	20	17	15
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14

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	2.0
10°-20°	528.8	5.6
20°-30°	778.3	8.3
30°-40°	904.8	9.6
40°-50°	904.8	9.6
50°-60°	791.5	8.4
60°-70°	587.8	6.2
70°-80°	333.9	3.5
80°-90°	99.6	1.1
90°-100°	427.2	4.5
100°-110°	889.1	9.4
110°-120°	796.4	8.5
120°-130°	669.9	7.1
130°-140°	558.5	5.9
140°-150°	426.7	4.5
150°-160°	299.9	3.2
160°-170°	176.4	1.9
170°-180°	57.4	0.6
0°-30°	1494.7	15.9
0°-40°	2399.5	25.5
0°-60°	4095.8	43.5
0°-90°	5117.1	54.3
90°-120°	2112.7	22.4
90°-150°	3767.8	40.0
90°-180°	4302.0	45.7
0°-180°	9418.8	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°	1	9	21	23	24	7
95°	38	121	947	469	284	43
105°	136	197	762	1641	1635	145
115°	239	300	680	1306	1570	237
125°	334	396	676	1111	1253	297
135°	396	472	670	987	1120	306
145°	457	523	667	832	914	287
155°	519	561	648	734	766	239
165°	566	583	622	658	668	160
175°	590	592	596	604	602	56
180°	592	592	592	592	592	



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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°	33.4	33.6	34.0	34.0	33.9	33.7	34.8	34.5	34.7	34.8	34.6
90°	1.2	3.5	7.0	8.1	9.3	9.3	16.3	16.3	18.6	20.9	19.8
92.5°	13.2	19.3	30.2	44.4	61.4	85.5	144.6	234.7	322.6	368.6	307.0
95°	38.3	41.8	53.5	68.6	96.4	145.3	246.3	436.9	714.6	947.0	973.8
97.5°	68.8	68.8	78.8	92.7	116.7	157.6	235.4	392.8	668.8	997.5	1223.4
100°	88.3	88.3	96.4	110.4	132.5	169.7	238.2	369.5	606.6	934.2	1231.7
102.5°	106.9	108.8	116.0	129.0	150.1	185.5	247.5	363.0	564.7	855.2	1162.0
105°	136.0	139.4	145.3	159.2	180.1	213.8	269.6	366.0	528.7	762.3	1035.3
107.5°	168.0	170.3	176.2	191.0	211.0	244.3	295.4	383.2	522.2	710.2	933.1
110°	189.4	191.7	197.5	211.5	232.4	263.8	314.9	396.2	524.1	692.6	882.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	209.9	212.2	218.9	231.9	252.9	284.2	333.5	410.2	529.6	684.2	853.1
115°	239.4	242.9	251.0	262.6	284.7	316.1	362.5	432.3	540.3	679.8	826.2
117.5°	270.0	273.3	280.5	293.3	314.0	346.5	390.7	454.8	551.7	678.6	814.1
120°	290.5	292.8	301.0	313.7	333.5	366.0	410.2	470.6	560.1	678.6	807.6
122.5°	309.1	311.4	319.6	331.4	353.0	384.6	428.8	485.5	568.5	677.7	800.2
125°	333.5	338.1	345.1	357.9	380.0	412.5	454.3	507.8	581.0	676.3	787.8
127.5°	355.1	358.8	367.2	381.8	404.8	437.6	478.0	527.1	591.0	673.7	771.3
130°	367.2	371.8	381.1	398.6	420.6	454.3	493.9	539.2	598.4	672.8	761.1
132.5°	379.3	383.0	395.1	411.6	435.5	467.4	506.9	551.3	604.9	671.9	751.8
135°	396.2	400.9	412.5	432.3	456.7	486.9	525.2	567.1	614.7	670.5	737.9
137.5°	413.2	417.6	430.4	449.2	474.6	503.4	539.2	578.2	620.5	670.2	725.8
140°	425.3	428.8	441.6	461.3	485.7	513.6	548.5	585.6	625.2	669.3	719.3
142.5°	438.3	441.8	453.6	472.5	495.9	522.9	556.8	591.2	628.9	669.3	713.7
145°	456.7	460.2	471.8	488.0	510.1	535.7	565.9	597.3	631.0	667.0	704.2
147.5°	477.3	478.5	488.7	505.5	523.8	546.8	575.2	602.6	632.1	662.8	695.6
150°	490.4	491.5	500.8	514.8	532.2	554.3	579.8	605.4	632.1	660.0	689.1
152.5°	502.4	502.7	512.0	525.0	540.6	560.8	583.6	607.3	630.3	655.4	681.6
155°	519.4	520.6	527.5	539.2	552.0	569.4	589.1	608.9	627.5	648.4	670.5
157.5°	535.9	535.9	542.4	551.5	562.6	576.4	593.1	608.9	624.5	641.2	659.1
160°	546.1	546.1	550.8	558.9	568.2	581.0	594.9	608.9	621.7	635.6	650.7
162.5°	555.4	554.5	558.2	565.4	573.8	583.8	596.8	608.9	618.9	630.0	643.3
165°	565.9	565.9	568.2	574.0	579.8	586.8	597.3	606.6	613.5	621.7	631.0
167.5°	576.4	575.2	576.4	580.8	584.0	589.4	597.0	603.8	608.0	613.3	619.8
170°	581.0	579.8	581.0	584.5	586.8	590.3	596.1	601.9	604.2	607.7	612.4
172.5°	585.6	584.5	584.7	587.3	588.7	591.2	595.2	600.1	600.5	602.1	605.9
175°	590.3	589.1	589.1	590.3	591.5	591.5	593.8	597.3	596.1	596.1	598.4
177.5°	592.4	591.5	590.5	591.5	591.5	591.5	592.4	594.2	592.4	592.4	593.3
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5



