

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: P333231-830

Luminaire Tested: **S125DIP-S850D810U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333231-830  
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: S125DIP-S850D810U830-4F0-1E-UDD-F4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

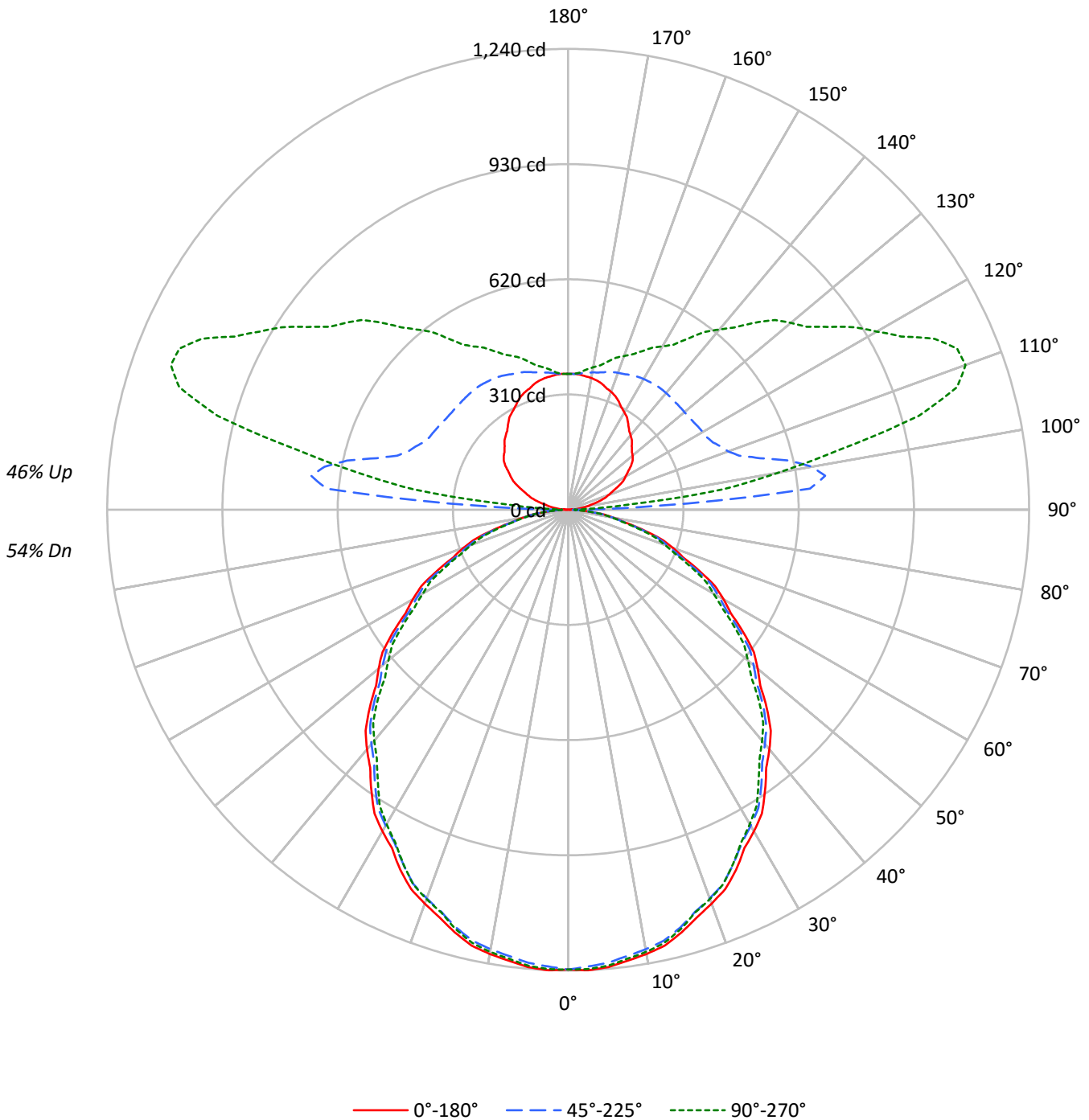
Lumens per Lamp: N/A  
Luminaire Lumens: 5963.0 lumens  
Efficiency: N/A  
Efficacy: 129.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (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	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	72	70	63	62	60	53	52	50	45				
2	90	82	76	71	83	76	71	66	66	62	58	56	53	50	46	44	42	38				
3	82	72	65	59	76	67	61	55	58	53	49	49	45	42	41	38	36	32				
4	75	64	56	50	69	60	53	47	51	46	42	44	40	36	37	34	31	28				
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	30	27	24				
6	63	51	43	37	59	48	40	35	41	36	31	36	31	28	30	27	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	27	24	21	19				
8	54	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	24	31	26	22	27	23	20	23	20	17	15				
10	47	35	28	23	44	33	26	22	29	24	20	25	21	18	22	18	16	14				

