

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: P333699-940

Luminaire Tested: **S125RDIW-S850D1560U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333699-940  
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: S125RDIW-S850D1560U940-4F0-1E-UDD-F1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7722.7 lumens  
Efficiency: N/A  
Efficacy: 113.4 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: Semi-Indirect

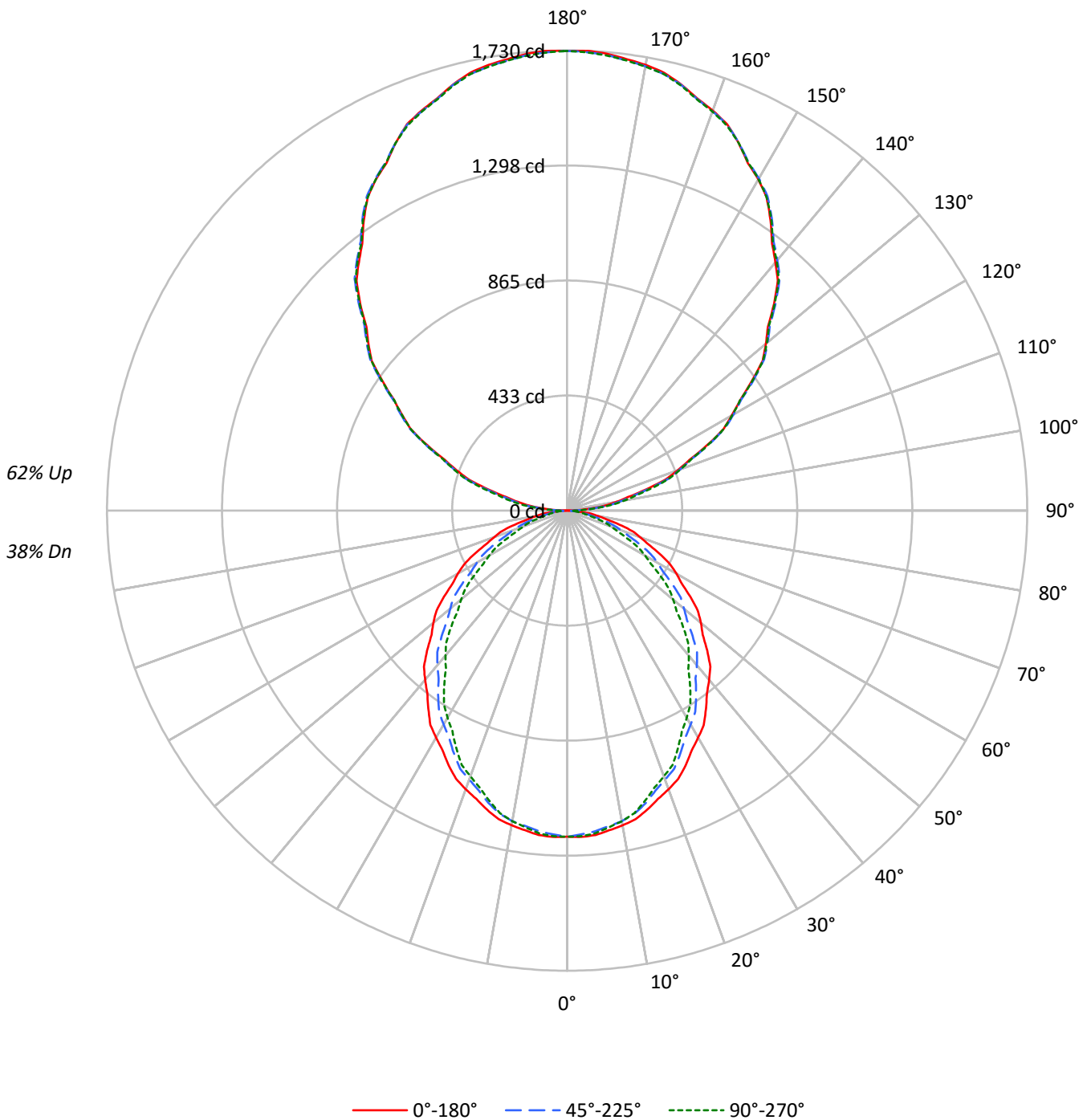
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	38
1	95	91	87	84	86	83	80	77	67	65	63	53	51	50	40	39	38	32
2	87	80	74	69	78	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23
4	72	62	54	49	65	57	50	45	46	42	38	37	33	31	28	26	24	20
5	66	55	47	42	60	50	44	38	41	36	32	33	29	27	25	23	21	17
6	61	50	42	36	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	57	45	37	31	51	41	34	29	34	29	25	27	23	21	21	18	16	14
8	52	40	33	28	48	37	31	26	31	26	22	25	21	18	19	17	15	12
9	49	37	30	25	44	34	27	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	17	15	17	14	12	10

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

	0°	45°	90°
0°	7919	7919	7919
5°	7937	7847	7895
10°	7877	7774	7774
15°	7783	7616	7554
20°	7663	7396	7307
25°	7524	7180	7021
30°	7348	6927	6706
35°	7171	6666	6352
40°	7003	6395	6004
45°	6801	6090	5624
50°	6597	5760	5230
55°	6361	5443	4808
60°	6124	5059	4354
65°	5845	4614	3834
70°	5527	4056	3305
75°	5085	3421	2750
80°	4478	2685	2310
85°	3772	2193	2060



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.3	1.5
10°-20°	322.2	4.2
20°-30°	467.2	6.1
30°-40°	532.5	6.9
40°-50°	519.1	6.7
50°-60°	436.9	5.7
60°-70°	306.3	4.0
70°-80°	157.4	2.0
80°-90°	43.5	0.6
90°-100°	115.7	1.5
100°-110°	341.8	4.4
110°-120°	578.9	7.5
120°-130°	761.9	9.9
130°-140°	853.7	11.1
140°-150°	836.7	10.8
150°-160°	702.8	9.1
160°-170°	467.2	6.0
170°-180°	163.5	2.1
0°-30°	904.7	11.7
0°-40°	1437.3	18.6
0°-60°	2393.2	31.0
0°-90°	2900.5	37.6
90°-120°	1036.5	13.4
90°-150°	3488.8	45.2
90°-180°	4822.0	62.4
0°-180°	7722.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1226	1226	1226	1226	1226	
