

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: P333597-840

Luminaire Tested: **S125RDIP-S1090D810U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333597-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125RDIP-S1090D810U840-4F0-1E-UDD-F4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7203.4 lumens  
Efficiency: N/A  
Efficacy: 132.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.11 / 1.25  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse

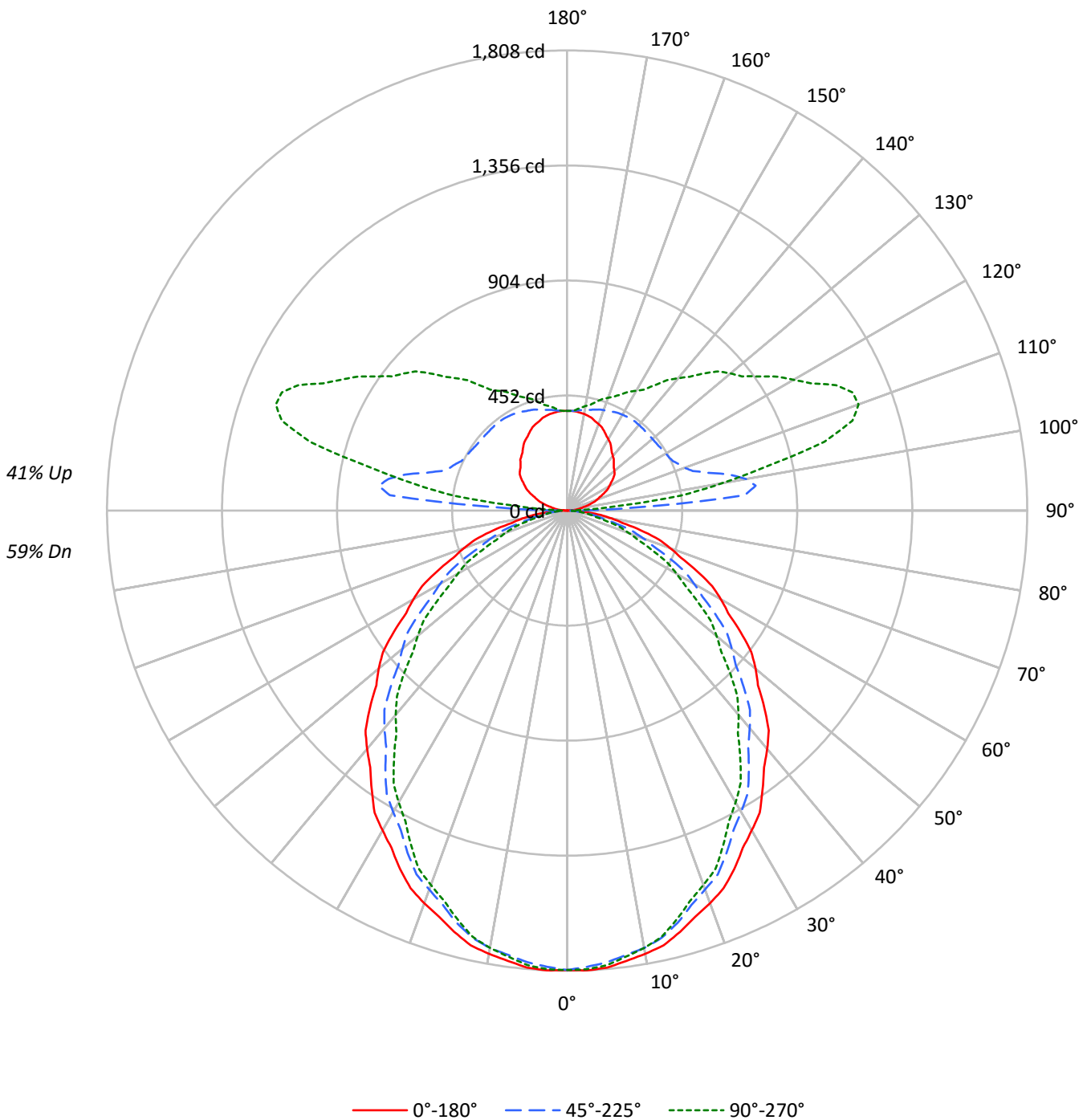
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	65	65	65	59
1	100	96	92	89	93	90	86	83	78	76	73	67	66	64	58	56	55	50
2	91	84	78	73	85	79	73	69	69	65	61	59	56	54	51	49	47	43
3	84	74	67	61	78	69	63	58	61	56	52	53	49	46	45	43	40	36
4	77	66	58	52	71	62	55	49	54	49	44	47	43	39	41	37	35	31
5	70	59	51	45	65	55	48	42	49	43	38	42	38	34	37	33	30	27
6	65	53	45	39	60	50	42	37	44	38	34	38	34	30	33	30	27	24
7	60	48	40	34	56	45	38	33	40	34	30	35	30	27	31	27	24	22
8	56	43	36	30	52	41	34	29	36	31	27	32	27	24	28	24	22	19
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	22	20	17
10	49	37	29	24	46	35	28	24	31	25	22	27	23	20	24	20	18	16

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11657	11657	11657
5°	11684	11551	11622
10°	11596	11444	11444
15°	11457	11212	11120
20°	11281	10888	10757
25°	11075	10570	10337
30°	10818	10197	9871
35°	10555	9813	9351
40°	10309	9413	8838
45°	10011	8965	8280
50°	9711	8478	7698
55°	9364	8014	7076
60°	9016	7448	6409
65°	8604	6791	5645
70°	8135	5973	4864
75°	7483	5036	4047
80°	6590	3954	3396
85°	5550	3231	3031



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.7	2.4
10°-20°	474.3	6.6
20°-30°	687.8	9.5
30°-40°	783.9	10.9
40°-50°	764.1	10.6
50°-60°	643.2	8.9
60°-70°	450.9	6.3
70°-80°	231.8	3.2
80°-90°	60.7	0.8
90°-100°	283.9	3.9
100°-110°	610.3	8.5
110°-120°	572.7	8.0
120°-130°	464.2	6.4
130°-140°	372.5	5.2
140°-150°	281.1	3.9
150°-160°	197.9	2.7
160°-170°	116.6	1.6
170°-180°	37.9	0.5
0°-30°	1331.9	18.5
0°-40°	2115.8	29.4
0°-60°	3523.1	48.9
0°-90°	4266.4	59.2