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

	0°	45°	90°
0°	7991	7991	7991
5°	8009	7933	7983
10°	7960	7877	7922
15°	7874	7782	7815
20°	7750	7649	7663
25°	7617	7492	7485
30°	7454	7322	7285
35°	7278	7139	7039
40°	7098	6940	6842
45°	6902	6760	6625
50°	6688	6540	6344
55°	6481	6293	6117
60°	6234	6044	5829
65°	5938	5744	5550
70°	5655	5399	5214
75°	5153	4983	4811
80°	4590	4515	4407
85°	3987	4068	3838



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.7	2.0
10°-20°	329.6	5.5
20°-30°	486.6	8.2
30°-40°	567.8	9.5
40°-50°	570.3	9.6
50°-60°	500.6	8.4
60°-70°	373.0	6.3
70°-80°	213.3	3.6
80°-90°	64.1	1.1
90°-100°	264.9	4.4
100°-110°	569.6	9.6
110°-120°	534.5	9.0
120°-130°	433.2	7.3
130°-140°	347.7	5.8
140°-150°	262.4	4.4
150°-160°	184.7	3.1
160°-170°	108.8	1.8
170°-180°	35.4	0.6
0°-30°	932.8	15.6
0°-40°	1500.6	25.2
0°-60°	2571.4	43.1
0°-90°	3221.8	54.0
90°-120°	1369.1	23.0
90°-150°	2412.3	40.5
90°-180°	2741.0	46.0
0°-180°	5963.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1237	1237	1237	1237	1237	
5°	1235	1233	1224	1232	1231	117
15°	1178	1174	1164	1169	1169	332
25°	1069	1064	1051	1053	1050	492
35°	923	919	906	900	893	577
45°	756	751	740	729	725	582
55°	576	572	559	550	543	514
65°	389	386	376	367	363	386
75°	206	204	200	197	193	220
85°	54	55	55	54	52	60
90°	1	7	12	15	17	4
95°	24	72	653	296	173	26
105°	83	116	534	1052	976	88
115°	149	179	429	925	1088	146
125°	206	242	411	736	857	183
135°	242	291	408	616	712	188
145°	282	322	410	510	562	176
155°	321	346	399	451	471	148
165°	351	360	383	406	413	99
175°	365	365	368	372	371	35
180°	366	366	366	366	366	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3
2.5°	1240.5	1239.9	1239.4	1238.9	1238.3	1237.2	1235.5	1233.8	1232.0	1230.3	1232.0
5°	1235.4	1234.9	1234.4	1234.1	1233.6	1232.3	1230.1	1227.9	1225.8	1223.6	1225.6
7.5°	1224.0	1223.6	1223.1	1222.7	1222.3	1220.9	1218.4	1216.1	1213.7	1211.3	1213.1
10°	1213.8	1213.4	1213.0	1212.5	1212.1	1210.7	1208.2	1205.9	1203.5	1201.1	1202.9
12.5°	1201.3	1200.5	1199.8	1198.9	1198.2	1196.7	1194.5	1192.2	1190.0	1187.8	1189.2
15°	1177.6	1177.0	1176.3	1175.6	1175.0	1173.5	1171.1	1168.7	1166.3	1163.9	1165.0
17.5°	1150.4	1149.4	1148.5	1147.5	1146.6	1144.8	1142.4	1139.9	1137.4	1134.9	1136.2
20°	1127.7	1127.3	1126.8	1126.3	1126.0	1124.3	1121.4	1118.6	1115.8	1113.0	1114.6
22.5°	1104.9	1104.2	1103.4	1102.6	1101.8	1100.1	1097.5	1094.8	1092.1	1089.5	1090.5
25°	1068.9	1067.9	1066.8	1065.6	1064.6	1062.6	1059.8	1057.0	1054.1	1051.3	1051.8
27.5°	1026.8	1026.2	1025.6	1024.9	1024.3	1022.5	1019.5	1016.6	1013.7	1010.8	1010.9
30°	999.5	998.8	998.2	997.5	996.8	994.9	991.6	988.4	985.1	981.8	981.4
32.5°	969.7	968.7	967.7	966.7	965.7	963.7	960.8	957.9	955.0	952.1	951.3
35°	923.1	922.2	921.3	920.5	919.6	917.7	914.6	911.5	908.5	905.5	904.4
37.5°	874.8	873.6	872.5	871.5	870.3	868.4	865.5	862.6	859.8	857.0	855.3
40°	841.9	840.7	839.7	838.6	837.4	835.5	832.4	829.3	826.3	823.2	821.3
42.5°	806.6	805.7	804.7	803.9	803.0	801.0	798.0	794.8	791.8	788.8	787.0
45°	755.7	754.8	753.9	753.1	752.2	750.5	747.9	745.3	742.6	740.1	737.4
47.5°	700.9	701.0	701.0	701.0	701.1	699.6	696.4	693.2	690.1	687.0	684.3
