

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: P333429-840

Luminaire Tested: **S125DIW-S850D1560U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333429-840
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-S850D1560U840-4F0-1E-UDD-F1
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH 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: 8915.2 lumens
Efficiency: N/A
Efficacy: 130.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: Semi-Indirect

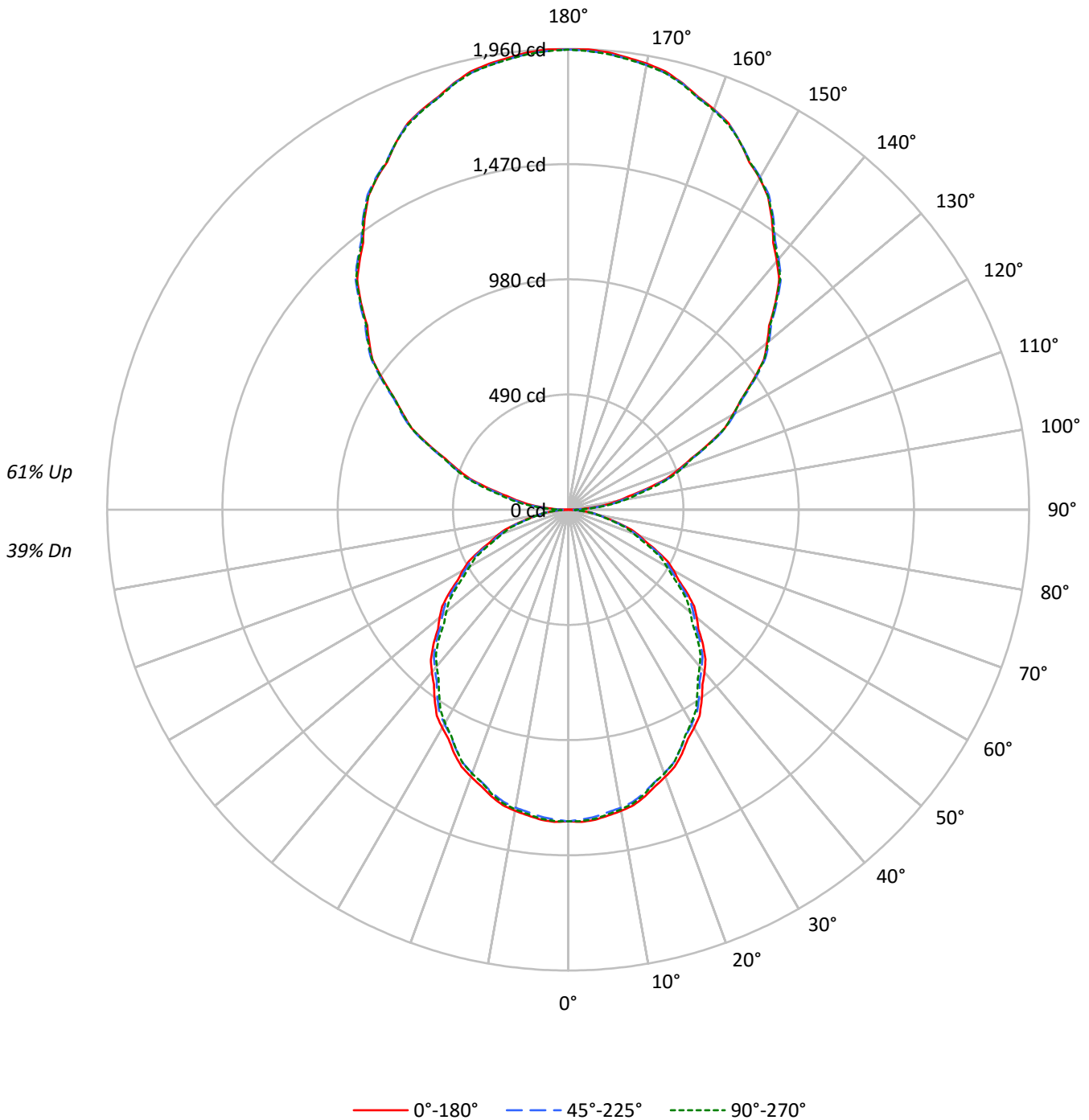
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	84	86	83	79	77	67	65	63	53	52	50	40	39	39	33
2	87	79	73	68	78	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	62	57	71	64	57	52	52	47	44	41	38	36	31	29	28	23
4	72	62	54	48	65	56	50	44	46	41	37	37	33	30	28	26	24	20
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21	17
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	56	44	36	31	51	41	34	29	34	28	24	27	23	20	21	18	16	13
8	52	40	32	27	47	37	30	25	31	25	22	25	21	18	19	16	14	12
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11
10	45	33	26	22	41	31	24	20	26	21	17	21	17	15	16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8561	8561	8561
5°	8581	8499	8554
10°	8529	8439	8487
15°	8436	8338	8372
20°	8304	8195	8210
25°	8161	8027	8020
30°	7986	7845	7806
35°	7798	7649	7541
40°	7605	7436	7331
45°	7395	7242	7099
50°	7166	7007	6797
55°	6944	6742	6554
60°	6679	6475	6245
65°	6363	6154	5946
70°	6060	5784	5586
75°	5522	5340	5155
80°	4917	4839	4720
85°	4276	4357	4113



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	1.4
10°-20°	353.1	4.0
20°-30°	521.3	5.8
30°-40°	608.3	6.8
40°-50°	611.0	6.9
50°-60°	536.3	6.0
60°-70°	399.6	4.5
70°-80°	228.5	2.6
80°-90°	70.8	0.8
90°-100°	131.1	1.5
100°-110°	387.1	4.3
110°-120°	655.6	7.4
120°-130°	862.9	9.7
130°-140°	966.8	10.8
140°-150°	947.6	10.6
150°-160°	795.9	8.9
160°-170°	529.1	5.9
170°-180°	185.2	2.1
0°-30°	999.4	11.2
0°-40°	1607.8	18.0
0°-60°	2755.1	30.9
0°-90°	3454.0	38.7
90°-120°	1173.8	13.2
90°-150°	3951.1	44.3
90°-180°	5461.0	61.3
0°-180°	8915.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1324	1321	1311	1320	1319	125
15°	1262	1258	1247	1252	1252	355