5°	1224	1220	1210	1219	1218	116
15°	1164	1158	1139	1138	1130	328
25°	1056	1041	1008	996	985	486
35°	910	886	846	819	806	569
45°	745	716	667	631	616	574
55°	565	534	483	443	427	505
65°	382	350	302	266	251	379
75°	204	175	137	118	110	216
85°	51	35	30	29	28	57
90°	1	12	22	28	32	7
95°	87	91	104	113	116	93
105°	307	313	322	329	334	327
115°	580	585	588	586	585	573
125°	846	854	855	853	851	757
135°	1100	1108	1110	1109	1104	848
145°	1333	1338	1342	1342	1338	833
155°	1525	1525	1526	1531	1525	702
165°	1658	1656	1657	1661	1654	468
175°	1724	1719	1719	1726	1717	164
180°	1728	1728	1728	1728	1728	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1228.3	1227.9	1227.4	1226.9	1226.4	1225.3	1223.7	1222.0	1220.4	1218.7	1220.4
5°	1224.3	1223.5	1222.6	1221.8	1221.0	1219.5	1217.2	1215.0	1212.6	1210.4	1212.5
7.5°	1212.3	1211.5	1210.7	1209.9	1209.2	1207.4	1204.7	1201.9	1199.3	1196.5	1197.9
10°	1201.1	1200.5	1199.9	1199.3	1198.6	1196.9	1194.1	1191.1	1188.3	1185.4	1186.0
12.5°	1188.6	1187.8	1187.0	1186.2	1185.4	1183.1	1179.2	1175.4	1171.5	1167.6	1168.1
15°	1164.1	1162.9	1161.6	1160.4	1159.1	1156.4	1152.1	1147.7	1143.4	1139.1	1138.9
17.5°	1136.5	1134.6	1132.7	1130.9	1128.9	1125.2	1119.8	1114.4	1108.9	1103.5	1102.5
20°	1115.0	1112.9	1110.9	1108.8	1106.8	1102.4	1095.9	1089.3	1082.7	1076.1	1075.1
22.5°	1091.3	1089.2	1087.2	1085.1	1083.1	1078.6	1071.7	1064.8	1057.8	1051.0	1048.9
25°	1055.8	1052.7	1049.5	1046.5	1043.4	1038.0	1030.5	1022.8	1015.2	1007.6	1005.0
27.5°	1015.0	1011.3	1007.5	1003.8	1000.1	994.1	986.0	977.8	969.6	961.4	957.7
30°	985.3	981.4	977.6	973.7	969.7	963.4	954.8	946.2	937.5	928.9	924.2
32.5°	956.4	951.9	947.4	942.8	938.2	931.5	922.7	913.9	905.1	896.3	891.1
35°	909.5	904.5	899.6	894.6	889.7	882.5	873.3	864.1	854.8	845.5	839.5
37.5°	863.3	857.3	851.3	845.3	839.3	831.5	822.0	812.3	802.8	793.3	786.1
40°	830.7	824.6	818.3	812.2	806.0	798.0	788.1	778.2	768.4	758.5	750.6
42.5°	796.7	790.3	784.0	777.6	771.2	763.0	752.8	742.6	732.4	722.2	714.7
45°	744.6	738.6	732.6	726.7	720.7	712.0	700.7	689.5	678.1	666.8	658.5