50°	665.6	665.0	664.3	663.6	663.1	661.4	658.8	656.2	653.6	650.9	648.1
52.5°	629.6	629.1	628.7	628.2	627.7	626.0	623.3	620.5	617.7	614.9	612.5
55°	575.6	575.0	574.3	573.6	573.0	571.1	568.1	565.1	561.9	558.9	556.9
57.5°	518.6	518.3	517.9	517.6	517.3	515.8	513.2	510.7	508.0	505.5	502.9
60°	482.6	481.7	480.9	479.9	479.1	477.5	475.0	472.7	470.3	467.9	465.7
62.5°	445.0	444.3	443.7	442.9	442.2	440.8	438.8	436.8	434.7	432.6	430.4
65°	388.6	388.1	387.8	387.3	386.9	385.5	383.0	380.7	378.2	375.9	373.9
67.5°	334.0	333.1	332.2	331.2	330.4	328.9	327.3	325.5	323.7	321.9	320.2
70°	299.5	298.4	297.4	296.2	295.2	293.7	291.7	289.7	287.8	285.9	284.6
72.5°	261.9	261.2	260.4	259.8	259.0	258.0	256.7	255.4	254.2	253.0	251.5
75°	206.5	206.1	205.7	205.3	204.8	204.1	202.9	201.9	200.8	199.7	199.1
77.5°	155.4	155.2	155.1	155.0	154.8	154.4	153.7	153.2	152.5	151.9	151.6
80°	123.4	123.4	123.4	123.4	123.4	123.1	122.7	122.2	121.8	121.4	121.2
82.5°	95.1	94.8	94.4	94.1	93.8	93.5	93.4	93.4	93.3	93.2	92.8
85°	53.8	54.1	54.3	54.5	54.7	54.9	54.9	54.9	54.9	54.9	54.6
87.5°	21.3	21.4	21.8	22.1	22.3	22.5	22.5	22.6	22.6	22.7	22.9
90°	0.8	1.5	2.9	4.4	5.9	7.4	8.1	9.6	10.3	11.8	12.5
92.5°	9.0	10.9	17.1	26.2	38.9	60.4	100.7	168.1	241.4	237.6	192.4
95°	24.3	25.1	30.9	39.0	55.2	88.4	167.3	329.4	532.8	653.0	638.9
97.5°	40.3	41.3	45.4	53.5	68.1	92.0	144.1	263.0	475.8	697.3	808.4
100°	51.6	53.1	56.0	64.1	78.1	100.2	143.0	238.7	424.5	665.5	849.7
102.5°	64.0	64.8	67.2	75.9	88.7	110.3	148.3	228.8	385.6	609.4	825.0
105°	83.3	83.3	87.0	94.3	106.1	126.8	159.2	224.8	347.9	534.3	745.8
107.5°	102.2	103.6	107.2	113.2	125.5	144.0	175.4	231.6	332.0	482.6	665.1
110°	115.7	117.2	120.1	126.8	137.8	156.9	187.2	238.1	327.3	458.4	619.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	129.2	130.7	133.1	139.7	150.8	169.4	198.4	246.3	327.3	444.2	584.8
115°	148.8	150.3	152.6	159.2	170.2	188.7	215.9	258.6	329.4	429.0	547.5
117.5°	166.5	168.8	171.2	177.8	190.3	208.1	233.9	272.9	334.3	421.4	525.3
120°	178.3	180.6	183.5	190.1	202.6	221.1	246.9	282.3	339.0	417.8	512.9
122.5°	190.8	192.4	194.7	201.3	215.1	233.5	259.3	292.8	343.1	414.9	502.3
125°	206.3	207.8	211.5	218.1	232.1	251.3	275.6	307.3	350.1	411.2	487.9
127.5°	218.6	220.8	225.6	233.9	248.8	268.0	291.4	320.6	357.9	409.4	474.6
130°	226.2	228.5	234.3	243.9	259.4	278.6	301.4	329.4	362.6	408.3	465.8
132.5°	232.1	235.0	242.0	252.8	268.8	288.0	310.9	337.1	367.9	408.3	458.7
135°	241.8	244.7	253.5	265.3	280.8	300.7	323.6	347.9	375.1	408.3	450.3
137.5°	253.8	256.0	264.3	276.1	291.2	311.7	332.5	355.8	381.7	409.2	442.8
140°	260.9	263.1	271.9	283.7	297.7	317.6	339.0	361.1	384.7	409.7	439.2
142.5°	269.1	270.8	279.0	290.8	304.3	322.9	343.1	364.1	386.4	410.4	436.3
145°	281.5	283.0	290.4	300.7	314.0	330.9	350.1	368.4	388.4	409.7	431.9
147.5°	294.5	295.4	301.7	311.3	322.8	337.7	354.5	371.2	389.1	407.8	427.3
150°	302.2	303.6	308.8	318.4	328.7	341.2	357.4	372.9	389.1	406.0	423.8
152.5°	310.4	311.3	315.8	324.2	334.0	345.3	360.3	374.1	388.5	403.7	419.6
155°	321.3	321.3	325.7	333.1	340.4	350.8	363.4	375.1	386.9	399.4	412.7
