

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: P333457-840

Luminaire Tested: **S125DIW-S1090D1560U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333457-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIW-S1090D1560U840-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 1090 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

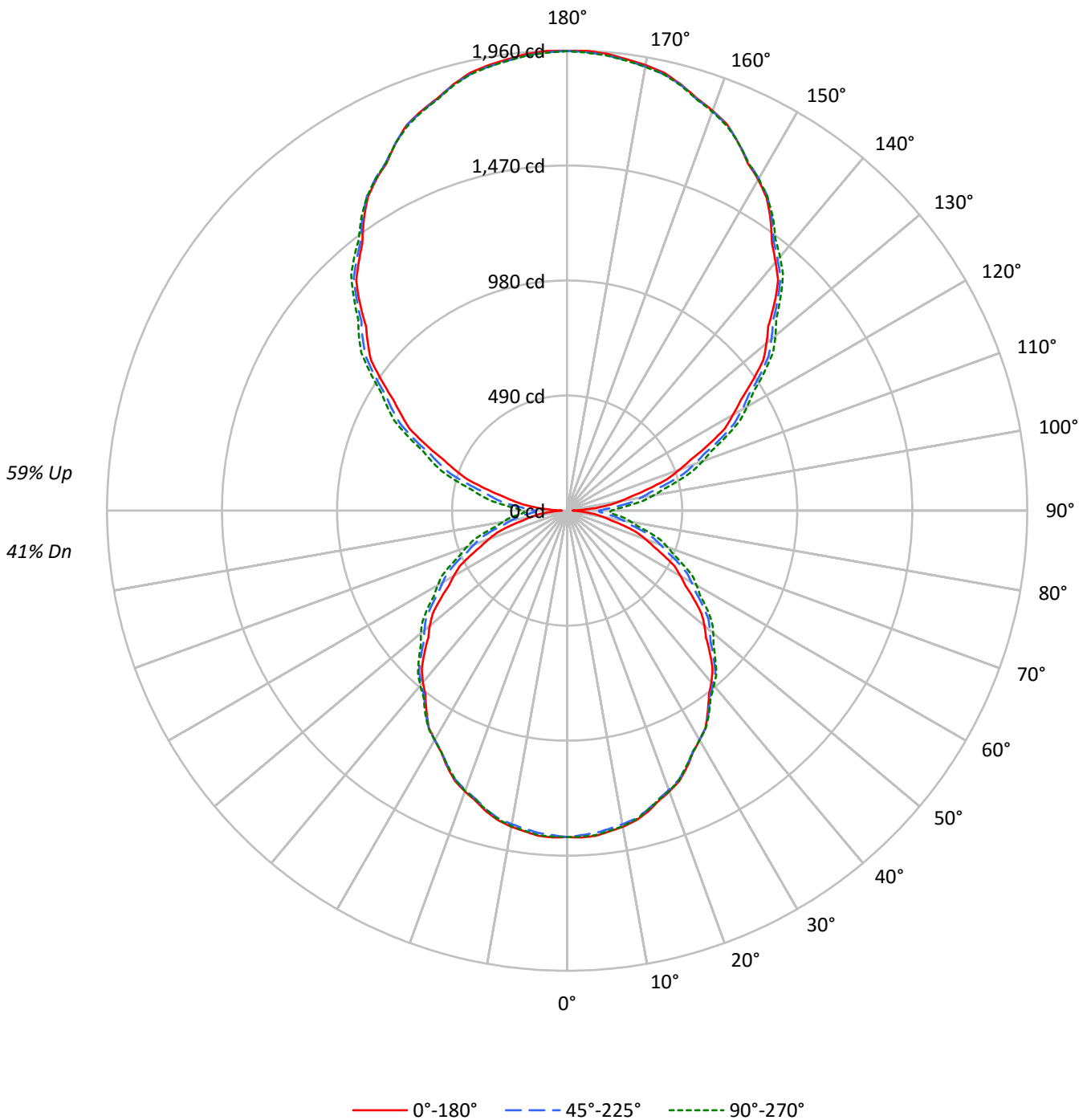
Lumens per Lamp: N/A  
Luminaire Lumens: 9772.4 lumens  
Efficiency: N/A  
Efficacy: 127.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 76.6  
Input Voltage (V): 120  
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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	41
1	95	91	87	83	87	83	79	76	68	65	63	54	53	51	42	41	39	34
2	86	79	73	67	78	72	67	62	59	55	52	47	44	42	36	34	33	28
3	79	69	62	56	71	63	57	51	52	47	43	42	38	35	32	30	28	23
4	72	61	53	47	65	56	49	43	46	41	37	37	33	30	28	26	24	20
5	66	54	46	40	60	50	42	37	41	36	31	33	29	26	26	23	20	17
6	61	48	40	34	55	44	37	32	37	31	27	30	26	23	23	20	18	15
7	56	44	36	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	40	32	26	47	36	29	25	30	25	21	25	21	18	19	16	14	12
9	48	36	29	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	26	21	41	30	24	20	25	20	17	21	17	14	17	14	12	10

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

	0°	45°	90°
0°	8981	8981	8981
5°	8999	8815	8843
10°	8935	8658	8644
15°	8829	8469	8392
20°	8685	8236	8140
25°	8515	7987	7828
30°	8308	7712	7547
35°	8115	7461	7288
40°	7918	7195	7027
45°	7696	6968	6796
50°	7485	6722	6592
55°	7230	6489	6352
60°	6950	6223	6107
65°	6660	5946	5832
70°	6332	5566	5549
75°	5809	5201	5201
80°	5122	4760	4822
85°	4483	4460	4702



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.5	1.3
10°-20°	373.3	3.8
20°-30°	555.1	5.7
30°-40°	657.5	6.7
40°-50°	679.8	7.0
50°-60°	626.3	6.4
60°-70°	506.2	5.2
70°-80°	339.0	3.5
80°-90°	180.1	1.8
90°-100°	229.7	2.4
100°-110°	459.8	4.7
110°-120°	704.4	7.2
120°-130°	890.5	9.1
130°-140°	978.9	10.0
140°-150°	950.0	9.7
150°-160°	795.9	8.1
160°-170°	529.1	5.4
170°-180°	185.2	1.9
0°-30°	1059.9	10.8
0°-40°	1717.4	17.6
0°-60°	3023.5	30.9
0°-90°	4048.8	41.4
90°-120°	1394.0	14.3
