

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: P333227-840

Luminaire Tested: **S125DIP-S850D810U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333227-840  
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: S125DIP-S850D810U840-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6147.2 lumens  
Efficiency: N/A  
Efficacy: 133.9 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

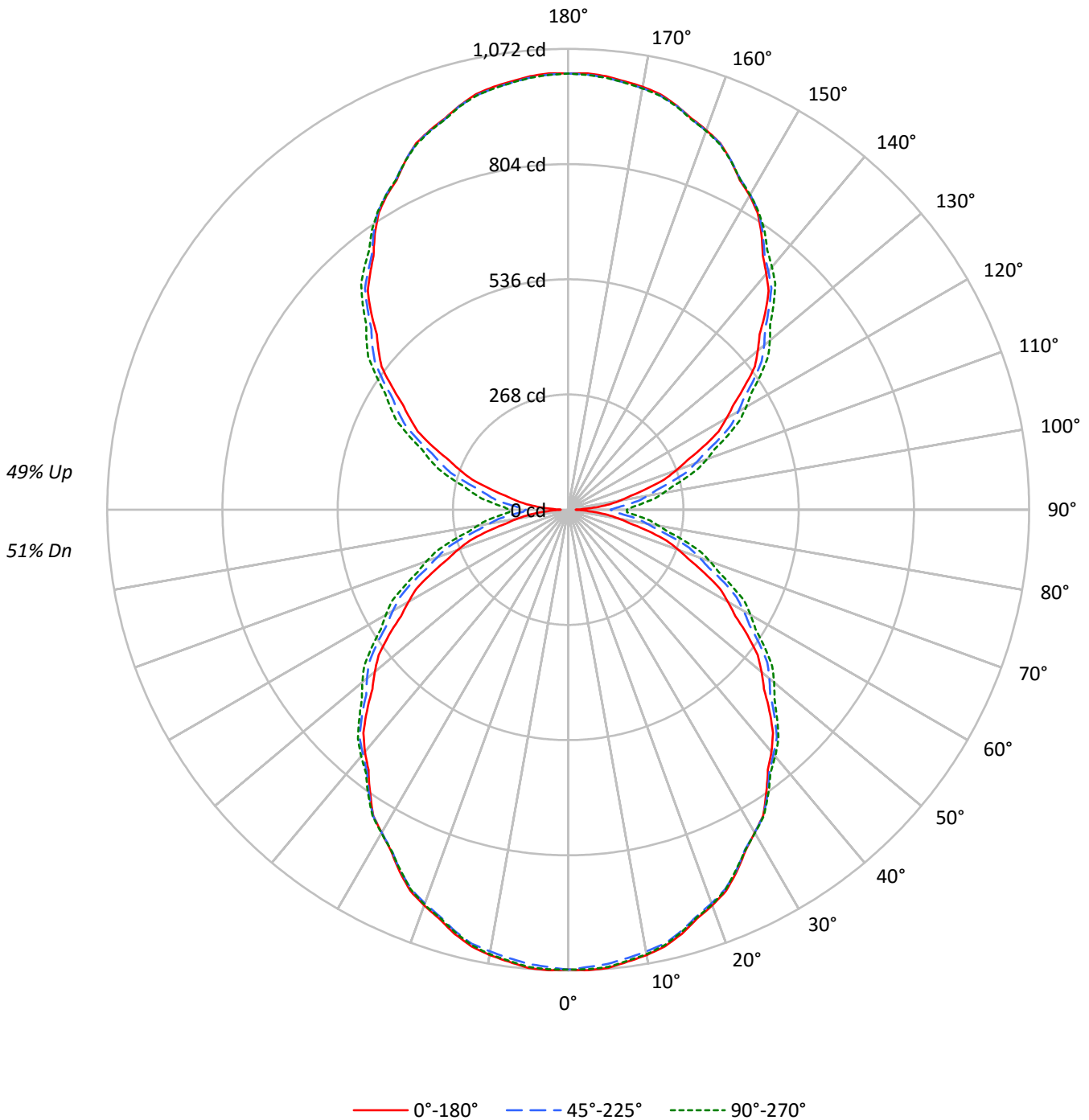
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	97	93	88	85	89	85	82	79	72	70	67	60	58	56	49	48	46	41
2	88	80	74	68	81	74	69	64	63	59	55	52	49	47	43	40	38	34
3	80	70	63	57	74	65	58	53	55	50	46	46	42	39	38	35	32	28
4	73	62	54	48	67	58	50	45	49	43	39	41	37	33	33	30	28	24
5	67	55	47	41	62	51	44	38	44	38	33	37	32	29	30	27	24	21
6	62	49	41	35	57	46	39	33	39	33	29	33	28	25	27	24	21	18
7	57	45	36	31	53	42	34	29	36	30	26	30	25	22	25	21	19	16
8	53	40	33	27	49	38	31	26	32	27	23	27	23	20	23	19	17	14
9	49	37	29	24	45	34	28	23	30	24	20	25	21	18	21	18	15	13
10	46	34	27	22	43	32	25	20	27	22	18	23	19	16	19	16	14	12

