

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: P333402-840

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333402-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
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-D  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 470 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5207.3 lumens  
Efficiency: N/A  
Efficacy: 138.1 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

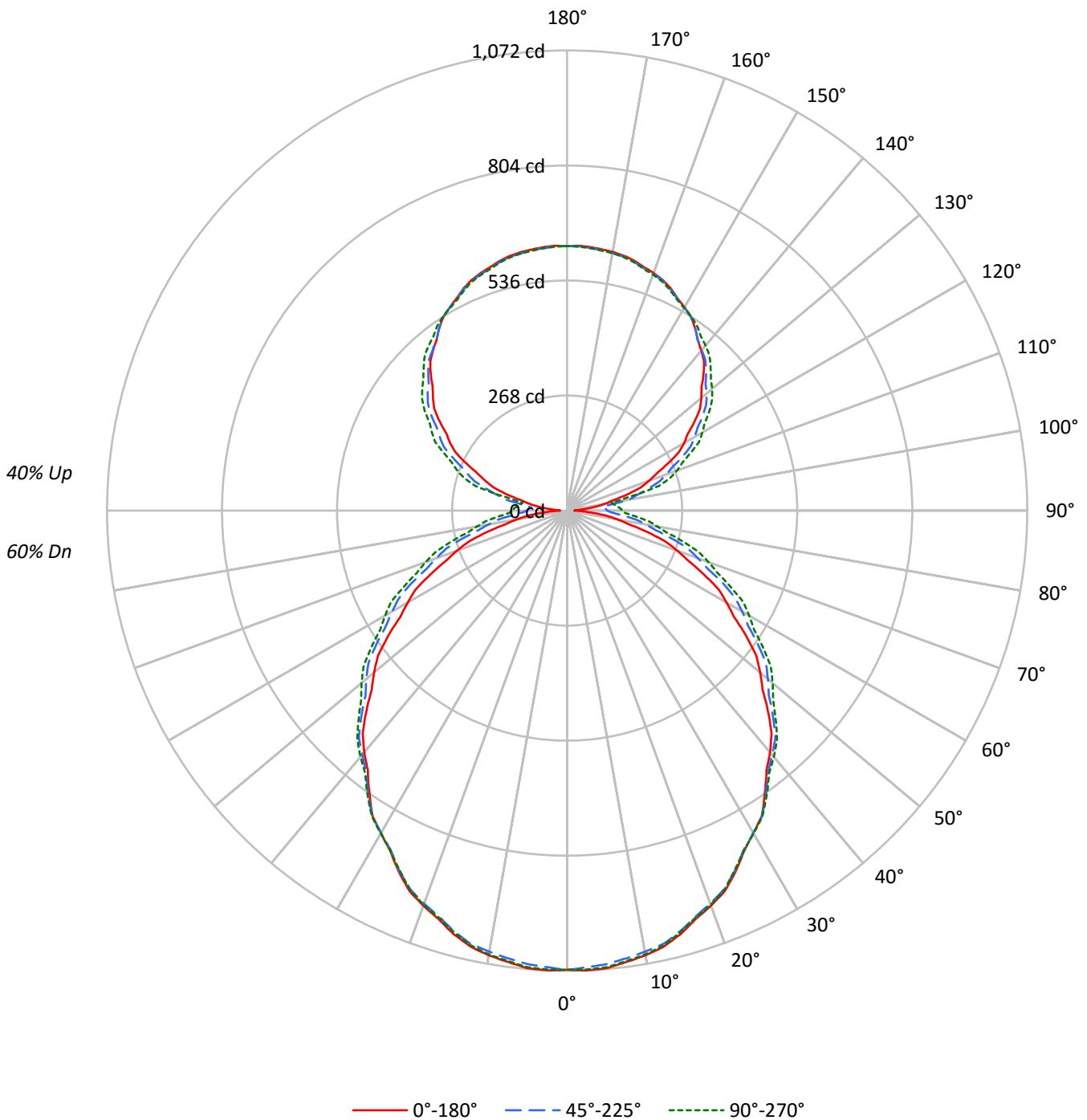
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60
1	99	94	90	86	92	88	84	81	77	74	71	66	64	62	56	55	53	49
2	90	82	75	70	84	77	71	66	67	62	58	57	54	51	49	46	44	40
3	82	72	64	58	76	67	60	55	58	53	49	50	46	43	43	40	37	33
4	75	63	55	49	69	59	52	46	52	46	41	45	40	36	38	35	32	28
5	69	56	48	42	64	53	45	39	46	40	35	40	35	31	34	31	28	25
6	63	51	42	36	59	47	40	34	42	35	31	36	31	27	31	27	24	21
7	58	46	37	32	54	43	35	30	38	32	27	33	28	24	28	24	21	19
8	54	41	33	28	50	39	32	27	34	28	24	30	25	22	26	22	19	17
9	50	38	30	25	47	36	29	24	32	26	22	28	23	19	24	20	17	15
10	47	35	27	22	44	33	26	21	29	23	19	26	21	18	22	19	16	14

