

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: P333403-840

Luminaire Tested: **S125DIW-S850D470U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333403-840  
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-S850D470U840-4F0-1E-UDD-D1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

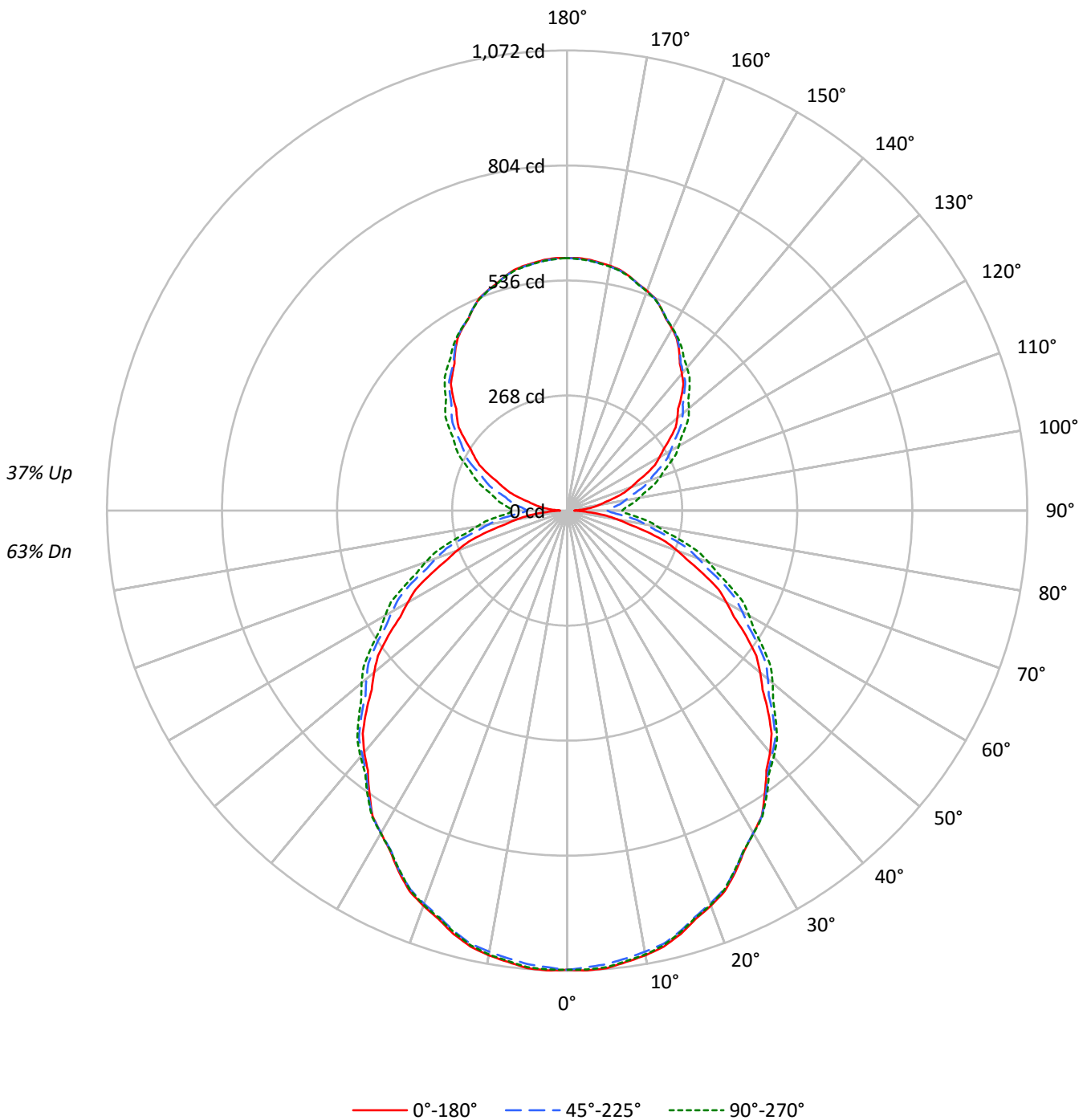
Lumens per Lamp: N/A  
Luminaire Lumens: 4956.0 lumens  
Efficiency: N/A  
Efficacy: 131.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: Semi-Direct  
  
Input Watts (W): 37.7  
Input Voltage (V): 120  
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



TEST NUMBER: P333403-840

CATALOG NUMBER: S125DIW-S850D470U840-4F0-1E-UDD-D1

### 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	90	90	90	79	79	79	68	68	68
1	100	95	91	87	93	89	85	82	78	75	72	68	66	64	59	57	55
2	90	82	76	70	84	77	71	66	68	63	59	59	56	53	51	48	46
3	82	72	64	58	77	68	61	55	60	54	49	52	48	44	45	42	39
4	75	64	55	49	70	60	52	47	53	47	42	46	41	38	40	36	33
5	69	57	48	42	64	53	46	40	47	41	36	41	36	32	36	32	29
6	64	51	42	36	59	48	40	35	42	36	31	37	32	28	33	28	25
7	59	46	38	32	55	43	36	30	39	32	28	34	29	25	30	26	22
8	55	42	34	28	51	39	32	27	35	29	25	31	26	22	27	23	20
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	25	21	18
10	48	35	28	23	45	33	26	22	30	24	20	26	22	18	23	19	16