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

	0°	45°	90°
0°	6909	6909	6909
5°	6923	6782	6803
10°	6874	6661	6651
15°	6793	6515	6456
20°	6682	6336	6262
25°	6551	6144	6023
30°	6392	5934	5806
35°	6242	5740	5607
40°	6092	5535	5406
45°	5921	5360	5229
50°	5758	5171	5072
55°	5562	4992	4887
60°	5348	4788	4699
65°	5124	4575	4486
70°	4871	4283	4269
75°	4469	4001	4001
80°	3945	3661	3710
85°	3453	3433	3619



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.2	1.6
10°-20°	287.2	4.7
20°-30°	427.1	6.9
30°-40°	505.9	8.2
40°-50°	523.0	8.5
50°-60°	481.8	7.8
60°-70°	389.5	6.3
70°-80°	260.8	4.2
80°-90°	137.5	2.2
90°-100°	143.9	2.3
100°-110°	256.7	4.2
110°-120°	377.4	6.1
120°-130°	468.7	7.6
130°-140°	510.6	8.3
140°-150°	493.2	8.0
150°-160°	412.7	6.7
160°-170°	274.3	4.5
170°-180°	96.0	1.6
0°-30°	815.4	13.3
0°-40°	1321.2	21.5
0°-60°	2326.0	37.8
0°-90°	3113.8	50.7
90°-120°	778.0	12.7
90°-150°	2250.4	36.6
90°-180°	3033.0	49.3
0°-180°	6147.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1070	1067	1060	1068	1068	101
15°	1022	1022	1015	1021	1017	288
25°	928	931	925	929	924	427
35°	803	810	808	811	811	503
45°	662	673	678	686	687	511
55°	509	526	542	553	558	455
65°	350	374	400	415	420	347
75°	193	221	254	274	280	205
85°	58	92	129	151	160	61
90°	18	58	99	126	136	14
95°	65	95	137	165	175	65
105°	190	211	246	271	282	202
115°	347	358	386	403	410	343
125°	501	506	526	541	546	448
135°	648	652	660	673	676	499
145°	784	786	788	793	795	489
155°	895	895	896	899	895	412
165°	974	972	973	976	971	275
175°	1012	1009	1009	1013	1008	96
180°	1015	1015	1015	1015	1015	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8
2.5°	1072.3	1072.0	1071.6	1071.2	1070.8	1070.0	1068.6	1067.3	1066.0	1064.7	1066.0
5°	1069.8	1069.3	1068.8	1068.3	1067.9	1066.8	1065.2	1063.6	1062.0	1060.4	1062.2
7.5°	1060.4	1060.2	1060.0	1059.8	1059.6	1058.6	1057.0	1055.3	1053.6	1052.0	1053.6
10°	1052.0	1052.0	1052.0	1052.0	1052.0	1051.1	1049.1	1047.3	1045.4	1043.6	1045.2
12.5°	1040.2	1040.4	1040.6	1040.8	1041.0	1040.3	1038.8	1037.3	1035.8	1034.3	1035.6
15°	1021.6	1021.8	1022.0	1022.2	1022.5	1021.8	1020.2	1018.5	1016.8	1015.2	1016.6
17.5°	997.2	997.6	998.2	998.6	999.1	998.5	996.8	995.2	993.6	992.0	993.0
20°	979.6	980.1	980.5	981.0	981.5	980.9	979.3	977.7	975.9	974.3	975.0
22.5°	959.5	960.3	961.1	962.0	962.8	962.3	960.5	958.7	956.8	955.0	955.9
25°	928.2	928.9	929.6	930.3	931.0	930.6	929.3	927.9	926.5	925.0	925.9
27.5°	893.3	894.4	895.4	896.5	897.5	897.2	895.6	894.0	892.4	890.9	891.5
30°	867.4	868.8	870.2	871.5	872.9	872.9	871.5	870.2	868.8	867.4	867.9
32.5°	843.8	845.1	846.3	847.5	848.7	848.8	847.8	846.8	845.8	844.8	845.2
35°	803.3	805.1	806.7	808.3	809.9	810.4	809.7	809.0	808.3	807.6	808.3
37.5°	762.9	764.4	765.9	767.4	768.9	769.5	769.2	769.0	768.8	768.6	769.5
40°	735.2	737.1	738.9	740.8	742.7	743.5	743.3	743.1	742.8	742.6	743.5
42.5°	705.0	707.4	709.8	712.3	714.7	716.2	716.7	717.2	717.7	718.2	719.3
45°	661.8	664.4	666.9	669.4	672.1	673.9	675.1	676.2	677.4	678.5	680.2
47.5°	617.5	620.0	622.3	624.7	627.0	629.2	631.3	633.3	635.2	637.2	639.6
50°	587.3	589.9	592.5	595.0	597.5	600.2	602.7	605.3	607.8	610.4	613.0