**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	1.9
10°-20°	287.2	5.5
20°-30°	427.1	8.2
30°-40°	505.9	9.7
40°-50°	523.0	10.0
50°-60°	481.8	9.3
60°-70°	389.5	7.5
70°-80°	260.8	5.0
80°-90°	136.5	2.6
90°-100°	98.3	1.9
100°-110°	194.0	3.7
110°-120°	287.8	5.5
120°-130°	342.6	6.6
130°-140°	354.9	6.8
140°-150°	326.2	6.3
150°-160°	262.4	5.0
160°-170°	169.7	3.3
170°-180°	58.5	1.1
0°-30°	815.4	15.7
0°-40°	1321.2	25.4
0°-60°	2326.0	44.7
0°-90°	3112.9	59.8
90°-120°	580.1	11.1
90°-150°	1603.8	30.8
90°-180°	2094.0	40.2
0°-180°	5207.3	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	12
95°	40	65	84	108	116	44
105°	144	163	194	214	222	152
115°	258	269	296	312	316	256
125°	363	366	386	400	405	324
135°	449	451	458	470	473	346
145°	520	520	520	525	527	325
155°	571	569	569	570	567	263
165°	603	600	600	603	599	170
175°	616	614	614	617	614	59
180°	616	616	616	616	616	



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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°	32.8	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	33.7	42.0	50.3	58.8	67.4	76.0	84.6	93.3	99.2
92.5°	22.1	28.5	34.8	41.1	47.5	55.0	63.7	72.5	81.2	90.0	95.6
95°	39.7	45.4	51.2	57.0	62.7	67.6	71.7	75.7	79.8	83.9	89.5
97.5°	66.8	72.7	78.8	84.7	90.8	93.7	93.8	93.8	93.8	93.8	95.8
100°	87.9	93.0	98.3	103.4	108.7	115.1	123.0	130.9	138.8	146.6	136.4
102.5°	109.3	114.2	119.1	124.0	129.0	135.1	142.7	150.2	157.6	165.2	167.0
105°	143.8	147.8	152.0	156.1	160.3	165.8	172.9	179.9	186.8	193.8	198.5
107.5°	179.6	182.8	185.9	189.1	192.3	197.3	204.2	211.2	218.0	225.0	229.6
110°	202.9	205.7	208.4	211.3	214.1	218.8	225.6	232.3	239.0	245.7	249.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	225.5	228.0	230.5	233.0	235.5	239.9	246.4	252.9	259.3	265.8	269.6
115°	258.5	260.6	262.8	264.9	267.0	271.1	277.3	283.5	289.6	295.8	299.6
117.5°	292.6	293.7	294.7	295.8	296.8	300.4	306.5	312.7	318.7	324.9	328.3
120°	314.6	315.2	315.7	316.3	316.9	320.0	325.7	331.4	337.1	342.7	346.5
122.5°	333.1	333.8	334.5	335.2	335.9	338.9	344.3	349.5	354.9	360.2	363.8
125°	362.8	363.3	363.8	364.3	364.8	367.3	371.9	376.7	381.3	386.0	389.3
127.5°	390.4	390.6	390.9	391.2	391.5	393.5	397.3	401.0	404.8	408.5	411.7
130°	407.9	408.2	408.5	408.8	409.0	410.8	414.2	417.6	420.9	424.3	427.3
132.5°	424.6	425.2	425.8	426.3	426.8	428.2	430.5	432.8	435.0	437.4	440.6
135°	449.4	449.7	450.1	450.5	450.9	451.8	453.2	454.6	456.1	457.5	460.3
137.5°	472.1	472.4	472.7	473.1	473.4	473.9	474.5	475.1	475.7	476.4	479.2
140°	486.3	486.5	486.7	486.9	487.1	487.3	487.4	487.5	487.6	487.8	490.5
142.5°	499.8	499.7	499.6	499.6	499.5	499.6	499.8	500.0	500.1	500.3	502.5
145°	519.6	519.6	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	520.7
147.5°	535.9	535.8	535.8	535.7	535.7	535.7	535.9	536.0	536.1	536.2	536.7
150°	546.8	546.6	546.4	546.2	546.0	546.0	546.2	546.4	546.6	546.8	547.0
152.5°	557.4	557.0	556.5	556.1	555.6	555.5	555.7	555.9	556.1	556.3	556.5
155°	571.1	570.5	569.9	569.3	568.7	568.5	568.7	568.9	569.1	569.3	569.6
157.5°	581.6	581.2	580.9	580.5	580.1	580.0	580.0	580.0	580.0	580.1	580.4
160°	588.9	588.2	587.6	587.0	586.4	586.2	586.3	586.4	586.5	586.6	587.0
162.5°	594.7	594.1	593.5	592.9	592.3	592.1	592.2	592.3	592.4	592.5	593.0
165°	602.6	602.0	601.4	600.8	600.2	599.9	600.0	600.1	600.2	600.3	600.9
167.5°	608.4	607.8	607.2	606.5	605.9	605.6	605.7	605.8	605.9	606.0	606.8
170°	611.8	611.1	610.3	609.6	608.8	608.5	608.6	608.7	608.8	608.9	609.8
172.5°	613.9	613.2	612.5	611.8	611.1	610.9	611.0	611.2	611.4	611.6	612.3
175°	616.3	615.7	615.1	614.5	613.9	613.6	613.7	613.8	613.9	614.0	614.8
177.5°	617.4	616.9	616.4	615.9	615.4	615.2	615.3	615.4	615.5	615.6	616.1
180°	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3