90°-120°	1466.9	20.4
90°-150°	2584.6	35.9
90°-180°	2937.0	40.8
0°-180°	7203.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1805	1805	1805	1805	1805	
5°	1802	1796	1782	1794	1793	171
15°	1714	1704	1677	1675	1663	483
25°	1554	1532	1483	1466	1451	715
35°	1339	1304	1245	1206	1186	838
45°	1096	1055	982	929	907	845
55°	832	786	712	652	628	744
65°	563	515	444	392	369	558
75°	300	258	202	173	162	317
85°	75	51	44	42	41	84
90°	1	7	13	17	18	5
95°	26	77	700	317	186	28
105°	89	125	572	1127	1046	94
115°	160	192	460	991	1166	157
125°	221	259	441	788	918	196
135°	259	311	438	660	763	201
145°	302	346	439	547	602	189
155°	344	370	428	484	504	158
165°	376	386	411	436	442	106
175°	391	391	394	399	397	37
180°	392	392	392	392	392	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0
2.5°	1808.3	1807.6	1806.9	1806.0	1805.3	1803.8	1801.4	1799.0	1796.5	1794.1	1796.5
5°	1802.3	1801.1	1799.9	1798.7	1797.5	1795.1	1791.8	1788.5	1785.1	1781.8	1784.8
7.5°	1784.5	1783.4	1782.2	1781.1	1779.9	1777.4	1773.3	1769.4	1765.3	1761.4	1763.5
10°	1768.2	1767.3	1766.4	1765.4	1764.5	1762.0	1757.8	1753.5	1749.3	1745.0	1746.0
12.5°	1749.6	1748.5	1747.4	1746.2	1745.0	1741.6	1736.0	1730.2	1724.5	1718.8	1719.5
15°	1713.6	1711.8	1710.0	1708.2	1706.4	1702.3	1696.0	1689.6	1683.2	1676.9	1676.6
17.5°	1673.0	1670.2	1667.5	1664.7	1661.8	1656.5	1648.5	1640.5	1632.4	1624.5	1623.0
20°	1641.4	1638.4	1635.4	1632.3	1629.3	1623.0	1613.3	1603.6	1593.9	1584.2	1582.7
22.5°	1606.5	1603.5	1600.4	1597.4	1594.4	1587.8	1577.6	1567.4	1557.2	1547.0	1544.1
25°	1554.2	1549.6	1545.1	1540.5	1536.0	1528.1	1516.9	1505.7	1494.5	1483.3	1479.4
27.5°	1494.2	1488.6	1483.1	1477.6	1472.1	1463.4	1451.4	1439.4	1427.3	1415.3	1409.9
30°	1450.6	1444.8	1439.1	1433.3	1427.5	1418.3	1405.5	1392.8	1380.1	1367.4	1360.4
32.5°	1408.0	1401.3	1394.5	1387.9	1381.1	1371.3	1358.3	1345.3	1332.3	1319.4	1311.7
35°	1338.8	1331.5	1324.2	1317.0	1309.7	1299.2	1285.6	1271.9	1258.3	1244.7	1235.9
37.5°	1270.8	1262.0	1253.1	1244.4	1235.5	1224.1	1209.9	1195.9	1181.8	1167.8	1157.2