52.5°	555.4	558.6	561.7	564.8	567.9	571.1	574.2	577.3	580.5	583.6	586.3
55°	508.7	512.4	516.1	519.9	523.6	527.4	531.1	534.8	538.5	542.2	544.8
57.5°	460.8	465.3	469.8	474.2	478.8	483.1	487.5	491.7	495.9	500.3	503.2
60°	429.0	433.6	438.3	442.9	447.6	452.3	457.0	461.6	466.3	470.9	474.4
62.5°	397.9	402.5	407.3	411.9	416.6	421.4	426.5	431.5	436.5	441.5	445.5
65°	350.3	355.7	361.0	366.4	371.7	377.2	382.8	388.4	394.0	399.6	403.1
67.5°	305.4	310.6	315.8	320.9	326.1	331.5	337.2	343.0	348.6	354.3	358.5
70°	272.7	278.0	283.4	288.8	294.2	299.8	305.9	311.9	318.0	324.1	328.5
72.5°	240.9	246.3	251.9	257.4	263.0	269.0	275.7	282.4	288.9	295.6	300.3
75°	193.0	199.0	205.1	211.2	217.2	224.0	231.5	238.9	246.3	253.8	258.4
77.5°	147.0	154.0	161.1	168.0	175.0	182.1	189.2	196.4	203.6	210.9	215.9
80°	118.6	125.5	132.5	139.5	146.5	153.9	161.9	169.8	177.7	185.6	190.8
82.5°	92.5	99.9	107.2	114.6	122.0	129.7	137.8	145.9	154.0	162.2	167.1
85°	57.7	65.3	73.1	80.8	88.5	96.3	104.5	112.7	120.9	129.0	134.1
87.5°	32.9	40.6	48.4	56.0	63.8	71.8	80.0	88.2	96.3	104.5	110.0
90°	17.6	26.5	35.2	44.1	53.0	62.0	71.2	80.3	89.5	98.7	104.9
92.5°	34.2	42.1	50.0	57.9	65.7	74.5	84.1	93.7	103.3	113.0	119.3
95°	64.9	71.4	77.8	84.2	90.6	98.7	108.4	118.1	127.6	137.3	143.7
97.5°	97.7	103.2	108.9	114.4	120.1	127.8	137.9	148.0	158.0	168.1	174.2
100°	122.1	126.9	131.9	136.7	141.7	149.0	158.8	168.4	178.2	187.9	194.4
102.5°	148.5	153.6	158.9	164.1	169.4	176.1	184.6	193.0	201.5	209.8	216.3
105°	189.5	194.1	198.7	203.3	207.9	214.2	222.3	230.4	238.3	246.4	252.2
107.5°	235.0	239.0	243.1	247.1	251.2	256.9	264.5	272.0	279.5	287.0	292.2
110°	266.4	270.0	273.7	277.4	281.0	286.4	293.5	300.5	307.6	314.6	319.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	299.2	301.8	304.6	307.3	309.9	314.9	321.8	328.8	335.9	342.8	347.3
115°	346.7	349.0	351.3	353.7	356.0	360.3	366.8	373.1	379.6	386.0	390.0
117.5°	394.3	395.7	397.0	398.4	399.8	403.5	409.6	415.6	421.6	427.7	431.8
120°	424.5	426.2	427.7	429.3	430.9	434.4	440.0	445.5	451.0	456.6	460.5
122.5°	456.6	457.2	457.9	458.5	459.2	462.3	467.9	473.5	479.2	484.8	488.5
125°	500.9	501.7	502.5	503.3	504.2	507.1	511.8	516.6	521.5	526.3	529.8
127.5°	547.2	547.5	548.0	548.4	548.7	550.9	554.9	559.0	563.0	567.0	570.3
130°	575.6	576.3	576.9	577.5	578.2	580.4	584.0	587.6	591.2	594.8	597.9
132.5°	603.3	604.6	606.0	607.4	608.8	610.8	613.2	615.6	618.0	620.6	623.6
135°	648.0	648.8	649.6	650.6	651.4	652.7	654.5	656.2	658.0	659.8	662.9
137.5°	690.1	690.9	691.9	692.7	693.5	694.5	695.7	696.8	698.0	699.2	702.2
140°	716.5	717.4	718.2	719.1	720.0	720.8	721.5	722.4	723.1	723.9	726.8
142.5°	743.7	744.2	744.8	745.3	745.9	746.5	747.2	747.9	748.6	749.3	751.7
145°	783.7	784.1	784.6	785.0	785.5	786.0	786.5	787.0	787.6	788.1	789.2
147.5°	819.5	819.9	820.3	820.7	821.0	821.4	821.9	822.3	822.7	823.1	823.9
150°	844.1	843.9	843.8	843.6	843.4	843.7	844.4	845.2	845.9	846.6	846.6
152.5°	864.3	864.6	864.8	865.2	865.4	865.7	865.9	866.2	866.5	866.8	867.2
155°	895.4	895.4	895.4	895.4	895.4	895.5	895.8	896.0	896.1	896.3	897.0
157.5°	923.3	922.9	922.5	922.1	921.7	921.6	921.8	922.0	922.1	922.3	923.0