**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



TEST NUMBER: P333403-840

CATALOG NUMBER: S125DIW-S850D470U840-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.2	2.0
10°-20°	287.2	5.8
20°-30°	427.1	8.6
30°-40°	505.9	10.2
40°-50°	523.0	10.6
50°-60°	481.8	9.7
60°-70°	389.5	7.9
70°-80°	260.8	5.3
80°-90°	136.5	2.8
90°-100°	115.3	2.3
100°-110°	172.3	3.5
110°-120°	234.5	4.7
120°-130°	280.6	5.7
130°-140°	299.9	6.1
140°-150°	286.7	5.8
150°-160°	239.2	4.8
160°-170°	159.0	3.2
170°-180°	55.6	1.1
0°-30°	815.4	16.5
0°-40°	1321.2	26.7
0°-60°	2326.0	46.9
0°-90°	3112.9	62.8
90°-120°	522.1	10.5
90°-150°	1389.2	28.0
90°-180°	1843.0	37.2
0°-180°	4956.0	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°	17	55	93	119	128	13
95°	43	72	112	137	146	42
105°	114	134	167	190	200	121
115°	204	214	241	259	265	201
125°	292	295	315	330	336	261
135°	376	379	386	399	403	290
145°	455	455	457	462	465	284
155°	519	519	520	521	519	239
165°	564	564	564	565	563	159
175°	587	585	585	587	584	56
180°	588	588	588	588	588	



TEST NUMBER: P333403-840

CATALOG NUMBER: S125DIW-S850D470U840-4F0-1E-UDD-D1

**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°	32.8	40.4	48.1	55.6	63.3	71.1	79.2	87.3	95.3	103.4	108.9
90°	17.3	25.5	33.8	42.0	50.3	58.8	67.5	76.0	84.7	93.3	99.2
92.5°	26.2	33.6	41.1	48.6	56.0	64.3	73.2	82.2	91.2	100.2	106.0
95°	43.4	49.7	55.9	62.2	68.5	76.0	85.0	93.9	102.9	111.8	117.6
97.5°	61.8	67.4	72.9	78.4	83.9	91.2	100.3	109.4	118.4	127.4	133.0
100°	75.6	80.5	85.4	90.3	95.2	102.0	110.8	119.6	128.4	137.1	143.0
102.5°	90.5	95.4	100.4	105.3	110.3	116.6	124.6	132.6	140.5	148.5	154.1
105°	113.8	118.1	122.3	126.5	130.8	136.6	144.3	151.9	159.5	167.0	172.4
107.5°	139.7	143.3	147.0	150.7	154.3	159.8	166.9	174.1	181.3	188.5	193.4
110°	157.4	160.8	164.1	167.4	170.7	175.7	182.6	189.5	196.2	203.1	207.8



TEST NUMBER: P333403-840

CATALOG NUMBER: S125DIW-S850D470U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	176.5	179.0	181.5	184.0	186.5	191.2	197.8	204.6	211.3	218.0	222.4
115°	203.6	205.6	207.6	209.6	211.8	215.9	222.2	228.4	234.7	241.0	245.0
117.5°	230.8	232.0	233.2	234.5	235.7	239.3	245.2	251.2	257.1	263.0	267.0
120°	248.3	249.5	250.7	252.0	253.1	256.4	262.0	267.4	272.9	278.3	282.3
122.5°	266.5	267.0	267.5	268.0	268.5	271.5	276.9	282.4	287.8	293.3	296.9
125°	292.1	292.5	292.9	293.3	293.6	296.2	300.9	305.7	310.4	315.2	318.7
127.5°	318.5	318.6	318.7	318.8	318.9	321.0	325.0	328.9	332.9	336.8	340.1
130°	335.0	335.3	335.6	335.8	336.1	338.0	341.4	344.9	348.4	351.8	355.0
132.5°	350.6	351.4	352.2	352.9	353.8	355.4	357.9	360.3	362.8	365.3	368.5
135°	376.5	376.9	377.3	377.6	378.0	379.1	380.8	382.5	384.3	386.0	389.0
137.5°	400.8	401.2	401.6	402.0	402.4	403.1	404.1	405.2	406.2	407.2	410.1
140°	415.8	416.3	416.8	417.3	417.8	418.3	418.8	419.4	419.9	420.4	423.2
142.5°	431.5	431.7	431.9	432.2	432.4	432.8	433.2	433.6	434.0	434.5	436.9
145°	454.6	454.8	454.9	455.1	455.3	455.6	455.9	456.2	456.5	456.8	458.0
147.5°	475.0	475.2	475.4	475.6	475.9	476.2	476.4	476.7	476.9	477.2	477.8
150°	489.3	489.2	489.1	489.0	488.9	489.1	489.5	489.9	490.3	490.7	490.7
152.5°	501.0	501.2	501.3	501.4	501.6	501.7	501.9	502.1	502.2	502.4	502.6
155°	519.1	519.1	519.1	519.1	519.1	519.1	519.2	519.3	519.4	519.5	519.9
157.5°	535.1	534.9	534.7	534.5	534.2	534.2	534.3	534.4	534.5	534.6	535.0
160°	544.7	544.4	544.0	543.7	543.4	543.3	543.4	543.5	543.6	543.7	544.2
162.5°	553.1	552.9	552.7	552.4	552.2	552.1	552.1	552.1	552.2	552.2	552.7
165°	564.3	564.1	563.9	563.7	563.5	563.5	563.6	563.7	563.8	563.9	564.3
167.5°	573.9	573.5	573.1	572.7	572.3	572.1	572.1	572.1	572.1	572.1	572.7
170°	579.0	578.6	578.1	577.7	577.3	577.1	577.1	577.1	577.1	577.1	577.7
172.5°	582.7	582.3	581.9	581.5	581.1	580.9	580.9	580.9	580.9	580.9	581.5
175°	586.8	586.3	585.9	585.5	585.1	584.9	584.9	584.9	584.9	584.9	585.5
177.5°	588.9	588.5	588.2	587.9	587.5	587.3	587.3	587.2	587.1	587.0	587.5
180°	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1