40°	1222.8	1213.8	1204.7	1195.6	1186.5	1174.7	1160.1	1145.6	1131.0	1116.5	1105.0
42.5°	1172.7	1163.4	1154.1	1144.7	1135.4	1123.2	1108.1	1093.2	1078.1	1063.1	1052.1
45°	1096.1	1087.3	1078.5	1069.8	1061.0	1048.2	1031.6	1014.9	998.3	981.6	969.5
47.5°	1016.7	1007.4	998.2	989.0	979.7	966.6	949.9	933.0	916.3	899.5	887.0
50°	966.5	956.5	946.5	936.5	926.6	912.9	895.6	878.4	861.1	843.8	831.1
52.5°	912.0	901.8	891.5	881.3	871.1	857.8	841.5	825.2	808.9	792.6	778.9
55°	831.6	821.9	812.2	802.5	792.8	779.5	762.5	745.6	728.6	711.7	698.0
57.5°	750.3	740.0	729.6	719.2	708.9	695.6	679.2	662.9	646.5	630.2	616.8
60°	698.0	687.4	676.8	666.2	655.6	642.1	625.7	609.4	593.0	576.6	563.3
62.5°	642.4	632.3	622.2	612.0	601.9	588.5	572.0	555.3	538.8	522.1	509.8
65°	563.0	552.7	542.4	532.1	521.8	508.7	492.6	476.6	460.5	444.4	432.3
67.5°	484.2	473.9	463.6	453.3	443.0	430.2	414.8	399.4	384.1	368.6	357.6
70°	430.8	420.5	410.2	399.9	389.6	376.9	361.7	346.6	331.4	316.3	306.9
72.5°	378.5	368.4	358.3	348.3	338.2	326.1	311.9	297.7	283.6	269.4	260.7
75°	299.9	290.8	281.8	272.7	263.6	252.7	239.9	227.2	214.5	201.8	195.1
77.5°	222.0	214.7	207.4	200.2	192.9	184.1	174.0	163.8	153.6	143.4	138.8
80°	177.2	170.0	162.7	155.4	148.1	140.3	131.8	123.3	114.8	106.3	103.6
82.5°	133.6	127.0	120.5	114.0	107.4	101.3	95.4	89.6	83.8	78.0	76.7
85°	74.9	69.5	64.0	58.6	53.1	49.7	48.2	46.7	45.1	43.6	43.3
87.5°	25.2	23.7	22.3	20.9	19.6	18.9	18.8	18.9	18.8	18.9	19.1
90°	0.8	1.6	3.1	4.7	6.4	7.9	8.7	10.3	11.0	12.6	13.4
92.5°	9.6	11.7	18.3	28.1	41.7	64.7	107.9	180.2	258.6	254.6	206.1
95°	26.1	26.9	33.1	41.8	59.2	94.7	179.3	352.9	570.9	699.6	684.6
97.5°	43.2	44.2	48.7	57.4	72.9	98.6	154.4	281.8	509.8	747.1	866.2
100°	55.2	56.9	60.0	68.7	83.7	107.3	153.2	255.8	454.8	713.1	910.4
102.5°	68.6	69.5	72.0	81.3	95.0	118.2	158.9	245.1	413.1	653.0	883.9
105°	89.3	89.3	93.2	101.1	113.7	135.8	170.6	240.9	372.7	572.5	799.1
107.5°	109.5	111.0	114.8	121.3	134.4	154.3	187.9	248.1	355.7	517.1	712.6
110°	124.0	125.5	128.7	135.8	147.6	168.1	200.6	255.1	350.6	491.1	663.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.5	140.1	142.6	149.7	161.6	181.5	212.6	263.9	350.6	475.9	626.6