47.5°	690.7	684.4	678.1	671.8	665.5	656.7	645.2	633.8	622.4	611.0	602.5
50°	656.6	649.8	643.0	636.2	629.5	620.2	608.4	596.7	585.0	573.3	564.6
52.5°	619.6	612.6	605.6	598.7	591.7	582.7	571.7	560.6	549.5	538.4	529.1
55°	564.9	558.3	551.8	545.2	538.6	529.5	518.0	506.5	495.0	483.4	474.1
57.5°	509.7	502.7	495.6	488.6	481.6	472.5	461.4	450.2	439.2	428.0	419.0
60°	474.1	467.0	459.8	452.5	445.3	436.2	425.1	413.9	402.9	391.7	382.7
62.5°	436.4	429.5	422.7	415.7	408.8	399.8	388.5	377.3	366.0	354.7	346.3
65°	382.5	375.5	368.5	361.5	354.5	345.5	334.7	323.7	312.8	301.9	293.6
67.5°	329.0	321.9	315.0	308.0	301.0	292.2	281.8	271.3	260.9	250.4	242.9
70°	292.7	285.6	278.7	271.6	264.7	256.0	245.8	235.4	225.2	214.8	208.5
72.5°	257.1	250.2	243.4	236.6	229.8	221.5	211.9	202.2	192.6	183.0	177.1
75°	203.8	197.6	191.4	185.2	179.1	171.7	163.0	154.4	145.7	137.1	132.5
77.5°	150.8	145.8	140.9	136.0	131.0	125.1	118.2	111.3	104.3	97.5	94.3
80°	120.4	115.5	110.5	105.6	100.7	95.3	89.5	83.7	78.0	72.2	70.4
82.5°	90.8	86.3	81.9	77.4	72.9	68.8	64.8	60.9	56.9	53.0	52.1
85°	50.9	47.3	43.5	39.9	36.1	33.7	32.7	31.7	30.7	29.6	29.4
87.5°	17.3	16.7	16.0	15.2	14.6	14.4	14.6	14.9	15.2	15.4	15.7
90°	1.3	3.7	6.2	8.6	10.9	13.1	15.2	17.3	19.4	21.5	23.0
92.5°	32.5	34.2	35.9	37.5	39.2	41.4	44.0	46.5	49.0	51.6	53.6
95°	87.4	88.0	88.6	89.2	89.8	91.6	94.6	97.6	100.6	103.5	105.7
97.5°	145.3	145.4	145.7	146.0	146.2	148.4	152.5	156.7	160.8	164.9	166.8
100°	188.2	188.2	188.2	188.2	188.2	190.2	194.1	198.0	201.9	205.7	208.5
102.5°	234.5	235.8	236.9	238.1	239.3	240.9	242.9	244.9	246.8	248.8	251.7
105°	306.7	308.1	309.6	311.1	312.6	314.2	316.0	317.8	319.6	321.5	323.2
107.5°	386.2	387.7	389.2	390.7	392.2	393.7	395.0	396.4	397.8	399.1	400.0
110°	441.1	442.6	444.1	445.6	447.1	448.3	449.2	450.0	450.9	451.8	452.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	497.0	497.8	498.6	499.4	500.2	501.1	502.2	503.4	504.5	505.7	506.0
115°	579.6	580.9	582.0	583.2	584.4	585.3	585.9	586.5	587.1	587.7	587.4
117.5°	662.5	663.0	663.5	664.1	664.6	665.1	665.7	666.2	666.7	667.4	667.5