25°	1145	1140	1126	1128	1125	527
35°	989	984	970	965	956	618
45°	810	805	793	781	777	624
55°	617	613	599	590	582	550
65°	416	414	403	394	389	413
75°	221	219	214	211	207	236
85°	58	59	59	58	56	64
90°	2	14	24	32	37	9
95°	99	103	117	128	131	106
105°	347	355	364	373	378	371
115°	656	662	666	664	663	649
125°	958	967	969	966	964	858
135°	1246	1255	1256	1256	1250	960
145°	1509	1515	1520	1520	1515	943
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°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1329.1	1328.5	1328.0	1327.4	1326.8	1325.5	1323.7	1321.9	1320.0	1318.2	1320.0
5°	1323.6	1323.1	1322.6	1322.2	1321.7	1320.3	1318.0	1315.7	1313.3	1311.0	1313.1
7.5°	1311.4	1311.0	1310.5	1310.0	1309.6	1308.1	1305.5	1302.9	1300.4	1297.8	1299.8
10°	1300.5	1300.1	1299.6	1299.1	1298.7	1297.2	1294.5	1292.0	1289.5	1286.9	1288.8
12.5°	1287.1	1286.3	1285.5	1284.5	1283.7	1282.1	1279.8	1277.4	1275.0	1272.6	1274.1
15°	1261.7	1261.0	1260.3	1259.6	1258.9	1257.3	1254.8	1252.1	1249.6	1247.0	1248.2
17.5°	1232.5	1231.5	1230.5	1229.5	1228.5	1226.6	1224.0	1221.3	1218.6	1216.0	1217.4
20°	1208.2	1207.8	1207.3	1206.8	1206.4	1204.6	1201.5	1198.5	1195.5	1192.4	1194.2
22.5°	1183.9	1183.1	1182.2	1181.3	1180.5	1178.7	1175.9	1173.0	1170.1	1167.3	1168.4
25°	1145.3	1144.2	1143.0	1141.8	1140.6	1138.5	1135.5	1132.5	1129.4	1126.4	1126.9
27.5°	1100.1	1099.5	1098.8	1098.1	1097.4	1095.5	1092.4	1089.2	1086.1	1083.0	1083.1
30°	1070.9	1070.2	1069.4	1068.7	1068.0	1065.9	1062.5	1058.9	1055.4	1052.0	1051.5
32.5°	1038.9	1037.8	1036.8	1035.7	1034.7	1032.6	1029.5	1026.3	1023.2	1020.1	1019.3
35°	989.1	988.1	987.1	986.2	985.3	983.2	980.0	976.6	973.4	970.2	969.0
37.5°	937.3	936.0	934.8	933.7	932.5	930.4	927.4	924.2	921.2	918.2	916.4
40°	902.0	900.8	899.7	898.5	897.3	895.1	891.8	888.6	885.3	882.0	880.0
42.5°	864.2	863.2	862.2	861.3	860.3	858.2	855.0	851.6	848.4	845.2	843.2
45°	809.7	808.7	807.8	806.9	806.0	804.1	801.3	798.5	795.7	792.9	790.1
47.5°	750.9	751.0	751.0	751.0	751.1	749.5	746.1	742.8	739.4	736.1	733.2
50°	713.2	712.5	711.8	711.0	710.4	708.6	705.9	703.1	700.2	697.4	694.4
52.5°	674.6	674.1	673.6	673.1	672.6	670.8	667.8	664.8	661.9	658.8	656.2