115°	159.5	161.1	163.5	170.6	182.4	202.2	231.4	277.1	352.9	459.6	586.6
117.5°	178.4	180.9	183.4	190.5	203.9	223.0	250.6	292.4	358.2	451.5	562.8
120°	191.1	193.5	196.6	203.7	217.1	236.9	264.5	302.5	363.2	447.7	549.6
122.5°	204.4	206.1	208.6	215.7	230.5	250.1	277.8	313.8	367.6	444.5	538.2
125°	221.1	222.7	226.6	233.7	248.7	269.2	295.3	329.2	375.1	440.6	522.7
127.5°	234.2	236.6	241.7	250.6	266.6	287.1	312.3	343.5	383.4	438.7	508.5
130°	242.4	244.8	251.1	261.4	277.9	298.5	323.0	352.9	388.5	437.5	499.1
132.5°	248.7	251.8	259.3	270.8	288.0	308.6	333.1	361.1	394.2	437.5	491.5
135°	259.0	262.2	271.7	284.3	300.8	322.1	346.7	372.7	401.9	437.5	482.4
137.5°	272.0	274.3	283.2	295.8	312.0	334.0	356.3	381.2	409.0	438.4	474.4
140°	279.5	281.9	291.3	304.0	319.0	340.3	363.2	386.9	412.1	439.0	470.6
142.5°	288.3	290.1	298.9	311.5	326.0	346.0	367.6	390.1	414.0	439.7	467.5
145°	301.6	303.2	311.1	322.1	336.4	354.6	375.1	394.8	416.2	439.0	462.7
147.5°	315.5	316.5	323.3	333.6	345.9	361.8	379.8	397.7	416.9	437.0	457.8
150°	323.8	325.3	330.8	341.1	352.1	365.6	382.9	399.5	416.9	435.0	454.0
152.5°	332.5	333.6	338.4	347.4	357.9	370.0	386.1	400.8	416.3	432.5	449.6
155°	344.3	344.3	349.0	356.9	364.8	375.9	389.3	401.9	414.5	428.0	442.2
157.5°	354.7	354.6	358.3	365.1	372.0	380.4	391.9	402.7	412.5	423.2	435.3
160°	361.6	360.8	364.1	369.5	375.9	382.9	393.2	402.7	410.6	420.1	429.6
162.5°	367.3	366.6	369.7	374.6	379.6	385.5	394.5	402.0	408.7	416.3	424.4
165°	375.9	374.3	376.7	380.6	383.7	388.5	394.8	401.1	405.9	410.6	416.9
167.5°	381.5	380.7	382.1	384.4	386.6	389.6	394.8	399.2	401.4	405.1	409.5
170°	385.4	384.6	385.4	386.9	388.5	390.8	394.8	398.0	399.5	401.9	405.1
172.5°	387.9	386.5	387.2	388.8	389.7	390.8	394.2	396.7	397.0	398.1	400.6
175°	390.8	389.3	390.1	390.8	390.8	390.8	393.2	394.8	394.0	394.0	394.8
177.5°	392.2	391.0	391.0	391.6	391.0	391.0	392.2	392.9	391.6	391.6	392.2
180°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0	1805.0
2.5°	1799.0	1801.4	1803.8	1804.8	1804.6	1804.4	1804.1	1803.9