90°-150°	4213.4	43.1
90°-180°	5724.0	58.6
0°-180°	9772.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1391	1391	1391	1391	1391	
5°	1391	1387	1378	1389	1388	132
15°	1328	1329	1320	1327	1322	374
25°	1206	1210	1202	1207	1201	555
35°	1044	1053	1050	1054	1054	653
45°	860	875	882	891	893	664
55°	661	683	705	719	725	591
65°	455	487	519	539	545	452
75°	251	287	330	356	364	266
85°	75	120	168	197	208	80
90°	23	79	136	174	189	20
95°	117	157	217	256	270	120
105°	360	390	439	474	490	384
115°	665	682	719	741	748	657
125°	963	972	1000	1018	1024	862
135°	1249	1257	1267	1284	1286	962
145°	1511	1515	1520	1526	1528	944
155°	1727	1727	1729	1734	1727	795
165°	1878	1875	1876	1882	1873	530
175°	1953	1947	1946	1954	1945	185
180°	1957	1957	1957	1957	1957	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6
2.5°	1393.8	1393.3	1392.8	1392.4	1391.9	1390.8	1389.1	1387.4	1385.7	1384.0	1385.7
5°	1390.6	1390.0	1389.4	1388.8	1388.2	1386.7	1384.6	1382.5	1380.4	1378.3	1380.7
7.5°	1378.3	1378.1	1377.8	1377.6	1377.4	1376.1	1373.9	1371.7	1369.6	1367.4	1369.5
10°	1367.4	1367.4	1367.4	1367.4	1367.4	1366.1	1363.7	1361.3	1358.9	1356.5	1358.6
12.5°	1352.1	1352.3	1352.6	1352.8	1353.1	1352.2	1350.3	1348.4	1346.5	1344.4	1346.2
15°	1327.9	1328.2	1328.5	1328.8	1329.1	1328.2	1326.1	1323.9	1321.8	1319.7	1321.5
17.5°	1296.2	1296.8	1297.4	1298.0	1298.6	1297.9	1295.8	1293.6	1291.5	1289.4	1290.8
20°	1273.3	1273.9	1274.6	1275.2	1275.8	1275.0	1272.8	1270.7	1268.6	1266.5	1267.4
22.5°	1247.1	1248.2	1249.3	1250.4	1251.5	1250.8	1248.5	1246.2	1243.7	1241.4	1242.5
25°	1206.5	1207.4	1208.3	1209.2	1210.1	1209.7	1207.9	1206.1	1204.3	1202.4	1203.7
27.5°	1161.2	1162.6	1163.9	1165.3	1166.6	1166.2	1164.2	1162.1	1160.0	1158.0	1158.8
30°	1127.4	1129.2	1131.0	1132.9	1134.7	1134.7	1132.9	1131.0	1129.2	1127.4	1128.0
32.5°	1096.9	1098.4	1100.0	1101.7	1103.2	1103.3	1102.0	1100.7	1099.3	1098.0	1098.6
35°	1044.3	1046.4	1048.5	1050.7	1052.8	1053.4	1052.5	1051.6	1050.7	1049.8	1050.7
37.5°	991.7	993.6	995.5	997.4	999.4	1000.3	1000.0	999.7	999.4	999.1	1000.3
40°	955.6	958.1	960.5	962.9	965.3	966.4	966.1	965.8	965.5	965.2	966.4