55°	616.7	616.0	615.3	614.6	613.9	611.9	608.6	605.4	602.1	598.8	596.7
57.5°	555.6	555.3	554.9	554.5	554.2	552.6	549.9	547.1	544.3	541.6	538.9
60°	517.1	516.1	515.2	514.2	513.3	511.6	509.0	506.4	503.9	501.3	499.0
62.5°	476.8	476.1	475.3	474.5	473.8	472.3	470.2	468.0	465.7	463.5	461.1
65°	416.4	415.9	415.5	415.0	414.5	413.0	410.4	407.9	405.3	402.7	400.6
67.5°	357.9	356.9	355.9	354.9	354.0	352.4	350.6	348.7	346.8	344.9	343.1
70°	320.9	319.7	318.6	317.4	316.3	314.7	312.6	310.4	308.3	306.3	304.9
72.5°	280.6	279.8	279.0	278.3	277.5	276.4	275.1	273.7	272.4	271.0	269.4
75°	221.3	220.9	220.4	219.9	219.4	218.6	217.4	216.3	215.1	214.0	213.3
77.5°	166.5	166.3	166.2	166.0	165.8	165.4	164.7	164.1	163.4	162.8	162.4
80°	132.2	132.2	132.2	132.2	132.2	131.9	131.5	131.0	130.5	130.1	129.9
82.5°	101.9	101.6	101.2	100.8	100.5	100.2	100.1	100.1	100.0	99.9	99.5
85°	57.7	58.0	58.2	58.4	58.6	58.8	58.8	58.8	58.8	58.8	58.5
87.5°	22.9	23.5	24.0	24.5	25.1	25.5	25.9	26.2	26.4	26.7	27.1
90°	1.5	4.2	7.0	9.7	12.3	14.8	17.3	19.6	22.0	24.3	26.1
92.5°	36.9	38.8	40.7	42.5	44.4	46.9	49.8	52.6	55.5	58.5	60.7
95°	99.0	99.7	100.4	101.0	101.7	103.7	107.1	110.5	113.9	117.2	119.7
97.5°	164.5	164.7	165.0	165.3	165.6	168.0	172.7	177.4	182.1	186.7	188.9
100°	213.2	213.2	213.2	213.2	213.2	215.4	219.8	224.2	228.6	233.0	236.1
102.5°	265.6	267.0	268.3	269.6	271.0	272.9	275.1	277.3	279.5	281.8	285.1
105°	347.3	348.9	350.6	352.3	354.1	355.9	357.9	359.9	361.9	364.1	366.1
107.5°	437.4	439.1	440.8	442.5	444.1	445.9	447.4	448.9	450.5	452.0	453.0
110°	499.6	501.3	502.9	504.6	506.3	507.7	508.7	509.7	510.7	511.7	512.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	562.9	563.8	564.7	565.5	566.4	567.5	568.8	570.1	571.4	572.7	573.1
115°	656.4	657.8	659.1	660.5	661.9	662.9	663.6	664.2	664.9	665.6	665.2
117.5°	750.2	750.8	751.4	752.0	752.7	753.3	753.9	754.5	755.1	755.8	756.0
120°	808.7	810.4	812.1	813.9	815.5	816.5	816.9	817.2	817.5	817.9	817.9
122.5°	872.1	872.7	873.3	873.9	874.5	875.3	876.2	877.1	877.9	878.8	878.5
125°	958.0	960.0	962.1	964.1	966.1	967.3	967.7	968.0	968.4	968.7	968.0
127.5°	1049.4	1050.6	1051.7	1052.8	1054.0	1054.8	1055.2	1055.6	1056.0	1056.4	1056.0