5°	1787.9	1790.9	1793.9	1795.1	1794.5	1793.9	1793.3	1792.7
7.5°	1765.6	1767.8	1769.9	1770.6	1769.9	1769.3	1768.6	1767.9
10°	1746.9	1747.8	1748.7	1748.7	1747.8	1746.9	1746.0	1745.0
12.5°	1720.2	1720.8	1721.5	1721.1	1719.7	1718.4	1717.0	1715.6
15°	1676.3	1676.0	1675.7	1674.2	1671.4	1668.7	1666.0	1663.2
17.5°	1621.4	1619.9	1618.4	1616.6	1614.3	1612.0	1609.8	1607.6
20°	1581.1	1579.6	1578.1	1576.0	1573.3	1570.5	1567.8	1565.1
22.5°	1541.2	1538.1	1535.2	1532.6	1530.3	1528.1	1525.8	1523.6
25°	1475.4	1471.5	1467.5	1463.9	1460.6	1457.2	1453.9	1450.6
27.5°	1404.3	1398.9	1393.3	1389.0	1385.7	1382.5	1379.3	1376.1
30°	1353.4	1346.5	1339.5	1334.6	1331.9	1329.2	1326.5	1323.7
32.5°	1304.0	1296.3	1288.6	1283.0	1279.6	1276.2	1272.6	1269.2
35°	1227.1	1218.3	1209.5	1203.1	1198.8	1194.6	1190.3	1186.1
37.5°	1146.7	1136.2	1125.6	1118.3	1114.2	1110.0	1105.9	1101.8
40°	1093.5	1082.0	1070.5	1062.9	1059.2	1055.6	1052.0	1048.3
42.5°	1041.1	1030.0	1019.0	1010.8	1005.4	1000.2	994.8	989.5
45°	957.4	945.2	933.1	924.7	920.2	915.6	911.1	906.6
47.5°	874.5	862.0	849.6	840.8	835.8	830.7	825.8	820.7
50°	818.4	805.7	792.9	784.4	779.8	775.3	770.7	766.2
52.5°	765.3	751.5	737.8	728.7	724.2	719.6	715.1	710.5
55°	684.4	670.8	657.1	647.8	643.0	638.1	633.3	628.4
57.5°	603.5	590.2	576.8	567.9	563.7	559.4	555.0	550.8
60°	550.0	536.6	523.3	514.4	509.9	505.3	500.8	496.2
62.5°	497.5	485.0	472.7	464.2	459.7	455.1	450.6	446.1
65°	420.2	408.1	396.0	387.6	383.0	378.5	374.0	369.4
67.5°	346.5	335.4	324.3	316.9	313.3	309.6	306.0	302.4
70°	297.5	288.1	278.7	272.2	268.5	264.9	261.3	257.6
72.5°	252.1	243.4	234.7	229.1	226.7	224.3	221.9	219.4
75°	188.4	181.8	175.1	170.7	168.5	166.4	164.3	162.2
77.5°	134.1	129.5	124.7	121.6	120.1	118.5	116.9	115.3
80°	100.9	98.2	95.4	93.7	93.1	92.5	91.9	91.3
82.5°	75.4	74.1	72.9	72.1	71.7	71.3	71.0	70.6
85°	43.0	42.7	42.4	42.1	41.8	41.5	41.2	40.9
87.5°	19.2	19.4	19.5	19.7	19.5	19.2	19.2	18.9
90°	14.2	15.0	15.8	17.4	17.4	17.4	18.2	18.2
92.5°	140.0	101.6	76.4	64.7	54.6	52.7	51.6	50.4