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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°	34.8	35.1	35.3	35.3	35.5	35.8	35.5	35.5
90°	20.9	22.1	23.2	23.2	24.4	25.6	24.4	24.4
92.5°	228.2	171.7	136.7	113.4	99.7	93.4	89.5	89.5
95°	861.0	680.9	525.2	412.5	355.6	319.6	298.6	283.5
97.5°	1272.2	1205.2	1091.6	970.3	886.8	816.9	782.0	757.9
100°	1401.4	1424.6	1367.7	1281.7	1180.6	1109.7	1074.9	1065.6
102.5°	1394.9	1510.1	1526.6	1490.8	1428.8	1377.4	1340.7	1333.3
105°	1301.4	1502.5	1617.5	1665.1	1667.5	1658.2	1641.9	1634.9
107.5°	1168.7	1382.8	1544.8	1648.4	1705.8	1732.3	1743.9	1747.0
110°	1088.8	1289.8	1458.3	1586.1	1668.6	1717.4	1738.4	1748.8



TEST NUMBER: P332714

CATALOG NUMBER: S124DIP-S1195D1205U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1030.2	1208.0	1367.2	1495.0	1588.7	1647.7	1677.0	1694.0
115°	971.4	1114.4	1250.3	1361.9	1453.7	1523.4	1560.6	1569.9
117.5°	942.6	1060.9	1167.8	1262.4	1340.7	1399.3	1436.9	1444.1
120°	929.6	1037.7	1130.6	1213.1	1279.4	1330.5	1360.7	1373.5
122.5°	918.4	1022.8	1107.4	1179.7	1235.7	1279.4	1304.9	1317.7
125°	899.4	999.3	1079.5	1143.4	1189.9	1223.6	1245.7	1252.6
127.5°	876.1	971.7	1051.6	1112.3	1159.0	1189.0	1207.6	1214.5
130°	857.6	949.4	1028.4	1090.0	1137.6	1166.6	1185.2	1192.2
132.5°	838.0	924.3	1001.4	1063.0	1109.7	1142.5	1160.1	1167.1
135°	811.1	886.6	957.5	1015.6	1062.1	1094.6	1113.2	1120.2
137.5°	786.7	850.6	910.3	962.8	1006.3	1038.4	1053.7	1062.1
140°	772.7	827.3	879.6	928.4	969.1	994.7	1010.9	1020.2
142.5°	759.7	807.8	852.7	895.0	931.0	954.7	969.1	975.6
145°	741.4	780.9	815.7	848.3	877.3	897.1	908.7	914.5
147.5°	726.3	757.6	785.5	811.1	832.5	849.4	858.3	860.3
150°	717.0	743.7	766.9	787.8	806.4	821.5	828.5	829.7
152.5°	706.7	729.7	751.1	768.3	784.1	796.4	800.6	801.8
155°	691.4	710.0	727.4	741.4	753.0	762.3	765.8	765.8
157.5°	674.9	690.5	705.1	716.3	725.1	732.1	734.2	734.2
160°	664.7	677.4	690.2	699.5	706.5	713.5	714.6	714.6
162.5°	654.4	665.4	675.4	683.7	688.8	695.8	697.0	696.0
165°	640.3	647.2	655.4	661.2	665.8	670.5	669.3	668.2
167.5°	626.6	631.9	638.4	641.9	644.2	647.2	647.0	646.1
170°	618.2	621.7	626.3	629.8	632.1	633.3	632.1	632.1
172.5°	610.7	613.3	616.1	618.6	620.0	621.2	620.0	618.2
175°	600.8	601.9	604.2	604.2	604.2	606.6	604.2	601.9
177.5°	594.2	595.2	595.2	596.1	595.2	596.1	594.2	592.4
180°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5

(END OF REPORT)