130°	1104.2	1105.9	1107.6	1109.2	1111.0	1112.2	1112.9	1113.5	1114.2	1114.9	1114.5
132.5°	1159.0	1161.8	1164.6	1167.4	1170.1	1171.4	1171.3	1171.1	1171.0	1170.9	1170.5
135°	1245.9	1247.9	1249.9	1251.9	1253.9	1255.2	1255.5	1255.9	1256.2	1256.5	1256.5
137.5°	1327.5	1329.5	1331.4	1333.3	1335.3	1336.7	1337.5	1338.2	1338.9	1339.7	1340.1
140°	1379.9	1381.6	1383.2	1384.9	1386.6	1388.0	1389.0	1390.1	1391.1	1392.1	1392.7
142.5°	1432.3	1433.7	1435.1	1436.5	1437.9	1439.3	1440.6	1441.9	1443.2	1444.4	1444.8
145°	1509.3	1510.7	1512.1	1513.4	1514.8	1515.9	1516.9	1517.9	1518.9	1519.9	1519.9
147.5°	1580.6	1581.3	1582.1	1582.9	1583.6	1584.4	1585.2	1586.0	1586.8	1587.6	1588.4
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°	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1321.9	1323.7	1325.5	1326.5	1326.3	1326.1	1325.9	1325.6
5°	1315.2	1317.3	1319.4	1320.3	1320.1	1319.9	1319.6	1319.4
7.5°	1301.9	1303.9	1306.0	1306.9	1306.7	1306.5	1306.2	1306.0
10°	1290.6	1292.5	1294.3	1295.2	1294.9	1294.6	1294.4	1294.2
12.5°	1275.6	1277.1	1278.6	1279.3	1279.3	1279.2	1279.2	1279.1
15°	1249.4	1250.5	1251.7	1252.2	1252.2	1252.2	1252.2	1252.2
17.5°	1218.9	1220.3	1221.7	1221.9	1220.7	1219.6	1218.4	1217.3
20°	1195.8	1197.4	1199.0	1199.2	1198.1	1196.9	1195.8	1194.6
22.5°	1169.4	1170.5	1171.6	1171.7	1170.9	1170.1	1169.3	1168.6
25°	1127.3	1127.8	1128.3	1128.1	1127.5	1126.8	1126.1	1125.4
27.5°	1083.2	1083.3	1083.4	1083.1	1082.4	1081.7	1081.0	1080.3
30°	1051.1	1050.6	1050.1	1049.6	1048.8	1048.1	1047.4	1046.7
32.5°	1018.3	1017.5	1016.7	1015.6	1014.4	1013.1	1011.9	1010.7
35°	967.9	966.6	965.5	964.0	962.1	960.3	958.4	956.5
37.5°	914.6	912.9	911.2	909.8	908.8	907.7	906.7	905.5
40°	877.9	875.8	873.6	872.2	871.5	870.9	870.2	869.5
42.5°	841.3	839.4	837.5	836.0	835.0	833.8	832.7	831.7
45°	787.3	784.5	781.7	779.9	779.3	778.6	777.9	777.2
47.5°	730.3	727.5	724.7	722.5	720.8	719.2	717.5	715.9
50°	691.4	688.3	685.3	683.0	681.4	679.7	678.1	676.5
52.5°	653.6	650.9	648.2	646.0	644.2	642.4	640.6	638.7
55°	594.7	592.6	590.5	588.7	586.9	585.3	583.7	582.1
57.5°	536.2	533.5	530.8	529.0	528.1	527.3	526.3	525.4
60°	496.7	494.3	492.0	490.0	488.4	486.8	485.1	483.5
62.5°	458.6	456.1	453.5	451.6	450.4	449.1	447.9	446.6