42.5°	916.4	919.6	922.7	925.8	929.0	930.9	931.6	932.2	932.9	933.6	935.0
45°	860.2	863.5	866.9	870.2	873.5	876.0	877.5	879.0	880.5	882.0	884.1
47.5°	802.7	805.8	808.9	811.9	815.1	817.9	820.5	823.1	825.8	828.3	831.4
50°	763.5	766.8	770.1	773.5	776.8	780.1	783.5	786.8	790.1	793.5	796.8
52.5°	722.0	726.1	730.1	734.2	738.2	742.3	746.4	750.4	754.5	758.5	762.1
55°	661.2	666.0	670.9	675.7	680.5	685.4	690.2	695.1	699.9	704.8	708.1
57.5°	599.1	604.8	610.7	616.5	622.3	628.0	633.6	639.1	644.7	650.3	654.1
60°	557.5	563.6	569.7	575.7	581.8	587.8	593.9	600.0	606.0	612.1	616.6
62.5°	517.3	523.3	529.4	535.4	541.5	547.8	554.3	560.9	567.4	573.9	579.0
65°	455.3	462.3	469.3	476.3	483.2	490.3	497.6	504.8	512.1	519.4	523.9
67.5°	397.0	403.7	410.4	417.2	423.8	430.9	438.4	445.8	453.1	460.5	466.1
70°	354.5	361.4	368.4	375.4	382.3	389.7	397.6	405.5	413.3	421.2	427.0
72.5°	313.1	320.2	327.4	334.7	341.8	349.7	358.4	367.0	375.6	384.2	390.4
75°	250.9	258.7	266.6	274.5	282.4	291.1	300.8	310.5	320.2	329.9	336.0
77.5°	191.2	200.3	209.3	218.4	227.5	236.7	246.0	255.4	264.7	274.0	280.6
80°	154.0	163.1	172.2	181.3	190.4	200.1	210.4	220.7	231.0	241.3	247.9
82.5°	120.3	129.8	139.4	149.0	158.5	168.5	179.2	189.7	200.3	210.8	217.2
85°	74.9	84.9	94.9	104.9	114.9	125.2	135.8	146.4	157.0	167.6	174.3
87.5°	42.8	53.1	63.3	73.5	83.8	94.3	105.0	115.8	126.6	137.3	144.7
90°	23.3	35.7	48.2	60.6	72.9	85.4	98.2	110.8	123.5	136.1	144.8
92.5°	56.5	67.4	78.3	89.1	100.0	112.1	125.5	139.0	152.5	165.9	174.9
95°	116.7	125.3	133.8	142.4	151.0	162.1	175.7	189.5	203.1	216.8	225.8
97.5°	180.6	187.9	195.3	202.7	210.1	221.0	235.6	250.2	264.8	279.4	288.0
100°	228.2	234.6	241.0	247.3	253.7	263.9	278.0	292.1	306.2	320.2	329.7
102.5°	279.5	286.8	294.0	301.2	308.4	317.9	329.6	341.2	352.9	364.7	374.1
105°	359.5	366.1	372.6	379.1	385.7	394.6	405.7	416.8	427.9	439.0	447.1
107.5°	448.1	453.8	459.7	465.4	471.3	479.4	489.6	499.9	510.2	520.5	527.5
110°	509.1	514.4	519.8	525.1	530.4	537.9	547.3	556.8	566.3	575.8	582.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	572.5	576.2	580.1	583.8	587.6	594.3	603.8	613.3	622.9	632.4	638.3
115°	664.6	668.1	671.6	675.0	678.5	684.5	693.1	701.7	710.1	718.7	723.9