TEST NUMBER: P333403-840

CATALOG NUMBER: S125DIW-S850D470U840-4F0-1E-UDD-D1

**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°	114.3	119.8	125.2	128.9	130.6	132.2	133.9	135.6
90°	105.0	110.9	116.8	120.7	122.6	124.6	126.5	128.5
92.5°	111.9	117.8	123.6	127.4	129.3	131.2	133.0	134.9
95°	123.5	129.4	135.1	139.0	140.9	142.7	144.5	146.3
97.5°	138.6	144.1	149.7	153.3	155.0	156.7	158.4	160.2
100°	148.8	154.6	160.4	164.1	165.7	167.3	169.0	170.5
102.5°	159.9	165.5	171.3	174.9	176.6	178.3	180.0	181.7
105°	177.6	182.9	188.1	191.8	193.7	195.6	197.5	199.5
107.5°	198.3	203.3	208.1	211.4	212.8	214.2	215.6	217.0
110°	212.6	217.3	222.0	225.2	226.7	228.2	229.7	231.3





TEST NUMBER: P333403-840

CATALOG NUMBER: S125DIW-S850D470U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	226.8	231.2	235.6	238.5	239.9	241.4	242.9	244.3
115°	249.1	253.2	257.3	260.0	261.3	262.6	263.9	265.2
117.5°	271.0	275.1	279.1	281.8	283.0	284.2	285.3	286.5
120°	286.2	290.2	294.2	296.6	297.6	298.6	299.6	300.6
122.5°	300.6	304.4	308.0	310.4	311.4	312.6	313.7	314.7
125°	322.2	325.8	329.3	331.6	332.6	333.8	334.8	335.9
127.5°	343.5	346.8	350.1	352.4	353.6	354.7	355.9	357.0
130°	358.1	361.3	364.5	366.6	367.5	368.5	369.4	370.4
132.5°	371.6	374.8	378.0	379.9	380.6	381.2	381.9	382.6
135°	392.0	395.1	398.1	400.0	400.8	401.5	402.3	403.0
137.5°	412.9	415.9	418.7	420.3	420.8	421.2	421.6	422.0
140°	426.0	428.8	431.5	433.1	433.5	433.9	434.3	434.8
142.5°	439.1	441.4	443.7	445.1	445.6	446.0	446.4	446.9
145°	459.1	460.3	461.4	462.3	463.0	463.6	464.2	464.8
147.5°	478.4	479.0	479.6	479.8	479.5	479.2	479.0	478.7
150°	490.7	490.7	490.7	490.7	490.7	490.7	490.8	490.8
152.5°	502.9	503.1	503.3	503.3	503.0	502.7	502.4	502.0
155°	520.3	520.7	521.1	521.1	520.6	520.1	519.6	519.1
157.5°	535.4	535.8	536.2	536.1	535.4	534.7	534.1	533.4
160°	544.6	545.0	545.4	545.3	544.8	544.3	543.8	543.3
162.5°	553.2	553.6	554.1	554.1	553.5	552.9	552.3	551.7
165°	564.7	565.1	565.5	565.4	564.8	564.2	563.6	563.0
167.5°	573.3	573.9	574.5	574.5	573.8	573.2	572.6	572.0
170°	578.3	579.0	579.7	579.6	578.9	578.1	577.4	576.7
172.5°	582.1	582.7	583.3	583.3	582.6	582.0	581.4	580.8
175°	586.1	586.8	587.4	587.3	586.6	585.9	585.2	584.5
177.5°	588.0	588.5	589.1	589.0	588.4	587.8	587.2	586.7
180°	588.1	588.1	588.1	588.1	588.1	588.1	588.1	588.1

(END OF REPORT)