120°	714.1	715.6	717.1	718.6	720.1	720.9	721.3	721.6	721.8	722.2	722.2
122.5°	770.1	770.6	771.2	771.7	772.2	772.8	773.6	774.5	775.2	776.0	775.7
125°	845.9	847.7	849.5	851.3	853.1	854.2	854.4	854.7	855.1	855.3	854.7
127.5°	926.6	927.6	928.6	929.6	930.7	931.4	931.7	932.1	932.5	932.8	932.5
130°	975.0	976.5	978.0	979.5	981.0	982.0	982.7	983.2	983.8	984.4	984.1
132.5°	1023.4	1025.9	1028.3	1030.8	1033.2	1034.4	1034.3	1034.1	1034.0	1033.9	1033.6
135°	1100.1	1101.9	1103.7	1105.5	1107.2	1108.3	1108.6	1108.9	1109.2	1109.5	1109.5
137.5°	1172.2	1173.9	1175.6	1177.3	1179.1	1180.3	1181.0	1181.6	1182.2	1182.9	1183.3
140°	1218.4	1219.9	1221.4	1222.9	1224.4	1225.6	1226.5	1227.4	1228.3	1229.2	1229.8
142.5°	1264.7	1266.0	1267.2	1268.5	1269.7	1270.9	1272.0	1273.2	1274.3	1275.4	1275.8
145°	1332.8	1333.9	1335.2	1336.3	1337.6	1338.5	1339.4	1340.3	1341.2	1342.1	1342.1
147.5°	1395.7	1396.3	1397.0	1397.7	1398.3	1399.0	1399.7	1400.4	1401.1	1401.9	1402.6
150°	1437.6	1437.3	1437.1	1436.7	1436.5	1436.9	1438.1	1439.3	1440.5	1441.7	1441.7
152.5°	1472.0	1472.5	1472.9	1473.3	1473.7	1474.2	1474.7	1475.2	1475.6	1476.1	1476.9
155°	1525.1	1525.1	1525.1	1525.1	1525.1	1525.2	1525.5	1525.8	1526.1	1526.4	1527.6
157.5°	1572.4	1571.7	1571.1	1570.4	1569.8	1569.6	1569.9	1570.2	1570.5	1570.7	1572.0
160°	1600.4	1599.5	1598.6	1597.7	1596.8	1596.5	1596.8	1597.1	1597.4	1597.7	1598.8
162.5°	1625.1	1624.4	1623.8	1623.2	1622.5	1622.2	1622.2	1622.3	1622.4	1622.4	1623.9
165°	1658.2	1657.6	1657.0	1656.4	1655.8	1655.6	1656.0	1656.3	1656.5	1656.9	1658.0
167.5°	1686.1	1685.0	1683.8	1682.6	1681.4	1680.8	1680.8	1680.8	1680.8	1680.8	1682.6
170°	1701.2	1700.0	1698.8	1697.6	1696.5	1695.9	1695.9	1695.9	1695.9	1695.9	1697.6
172.5°	1712.0	1710.8	1709.6	1708.4	1707.2	1706.6	1706.6	1706.6	1706.6	1706.6	1708.4
175°	1724.1	1722.9	1721.7	1720.5	1719.3	1718.7	1718.7	1718.7	1718.7	1718.7	1720.5
177.5°	1730.3	1729.3	1728.4	1727.4	1726.4	1725.8	1725.6	1725.4	1725.1	1724.9	1726.4
180°	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1222.0	1223.7	1225.3	1226.1	1225.9	1225.7	1225.6	1225.4