117.5°	757.1	759.1	761.0	763.1	765.1	770.1	778.2	786.3	794.3	802.3	807.8
120°	815.6	818.2	820.7	823.3	826.0	830.9	838.2	845.6	852.8	860.1	865.3
122.5°	877.8	878.9	879.9	880.9	881.9	886.3	893.8	901.5	909.1	916.7	921.3
125°	963.4	965.1	966.9	968.7	970.4	974.4	980.8	987.2	993.6	1000.0	1004.2
127.5°	1053.5	1054.3	1055.2	1056.0	1056.8	1060.0	1065.3	1070.8	1076.1	1081.5	1085.6
130°	1108.3	1109.6	1111.1	1112.5	1113.9	1117.0	1122.0	1126.8	1131.8	1136.7	1140.5
132.5°	1162.1	1164.8	1167.5	1170.1	1172.9	1175.8	1178.9	1182.0	1185.2	1188.4	1192.2
135°	1248.6	1250.3	1252.0	1253.7	1255.5	1257.6	1260.0	1262.5	1265.0	1267.4	1271.3
137.5°	1329.9	1331.6	1333.4	1335.1	1336.9	1338.6	1340.3	1342.1	1343.9	1345.6	1349.7
140°	1381.2	1382.9	1384.6	1386.3	1388.0	1389.5	1390.8	1392.2	1393.5	1394.8	1398.8
142.5°	1433.6	1434.8	1436.0	1437.1	1438.4	1439.6	1441.0	1442.3	1443.6	1445.0	1448.2
145°	1510.7	1511.8	1512.8	1513.9	1514.9	1515.9	1516.9	1517.9	1518.9	1519.9	1521.5
147.5°	1580.6	1581.3	1582.1	1582.9	1583.6	1584.4	1585.2	1586.0	1586.8	1587.6	1588.9
150°	1628.1	1627.8	1627.5	1627.1	1626.8	1627.3	1628.6	1630.0	1631.3	1632.7	1632.7
152.5°	1667.1	1667.6	1668.1	1668.5	1669.0	1669.5	1670.1	1670.6	1671.1	1671.7	1672.5
155°	1727.2	1727.2	1727.2	1727.2	1727.2	1727.3	1727.7	1728.0	1728.3	1728.7	1730.0
157.5°	1780.7	1780.0	1779.3	1778.5	1777.8	1777.6	1777.9	1778.3	1778.6	1778.9	1780.3
160°	1812.4	1811.4	1810.4	1809.4	1808.4	1808.1	1808.4	1808.7	1809.1	1809.4	1810.7
162.5°	1840.5	1839.7	1839.0	1838.3	1837.4	1837.1	1837.1	1837.2	1837.3	1837.3	1839.1
165°	1877.9	1877.2	1876.5	1875.9	1875.2	1875.0	1875.4	1875.7	1876.0	1876.4	1877.7
167.5°	1909.6	1908.2	1906.9	1905.5	1904.2	1903.5	1903.5	1903.5	1903.5	1903.5	1905.5
170°	1926.6	1925.3	1923.9	1922.6	1921.3	1920.6	1920.6	1920.6	1920.6	1920.6	1922.6
172.5°	1938.8	1937.5	1936.1	1934.8	1933.4	1932.8	1932.8	1932.8	1932.8	1932.8	1934.8
175°	1952.6	1951.2	1949.8	1948.4	1947.1	1946.4	1946.4	1946.4	1946.4	1946.4	1948.4
177.5°	1959.5	1958.4	1957.4	1956.3	1955.2	1954.5	1954.3	1954.0	1953.7	1953.5	1955.1
180°	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6	1390.6