160°	939.7	939.2	938.7	938.2	937.6	937.5	937.6	937.8	938.0	938.2	938.9
162.5°	954.2	953.8	953.4	953.1	952.7	952.5	952.5	952.6	952.6	952.7	953.5
165°	973.7	973.3	973.0	972.6	972.3	972.2	972.3	972.5	972.7	972.9	973.6
167.5°	990.1	989.4	988.7	988.0	987.2	986.9	986.9	986.9	986.9	986.9	988.0
170°	999.0	998.3	997.5	996.8	996.1	995.7	995.7	995.7	995.7	995.7	996.8
172.5°	1005.2	1004.5	1003.8	1003.1	1002.4	1002.1	1002.1	1002.1	1002.1	1002.1	1003.1
175°	1012.4	1011.7	1011.0	1010.3	1009.6	1009.2	1009.2	1009.2	1009.2	1009.2	1010.3
177.5°	1016.0	1015.4	1014.9	1014.3	1013.7	1013.4	1013.3	1013.1	1013.0	1012.8	1013.7
180°	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8	1069.8
2.5°	1067.3	1068.6	1070.0	1070.6	1070.4	1070.2	1070.0	1069.8
5°	1064.1	1065.9	1067.8	1068.6	1068.3	1068.1	1067.9	1067.7
7.5°	1055.2	1056.8	1058.4	1059.1	1058.9	1058.7	1058.4	1058.2
10°	1046.8	1048.4	1050.1	1050.8	1050.6	1050.4	1050.1	1049.9
12.5°	1036.8	1038.1	1039.4	1039.7	1039.1	1038.4	1037.8	1037.2
15°	1018.0	1019.5	1020.9	1021.1	1020.2	1019.2	1018.2	1017.3
17.5°	994.1	995.2	996.2	996.5	995.9	995.4	994.8	994.3
20°	975.7	976.4	977.1	977.4	977.4	977.4	977.4	977.4
22.5°	956.8	957.7	958.6	958.8	958.2	957.7	957.0	956.5
25°	927.0	927.9	928.8	928.7	927.5	926.3	925.1	924.0
27.5°	892.1	892.8	893.4	893.6	893.1	892.7	892.3	891.9
30°	868.3	868.8	869.2	869.4	869.1	868.9	868.7	868.4
32.5°	845.7	846.1	846.6	846.7	846.5	846.3	846.0	845.8
35°	809.0	809.7	810.4	810.7	810.7	810.7	810.7	810.7
37.5°	770.4	771.3	772.2	772.7	772.6	772.5	772.4	772.3
40°	744.4	745.4	746.3	747.0	747.4	747.9	748.4	748.8
42.5°	720.4	721.5	722.7	723.3	723.4	723.5	723.6	723.7
45°	681.9	683.5	685.1	686.0	686.3	686.5	686.7	687.0
47.5°	642.0	644.4	646.7	648.2	648.7	649.2	649.7	650.3
50°	615.5	618.1	620.7	622.3	623.0	623.7	624.4	625.1
52.5°	589.1	591.8	594.5	596.2	596.7	597.2	597.7	598.2
55°	547.3	550.0	552.5	554.2	555.1	556.1	557.0	558.0
57.5°	506.1	509.1	512.0	513.8	514.5	515.2	515.9	516.6
60°	477.9	481.4	484.9	487.0	487.7	488.4	489.1	489.8
62.5°	449.3	453.1	457.1	459.4	460.3	461.2	462.0	462.9
65°	406.6	410.1	413.5	415.8	416.8	417.7	418.6	419.5
67.5°	362.7	367.0	371.2	374.0	375.2	376.4	377.6	378.8
70°	333.0	337.4	341.8	344.7	346.1	347.5	348.9	350.3
72.5°	305.2	309.9	314.8	317.7	318.7	319.7	320.7	321.7
75°	263.2	267.8	272.5	275.4	276.5	277.7	278.8	280.0
77.5°	221.1	226.2	231.4	234.4	235.3	236.2	237.1	238.1
80°	195.9	201.1	206.1	209.1	210.2	211.1	212.0	212.9
82.5°	172.0	176.9	181.9	185.2	186.9	188.5	190.3	192.0
85°	139.3	144.4	149.6	153.0	154.9	156.7	158.6	160.5
87.5°	115.5	121.1	126.6	130.3	132.0	133.7	135.4	137.2
90°	111.1	117.3	123.6	127.7	130.0	132.1	134.2	136.4
92.5°	125.6	132.0	138.3	142.5	144.5	146.5	148.6	150.6
95°	150.1	156.4	162.8	166.9	169.0	171.0	172.9	174.9
97.5°	180.3	186.3	192.4	196.2	198.0	199.9	201.7	203.5
100°	200.9	207.3	213.8	217.9	219.7	221.5	223.2	224.9
102.5°	222.7	229.1	235.6	239.7	241.7	243.5	245.4	247.3
105°	257.8	263.6	269.2	273.2	275.4	277.5	279.6	281.9
107.5°	297.3	302.5	307.6	310.8	312.3	313.7	315.1	316.5
110°	324.6	329.5	334.5	337.6	339.1	340.5	342.0	343.5