157.5°	331.0	330.9	334.4	340.7	347.2	355.1	365.8	375.9	385.0	395.0	406.2
160°	337.5	336.8	339.8	344.9	350.8	357.4	367.0	375.9	383.2	392.1	401.0
162.5°	342.8	342.1	345.1	349.6	354.3	359.8	368.2	375.2	381.4	388.5	396.2
165°	350.8	349.3	351.6	355.2	358.2	362.6	368.4	374.4	378.8	383.2	389.1
167.5°	356.1	355.3	356.7	358.7	360.8	363.6	368.4	372.6	374.7	378.1	382.2
170°	359.7	358.9	359.7	361.1	362.6	364.8	368.4	371.5	372.9	375.1	378.1
172.5°	362.0	360.7	361.4	362.9	363.7	364.8	367.9	370.2	370.5	371.6	373.9
175°	364.8	363.4	364.1	364.8	364.8	364.8	367.0	368.4	367.8	367.8	368.4
177.5°	366.1	365.0	365.0	365.5	365.0	365.0	366.1	366.7	365.5	365.5	366.1
180°	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3	1237.3
2.5°	1233.8	1235.5	1237.2	1238.0	1237.8	1237.7	1237.5	1237.3
5°	1227.6	1229.5	1231.4	1232.3	1232.1	1231.9	1231.6	1231.4
7.5°	1215.1	1217.0	1218.9	1219.7	1219.6	1219.4	1219.1	1218.9
10°	1204.6	1206.4	1208.1	1208.8	1208.6	1208.3	1208.2	1208.0
12.5°	1190.5	1191.9	1193.4	1194.0	1194.0	1193.9	1193.9	1193.8
15°	1166.1	1167.2	1168.3	1168.8	1168.8	1168.8	1168.8	1168.8
17.5°	1137.6	1139.0	1140.3	1140.5	1139.3	1138.3	1137.2	1136.1
20°	1116.1	1117.6	1119.1	1119.3	1118.2	1117.1	1116.1	1114.9
22.5°	1091.5	1092.5	1093.5	1093.6	1092.9	1092.1	1091.4	1090.7
25°	1052.2	1052.6	1053.1	1052.9	1052.3	1051.7	1051.0	1050.4
27.5°	1011.0	1011.1	1011.2	1010.9	1010.2	1009.6	1008.9	1008.2
30°	981.0	980.5	980.1	979.6	978.9	978.3	977.6	976.9
32.5°	950.5	949.7	949.0	947.9	946.8	945.6	944.4	943.3
35°	903.3	902.2	901.2	899.8	898.0	896.3	894.5	892.8
37.5°	853.7	852.1	850.5	849.1	848.2	847.2	846.2	845.2
40°	819.4	817.4	815.4	814.1	813.4	812.8	812.2	811.5
42.5°	785.2	783.4	781.7	780.2	779.3	778.3	777.2	776.3
45°	734.8	732.2	729.6	727.9	727.4	726.7	726.0	725.4
47.5°	681.6	679.0	676.4	674.3	672.8	671.3	669.7	668.2
50°	645.3	642.4	639.6	637.4	635.9	634.4	632.9	631.4
52.5°	610.0	607.5	605.0	602.9	601.2	599.6	597.9	596.2
55°	555.1	553.1	551.1	549.4	547.8	546.3	544.8	543.3
57.5°	500.5	497.9	495.4	493.7	492.9	492.1	491.3	490.4
60°	463.5	461.4	459.2	457.3	455.8	454.3	452.8	451.3
62.5°	428.0	425.7	423.3	421.5	420.4	419.1	418.0	416.8
65°	372.0	370.0	368.1	366.6	365.8	365.0	364.0	363.2
67.5°	318.6	316.9	315.3	314.1	313.7	313.1	312.5	312.1
70°	283.2	281.9	280.6	279.6	278.6	277.8	276.9	276.1
72.5°	250.0	248.5	247.0	245.8	245.0	244.1	243.3	242.3
75°	198.4	197.7	197.1	196.3	195.5	194.5	193.7	192.8
77.5°	151.2	150.7	150.3	149.9	149.2	148.6	148.1	147.4
80°	120.9	120.7	120.6	120.2	119.8	119.3	118.9	118.5
82.5°	92.4	92.0	91.6	91.4	91.3	91.2	91.1	91.0
85°	54.4	54.2	53.9	53.6	53.2	52.8	52.3	51.8
87.5°	23.0	23.2	23.3	23.5	23.1	22.7	22.5	22.1
90°	13.3	14.0	14.7	16.2	16.2	16.2	17.0	17.0
92.5°	130.6	94.8	71.4	60.4	51.0	49.2	48.2	47.0
95°	529.9	417.8	327.3	265.3	213.0	190.9	185.0	173.1
97.5°	789.2	710.6	622.3	536.2	490.7	449.4	428.0	418.6
100°	906.4	870.3	794.5	717.8	666.9	613.9	586.6	574.9
102.5°	945.9	968.3	931.8	880.0	825.6	787.8	758.2	749.3
105°	922.7	1023.7	1056.1	1048.0	1024.4	1000.0	985.3	976.5
107.5°	839.5	974.3	1057.5	1096.0	1108.0	1107.8	1103.0	1097.0
110°	778.3	918.2	1022.2	1084.8	1117.9	1132.0	1137.2	1137.2