2.5°	1387.4	1389.1	1390.8	1391.5	1391.3	1391.0	1390.8	1390.6
5°	1383.1	1385.5	1388.0	1389.1	1388.8	1388.5	1388.2	1387.9
7.5°	1371.6	1373.7	1375.8	1376.7	1376.4	1376.1	1375.8	1375.5
10°	1360.7	1362.8	1364.9	1365.8	1365.5	1365.2	1364.9	1364.6
12.5°	1347.8	1349.4	1351.0	1351.4	1350.7	1349.9	1349.1	1348.3
15°	1323.3	1325.1	1327.0	1327.3	1326.1	1324.8	1323.6	1322.4
17.5°	1292.2	1293.5	1294.9	1295.3	1294.5	1293.8	1293.1	1292.4
20°	1268.3	1269.2	1270.1	1270.6	1270.6	1270.6	1270.6	1270.6
22.5°	1243.7	1244.9	1246.0	1246.2	1245.5	1244.8	1244.1	1243.3
25°	1204.9	1206.1	1207.3	1207.1	1205.6	1204.1	1202.5	1201.0
27.5°	1159.6	1160.5	1161.3	1161.5	1160.9	1160.4	1159.8	1159.3
30°	1128.6	1129.2	1129.8	1130.0	1129.7	1129.4	1129.1	1128.8
32.5°	1099.2	1099.8	1100.4	1100.6	1100.2	1099.9	1099.6	1099.3
35°	1051.6	1052.5	1053.4	1053.8	1053.8	1053.8	1053.8	1053.8
37.5°	1001.5	1002.7	1003.9	1004.4	1004.3	1004.2	1004.0	1003.9
40°	967.7	968.9	970.1	971.0	971.6	972.2	972.8	973.4
42.5°	936.4	938.0	939.4	940.2	940.3	940.4	940.6	940.7
45°	886.3	888.4	890.5	891.7	892.0	892.3	892.6	892.9
47.5°	834.6	837.6	840.7	842.5	843.2	843.9	844.6	845.3
50°	800.1	803.4	806.8	808.9	809.8	810.7	811.6	812.5
52.5°	765.7	769.2	772.8	775.0	775.6	776.3	777.0	777.6
55°	711.4	714.8	718.1	720.4	721.6	722.9	724.1	725.3
57.5°	657.9	661.8	665.6	667.9	668.8	669.7	670.7	671.6
60°	621.2	625.7	630.3	633.0	633.9	634.8	635.7	636.6
62.5°	584.0	589.1	594.1	597.1	598.3	599.5	600.6	601.8
65°	528.5	533.0	537.6	540.5	541.7	542.9	544.1	545.3
67.5°	471.5	477.1	482.6	486.1	487.7	489.3	490.8	492.4
70°	432.7	438.5	444.2	448.1	449.9	451.7	453.5	455.3
72.5°	396.7	402.9	409.1	412.9	414.2	415.6	416.9	418.3
75°	342.0	348.1	354.2	357.9	359.4	360.9	362.4	364.0
77.5°	287.3	294.0	300.6	304.6	305.8	307.0	308.2	309.4
80°	254.6	261.3	267.9	271.9	273.1	274.3	275.5	276.7
82.5°	223.6	230.0	236.4	240.8	243.0	245.1	247.3	249.4
85°	181.0	187.6	194.3	198.8	201.3	203.7	206.1	208.5
87.5°	152.0	159.3	166.6	171.5	173.8	176.1	178.4	180.8
90°	153.5	162.2	170.8	176.7	179.9	183.0	186.1	189.2
92.5°	183.8	192.8	201.8	207.6	210.6	213.4	216.2	219.1
95°	234.9	243.9	253.0	258.8	261.7	264.5	267.2	270.0