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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°	114.3	119.8	125.2	128.9	130.5	132.2	133.9	135.6
90°	105.0	110.9	116.7	120.7	122.6	124.5	126.5	128.5
92.5°	101.3	107.0	112.7	116.4	118.2	120.0	121.7	123.5
95°	95.1	100.8	106.4	110.1	111.7	113.3	114.9	116.5
97.5°	97.9	99.9	101.9	103.7	105.3	106.9	108.5	110.1
100°	126.1	115.9	105.7	101.1	102.1	103.0	104.0	105.0
102.5°	168.8	170.8	172.6	170.8	165.2	159.8	154.2	148.8
105°	203.2	207.8	212.5	215.6	217.1	218.6	220.2	221.7
107.5°	234.3	238.8	243.5	246.4	247.5	248.7	249.8	251.0
110°	254.0	258.1	262.3	265.2	266.9	268.6	270.3	272.1





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

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.5	277.3	281.2	283.9	285.4	286.9	288.3	289.8
115°	303.4	307.2	310.9	313.3	314.1	314.9	315.7	316.4
117.5°	331.7	335.2	338.6	341.0	342.3	343.7	345.0	346.3
120°	350.2	354.0	357.8	360.1	360.9	361.8	362.7	363.7
122.5°	367.4	370.9	374.5	376.7	377.5	378.3	379.1	379.9
125°	392.6	396.0	399.2	401.3	402.2	403.0	403.9	404.8
127.5°	415.0	418.2	421.4	423.3	423.9	424.5	425.2	425.8
130°	430.2	433.1	436.2	438.0	438.6	439.3	439.9	440.6
132.5°	443.8	447.0	450.2	452.0	452.5	453.0	453.4	453.9
135°	463.1	466.0	468.8	470.5	471.0	471.6	472.1	472.7
137.5°	481.9	484.7	487.6	489.1	489.5	489.9	490.3	490.7
140°	493.3	496.0	498.8	500.4	500.7	501.0	501.3	501.6
142.5°	504.7	507.1	509.3	510.5	510.8	511.2	511.5	511.8
145°	522.0	523.2	524.5	525.3	525.6	525.9	526.2	526.6
147.5°	537.2	537.8	538.3	538.4	538.1	537.8	537.3	537.0
150°	547.2	547.4	547.6	547.4	546.9	546.3	545.7	545.1
152.5°	556.7	556.9	557.1	556.9	556.2	555.5	554.9	554.2
155°	569.9	570.2	570.5	570.2	569.4	568.6	567.7	566.9
157.5°	580.7	581.0	581.3	581.1	580.3	579.5	578.7	577.8
160°	587.4	587.8	588.2	588.0	587.2	586.4	585.6	584.8
162.5°	593.6	594.2	594.7	594.6	593.7	592.8	591.9	591.0
165°	601.6	602.2	602.8	602.7	601.9	601.0	600.2	599.4
167.5°	607.5	608.2	608.9	608.9	607.9	607.0	606.1	605.2
170°	610.6	611.5	612.3	612.2	611.3	610.4	609.5	608.5
172.5°	613.0	613.7	614.5	614.4	613.5	612.6	611.7	610.8
175°	615.6	616.4	617.2	617.2	616.3	615.4	614.5	613.6
177.5°	616.7	617.2	617.8	617.8	617.1	616.5	615.8	615.2
180°	616.3	616.3	616.3	616.3	616.3	616.3	616.3	616.3

(END OF REPORT)