TEST NUMBER: P333231-830

CATALOG NUMBER: S125DIP-S850D810U830-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	729.9	862.8	967.9	1041.8	1090.2	1114.3	1127.1	1132.5
115°	669.2	783.4	884.4	964.7	1022.2	1057.5	1078.2	1087.8
117.5°	630.0	728.4	815.4	889.1	946.6	983.1	1003.6	1009.5
120°	608.7	697.2	778.3	843.1	897.6	933.0	952.9	958.8
122.5°	592.9	674.8	747.0	807.8	856.4	888.8	908.7	914.0
125°	569.7	644.9	709.0	762.0	803.3	833.5	849.7	857.1
127.5°	546.1	616.2	676.1	725.8	763.2	789.9	805.2	808.4
130°	531.3	596.3	653.7	701.6	738.5	762.8	777.5	781.9
132.5°	516.6	577.3	629.5	675.6	712.5	736.8	750.4	755.4
135°	497.5	548.3	595.5	637.4	669.9	694.2	707.5	711.9
137.5°	481.3	522.4	561.6	597.2	626.3	648.4	660.6	665.5
140°	472.4	507.0	540.9	571.8	599.2	618.3	629.3	633.0
142.5°	464.8	494.1	523.2	550.1	573.3	589.5	599.9	602.9
145°	454.7	477.6	500.4	520.3	538.0	550.5	558.6	561.6
147.5°	445.3	463.8	481.4	496.4	510.4	520.5	525.2	526.5
150°	440.0	456.2	470.1	483.4	494.6	503.3	506.3	507.0
152.5°	434.0	448.6	461.4	471.6	481.0	488.0	491.0	491.7
155°	425.3	437.1	447.3	455.4	462.8	468.0	470.1	470.9
157.5°	416.4	426.1	434.0	440.5	446.2	450.4	452.5	452.3
160°	410.5	417.8	425.3	430.4	435.5	439.2	440.7	440.0
162.5°	404.0	410.8	417.0	421.5	425.6	428.6	429.0	428.8
165°	395.0	400.2	404.6	408.3	411.2	412.7	412.7	412.7
167.5°	386.4	389.8	393.2	395.9	397.4	398.7	398.1	397.9
170°	381.7	384.0	386.2	387.7	389.1	389.8	389.8	389.1
172.5°	376.5	378.6	380.3	381.2	381.4	382.8	381.6	380.9
175°	370.7	370.7	372.2	372.2	372.2	372.9	371.5	370.7
177.5°	366.7	367.3	367.3	367.3	366.7	367.3	365.5	365.5
180°	365.5	365.5	365.5	365.5	365.5	365.5	365.5	365.5

(END OF REPORT)