5°	1214.5	1216.6	1218.6	1219.5	1219.1	1218.6	1218.3	1217.8
7.5°	1199.4	1200.9	1202.3	1202.7	1202.3	1201.8	1201.4	1201.0
10°	1186.6	1187.2	1187.8	1187.8	1187.2	1186.6	1186.0	1185.4
12.5°	1168.5	1168.9	1169.4	1169.2	1168.2	1167.2	1166.4	1165.4
15°	1138.7	1138.4	1138.3	1137.3	1135.4	1133.5	1131.7	1129.8
17.5°	1101.4	1100.5	1099.4	1098.1	1096.6	1095.1	1093.6	1092.1
20°	1074.1	1073.0	1072.0	1070.6	1068.7	1066.8	1065.0	1063.2
22.5°	1046.9	1044.9	1042.9	1041.1	1039.6	1038.0	1036.5	1035.0
25°	1002.3	999.6	996.9	994.4	992.1	989.9	987.7	985.3
27.5°	954.0	950.2	946.5	943.5	941.4	939.1	937.0	934.8
30°	919.4	914.7	909.9	906.7	904.8	902.9	901.1	899.2
32.5°	885.8	880.6	875.4	871.6	869.2	866.9	864.5	862.2
35°	833.6	827.6	821.6	817.3	814.3	811.5	808.6	805.7
37.5°	779.0	771.8	764.6	759.6	756.9	754.0	751.3	748.5
40°	742.8	735.0	727.2	722.0	719.6	717.1	714.6	712.2
42.5°	707.2	699.7	692.2	686.6	683.1	679.4	675.7	672.2
45°	650.3	642.1	633.8	628.2	625.1	622.1	618.9	615.8
47.5°	594.1	585.6	577.1	571.1	567.8	564.4	560.9	557.5
50°	556.0	547.3	538.7	532.8	529.8	526.6	523.5	520.5
52.5°	519.9	510.5	501.2	495.0	492.0	488.8	485.8	482.7
55°	464.9	455.7	446.4	440.1	436.8	433.5	430.3	427.0
57.5°	409.9	400.9	391.8	385.8	382.9	380.0	377.1	374.2
60°	373.6	364.5	355.5	349.5	346.3	343.3	340.2	337.1
62.5°	337.9	329.5	321.1	315.4	312.3	309.2	306.1	303.0
65°	285.4	277.2	268.9	263.3	260.2	257.2	254.0	250.9
67.5°	235.3	227.8	220.3	215.3	212.9	210.4	207.9	205.5
70°	202.1	195.7	189.3	184.9	182.4	179.9	177.5	175.0
72.5°	171.2	165.3	159.4	155.7	154.0	152.4	150.8	149.1
75°	128.0	123.5	119.0	116.0	114.5	113.1	111.6	110.2
77.5°	91.0	87.9	84.7	82.7	81.6	80.5	79.5	78.4
80°	68.6	66.7	64.8	63.7	63.3	62.9	62.4	62.1
82.5°	51.3	50.4	49.5	49.0	48.7	48.5	48.2	48.0
85°	29.2	29.0	28.8	28.6	28.4	28.2	28.0	27.8
87.5°	16.1	16.3	16.6	16.8	16.8	16.8	16.9	16.9
90°	24.5	26.0	27.5	28.7	29.6	30.5	31.4	32.3
92.5°	55.6	57.5	59.6	60.8	61.5	62.2	62.8	63.5
95°	107.7	109.9	111.9	113.2	113.9	114.5	115.0	115.7
97.5°	168.8	170.8	172.7	174.0	174.3	174.7	175.0	175.4
100°	211.2	213.8	216.5	218.2	218.7	219.4	220.0	220.5