97.5°	296.6	305.2	313.8	319.3	321.8	324.3	326.7	329.2
100°	339.1	348.5	357.9	363.9	366.4	368.8	371.3	373.9
102.5°	383.5	392.9	402.4	408.5	411.2	414.0	416.8	419.6
105°	455.1	463.2	471.3	477.0	480.1	483.2	486.4	489.5
107.5°	534.5	541.5	548.6	552.9	554.7	556.5	558.4	560.2
110°	589.4	596.1	602.9	607.1	608.9	610.8	612.5	614.3





TEST NUMBER: P333457-840

CATALOG NUMBER: S125DIW-S1090D1560U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	644.4	650.4	656.3	660.0	661.6	663.1	664.6	666.1
115°	728.9	734.1	739.2	742.5	744.0	745.5	746.9	748.4
117.5°	813.2	818.6	824.0	827.1	827.8	828.5	829.2	829.9
120°	870.4	875.6	880.7	883.5	884.0	884.4	884.9	885.3
122.5°	925.9	930.6	935.2	938.0	938.7	939.4	940.1	940.9
125°	1008.4	1012.5	1016.7	1019.4	1020.6	1021.7	1022.9	1024.1
127.5°	1089.7	1093.9	1098.0	1100.7	1101.8	1102.8	1103.9	1105.0
130°	1144.5	1148.4	1152.3	1154.7	1155.5	1156.3	1157.2	1158.0
132.5°	1196.2	1200.0	1204.0	1206.1	1206.4	1206.8	1207.1	1207.4
135°	1275.3	1279.2	1283.1	1285.3	1285.4	1285.6	1285.7	1285.9
137.5°	1353.6	1357.6	1361.6	1363.3	1362.8	1362.4	1361.9	1361.4
140°	1402.8	1406.8	1410.8	1412.6	1412.1	1411.6	1411.2	1410.7
142.5°	1451.5	1454.7	1458.0	1459.4	1459.0	1458.4	1457.9	1457.4
145°	1523.0	1524.5	1526.0	1526.9	1527.1	1527.3	1527.5	1527.7
147.5°	1590.2	1591.5	1592.8	1592.6	1590.8	1589.0	1587.3	1585.6
150°	1632.7	1632.7	1632.7	1632.5	1632.1	1631.7	1631.4	1631.0
152.5°	1673.3	1674.2	1675.0	1674.8	1673.6	1672.4	1671.3	1670.1
155°	1731.3	1732.7	1734.0	1733.9	1732.2	1730.5	1728.8	1727.2
157.5°	1781.6	1783.0	1784.3	1783.9	1781.6	1779.4	1777.2	1774.9
160°	1812.1	1813.4	1814.8	1814.6	1812.9	1811.2	1809.6	1807.9
162.5°	1840.7	1842.3	1843.9	1843.7	1841.8	1839.8	1837.9	1835.8
165°	1879.1	1880.5	1881.8	1881.5	1879.5	1877.4	1875.4	1873.3
167.5°	1907.5	1909.6	1911.6	1911.6	1909.5	1907.4	1905.3	1903.2
170°	1924.6	1926.6	1928.6	1928.5	1926.1	1923.8	1921.4	1919.0
172.5°	1936.8	1938.8	1940.9	1940.9	1938.7	1936.6	1934.5	1932.5
175°	1950.6	1952.6	1954.6	1954.4	1952.1	1949.6	1947.3	1944.9
177.5°	1956.7	1958.3	1959.9	1959.8	1957.9	1956.0	1954.1	1952.3
180°	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1	1957.1

(END OF REPORT)