65°	398.6	396.5	394.4	392.8	391.9	391.0	390.0	389.1
67.5°	341.3	339.5	337.8	336.6	336.1	335.5	334.9	334.4
70°	303.5	302.1	300.6	299.5	298.5	297.6	296.7	295.8
72.5°	267.8	266.3	264.7	263.4	262.5	261.6	260.6	259.6
75°	212.6	211.9	211.2	210.4	209.4	208.4	207.5	206.6
77.5°	162.0	161.5	161.1	160.6	159.9	159.3	158.6	157.9
80°	129.6	129.4	129.2	128.8	128.4	127.8	127.3	126.9
82.5°	99.0	98.6	98.2	98.0	97.9	97.8	97.7	97.6
85°	58.3	58.1	57.8	57.5	57.0	56.6	56.0	55.5
87.5°	27.4	27.7	28.1	28.2	28.0	27.8	27.6	27.5
90°	27.8	29.5	31.1	32.5	33.5	34.5	35.5	36.6
92.5°	62.9	65.1	67.5	68.9	69.7	70.4	71.1	71.9
95°	122.0	124.4	126.7	128.3	129.0	129.7	130.3	131.0
97.5°	191.2	193.4	195.6	197.0	197.4	197.8	198.2	198.6
100°	239.1	242.2	245.2	247.1	247.7	248.4	249.1	249.7
102.5°	288.4	291.8	295.0	297.2	298.1	299.0	300.0	300.9
105°	368.1	370.1	372.1	373.7	374.7	375.7	376.7	377.7
107.5°	454.0	455.0	456.1	456.6	456.5	456.5	456.4	456.3
110°	513.8	514.8	515.8	516.1	515.8	515.4	515.1	514.8



TEST NUMBER: P333429-840

CATALOG NUMBER: S125DIW-S850D1560U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	573.6	574.1	574.5	574.5	573.9	573.3	572.7	572.1
115°	664.9	664.6	664.2	663.9	663.6	663.2	662.9	662.6
117.5°	756.3	756.6	756.8	756.3	754.9	753.6	752.2	750.8
120°	817.9	817.9	817.9	817.2	815.9	814.5	813.1	811.8
122.5°	878.3	878.0	877.7	877.1	876.0	874.8	873.7	872.7
125°	967.3	966.6	965.9	965.4	965.1	964.7	964.4	964.1
127.5°	1055.7	1055.4	1055.0	1054.5	1053.8	1053.2	1052.5	1051.8
130°	1114.2	1113.9	1113.5	1113.0	1112.4	1111.7	1111.0	1110.3
132.5°	1170.2	1169.9	1169.5	1168.9	1168.0	1167.0	1166.1	1165.1
135°	1256.5	1256.5	1256.5	1255.9	1254.5	1253.1	1251.7	1250.4
137.5°	1340.5	1340.9	1341.3	1340.7	1339.0	1337.3	1335.5	1333.8
140°	1393.4	1394.1	1394.7	1394.2	1392.6	1390.9	1389.2	1387.5
142.5°	1445.2	1445.6	1446.1	1445.4	1443.7	1442.1	1440.4	1438.7
145°	1519.9	1519.9	1519.9	1519.4	1518.4	1517.4	1516.4	1515.4
147.5°	1589.2	1590.0	1590.8	1590.1	1587.8	1585.5	1583.3	1580.9
150°	1632.7	1632.7	1632.7	1632.3	1631.6	1631.0	1630.3	1629.6
152.5°	1673.3	1674.2	1675.0	1674.8	1673.5	1672.3	1671.1	1669.9
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)