102.5°	254.7	257.6	260.5	262.4	263.2	264.0	264.9	265.7
105°	325.0	326.8	328.6	329.9	330.8	331.7	332.6	333.5
107.5°	400.9	401.8	402.7	403.1	403.1	403.1	403.0	402.9
110°	453.7	454.6	455.5	455.8	455.5	455.1	454.9	454.6





TEST NUMBER: P333699-940

CATALOG NUMBER: S125RDIW-S850D1560U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	506.5	506.9	507.3	507.3	506.8	506.2	505.7	505.2
115°	587.1	586.8	586.5	586.2	585.9	585.6	585.3	585.1
117.5°	667.8	668.1	668.2	667.8	666.6	665.4	664.2	663.0
120°	722.2	722.2	722.2	721.6	720.4	719.2	718.0	716.8
122.5°	775.5	775.3	775.0	774.5	773.5	772.5	771.5	770.6
125°	854.2	853.5	852.9	852.5	852.2	851.9	851.6	851.3
127.5°	932.2	931.9	931.6	931.1	930.5	930.0	929.3	928.7
130°	983.8	983.6	983.2	982.8	982.2	981.6	981.0	980.4
132.5°	1033.3	1033.0	1032.7	1032.2	1031.4	1030.5	1029.7	1028.8
135°	1109.5	1109.5	1109.5	1108.9	1107.7	1106.5	1105.3	1104.1
137.5°	1183.7	1184.0	1184.4	1183.8	1182.3	1180.8	1179.3	1177.8
140°	1230.4	1231.0	1231.5	1231.1	1229.7	1228.2	1226.6	1225.1
142.5°	1276.1	1276.5	1276.9	1276.3	1274.8	1273.4	1271.8	1270.3
145°	1342.1	1342.1	1342.1	1341.7	1340.8	1339.9	1339.0	1338.1
147.5°	1403.3	1404.0	1404.7	1404.1	1402.0	1400.0	1398.0	1396.0
150°	1441.7	1441.7	1441.7	1441.4	1440.7	1440.2	1439.6	1439.0
152.5°	1477.6	1478.3	1479.0	1478.8	1477.7	1476.7	1475.6	1474.5
155°	1528.7	1530.0	1531.2	1531.1	1529.6	1528.0	1526.5	1525.1
157.5°	1573.2	1574.4	1575.6	1575.2	1573.2	1571.2	1569.2	1567.3
160°	1600.1	1601.2	1602.5	1602.3	1600.8	1599.3	1597.9	1596.3
162.5°	1625.3	1626.7	1628.2	1628.0	1626.3	1624.5	1622.8	1621.0
165°	1659.2	1660.5	1661.6	1661.3	1659.6	1657.8	1656.0	1654.1
167.5°	1684.4	1686.1	1687.9	1687.9	1686.0	1684.3	1682.4	1680.5
170°	1699.4	1701.2	1703.0	1702.9	1700.8	1698.7	1696.6	1694.5
172.5°	1710.2	1712.0	1713.8	1713.8	1711.9	1710.0	1708.2	1706.4
175°	1722.3	1724.1	1725.9	1725.7	1723.7	1721.5	1719.5	1717.3
177.5°	1727.8	1729.2	1730.6	1730.5	1728.8	1727.2	1725.5	1723.9
180°	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1	1728.1

(END OF REPORT)