TEST NUMBER: P333227-840

CATALOG NUMBER: S125DIP-S850D810U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	351.8	356.3	360.8	363.8	365.1	366.4	367.7	369.0
115°	394.0	398.1	402.0	404.7	405.9	407.2	408.4	409.6
117.5°	435.9	440.0	444.1	446.6	447.5	448.4	449.3	450.1
120°	464.5	468.5	472.4	474.7	475.4	476.2	476.9	477.6
122.5°	492.1	495.7	499.4	501.6	502.4	503.2	504.1	504.9
125°	533.1	536.4	539.9	542.1	543.0	544.0	545.0	546.0
127.5°	573.6	576.8	580.1	582.3	583.2	584.2	585.2	586.2
130°	601.0	604.1	607.1	609.2	610.0	610.8	611.6	612.4
132.5°	626.7	629.8	632.9	634.7	635.1	635.6	636.1	636.6
135°	665.9	668.9	672.0	673.8	674.2	674.7	675.1	675.6
137.5°	705.1	708.1	711.0	712.6	712.7	712.7	712.8	712.8
140°	729.7	732.6	735.5	737.0	737.1	737.1	737.2	737.2
142.5°	754.2	756.6	758.9	760.1	760.2	760.3	760.3	760.4
145°	790.4	791.6	792.7	793.6	794.0	794.4	794.8	795.2
147.5°	824.8	825.6	826.4	826.4	825.6	824.8	824.0	823.2
150°	846.6	846.6	846.6	846.5	846.4	846.3	846.1	846.0
152.5°	867.6	868.0	868.4	868.4	867.8	867.2	866.6	866.0
155°	897.7	898.4	899.1	899.0	898.1	897.3	896.4	895.4
157.5°	923.7	924.4	925.1	924.9	923.7	922.6	921.4	920.3
160°	939.6	940.2	940.9	940.9	940.0	939.1	938.2	937.4
162.5°	954.3	955.2	956.0	955.9	954.9	953.9	952.9	951.9
165°	974.3	975.0	975.6	975.5	974.4	973.4	972.3	971.3
167.5°	989.1	990.1	991.2	991.1	990.1	989.0	987.8	986.7
170°	997.8	999.0	1000.0	999.9	998.7	997.4	996.2	995.0
172.5°	1004.2	1005.2	1006.3	1006.3	1005.2	1004.1	1003.0	1001.9
175°	1011.3	1012.4	1013.4	1013.3	1012.1	1010.9	1009.7	1008.5
177.5°	1014.5	1015.3	1016.2	1016.1	1015.1	1014.2	1013.2	1012.2
180°	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7	1014.7

(END OF REPORT)