95°	567.7	447.7	350.6	284.3	228.2	204.5	198.2	185.5
97.5°	845.6	761.3	666.7	574.5	525.7	481.5	458.6	448.5
100°	971.2	932.5	851.2	769.1	714.6	657.7	628.5	615.9
102.5°	1013.5	1037.4	998.4	942.8	884.5	844.0	812.3	802.8
105°	988.6	1096.8	1131.6	1122.9	1097.5	1071.5	1055.7	1046.2
107.5°	899.5	1043.9	1133.1	1174.3	1187.1	1186.9	1181.7	1175.4
110°	833.8	983.8	1095.2	1162.3	1197.8	1212.8	1218.4	1218.4





TEST NUMBER: P333597-840

CATALOG NUMBER: S125RDIP-S1090D810U840-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	782.0	924.4	1037.0	1116.2	1168.1	1193.9	1207.6	1213.4
115°	717.0	839.4	947.6	1033.6	1095.2	1133.1	1155.2	1165.5
117.5°	675.0	780.4	873.6	952.6	1014.2	1053.3	1075.3	1081.6
120°	652.2	747.0	833.8	903.3	961.7	999.7	1021.0	1027.2
122.5°	635.2	723.0	800.3	865.5	917.6	952.3	973.6	979.3
125°	610.4	690.9	759.6	816.5	860.7	893.0	910.4	918.3
127.5°	585.1	660.2	724.4	777.6	817.7	846.3	862.7	866.2
130°	569.3	638.8	700.3	751.7	791.2	817.3	833.0	837.8
132.5°	553.5	618.5	674.5	723.9	763.4	789.4	804.0	809.3
135°	533.0	587.4	638.0	683.0	717.7	743.8	758.0	762.8
137.5°	515.6	559.7	601.7	639.9	671.1	694.7	707.8	713.1
140°	506.1	543.2	579.6	612.7	642.0	662.5	674.3	678.2
142.5°	498.0	529.4	560.6	589.4	614.2	631.6	642.8	646.0
145°	487.2	511.7	536.1	557.4	576.4	589.9	598.5	601.7
147.5°	477.1	497.0	515.7	531.9	546.8	557.6	562.7	564.1
150°	471.4	488.8	503.7	518.0	529.9	539.3	542.5	543.2
152.5°	465.0	480.6	494.3	505.3	515.3	522.9	526.0	526.8
155°	455.7	468.3	479.3	488.0	495.8	501.4	503.7	504.5
157.5°	446.2	456.6	465.0	471.9	478.1	482.6	484.8	484.6
160°	439.8	447.7	455.7	461.1	466.7	470.6	472.2	471.4
162.5°	432.8	440.1	446.8	451.6	456.0	459.2	459.6	459.4
165°	423.2	428.8	433.5	437.5	440.6	442.2	442.2	442.2
167.5°	414.0	417.7	421.3	424.1	425.8	427.2	426.6	426.4
170°	409.0	411.4	413.7	415.4	416.9	417.7	417.7	416.9
172.5°	403.3	405.7	407.5	408.4	408.7	410.1	408.9	408.1
175°	397.2	397.2	398.8	398.8	398.8	399.5	398.0	397.2
177.5°	392.9	393.5	393.5	393.5	392.9	393.5	391.6	391.6
180°	391.6	391.6	391.6	391.6	391.6	391.6	391.6	391.6

(END OF REPORT)