

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: P333405-935

Luminaire Tested: **S125DIW-S850D470U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333405-935  
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-S850D470U935-4F0-1E-UDD-F1  
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH 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: 4341.6 lumens  
Efficiency: N/A  
Efficacy: 115.2 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: Semi-Direct

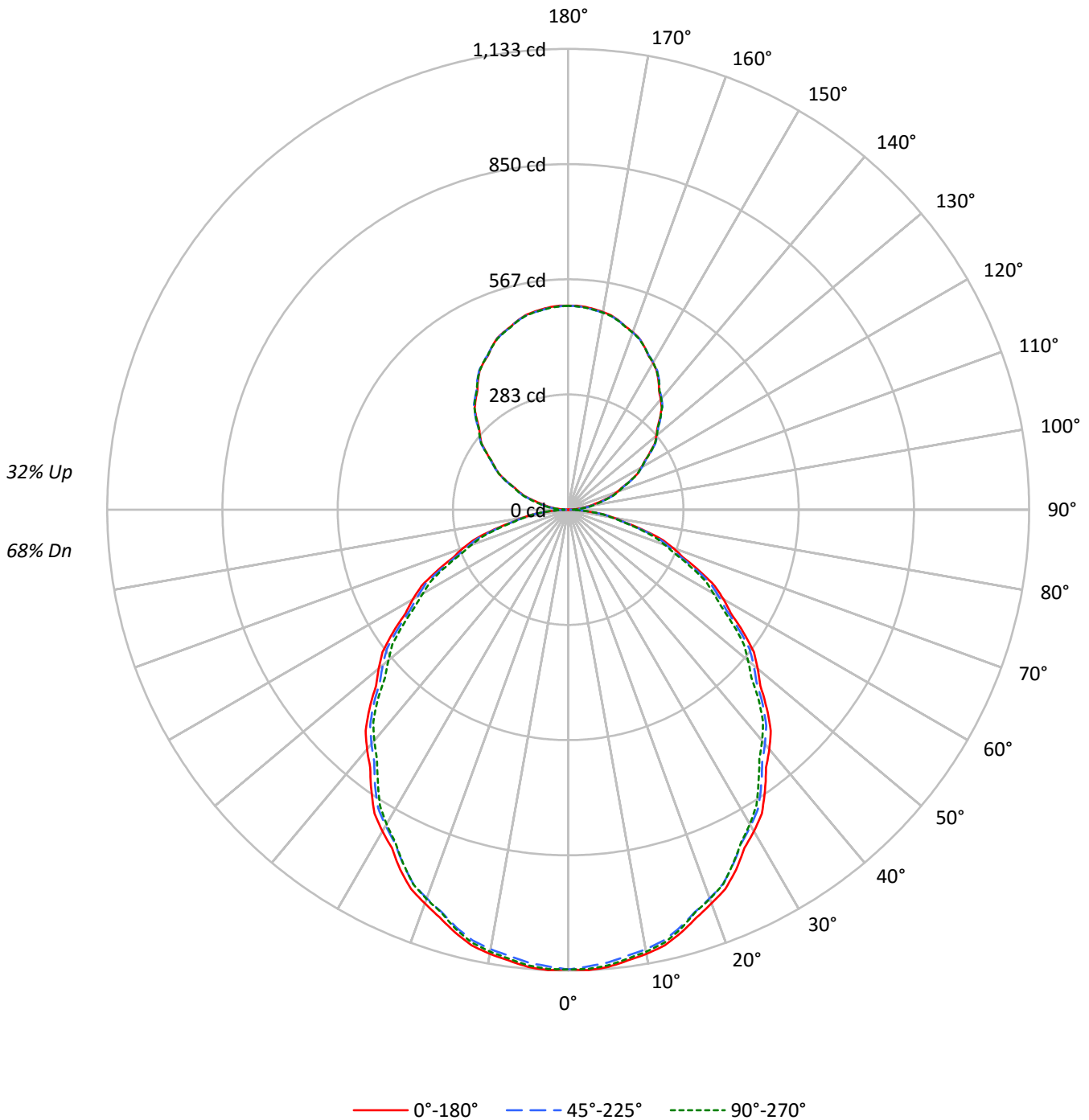
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	68
1	102	97	93	90	96	92	88	85	82	79	77	72	70	69	64	62	61	57
2	93	85	78	73	87	80	75	70	72	67	63	64	60	57	56	54	51	48
3	84	75	67	61	79	71	64	58	63	58	53	56	52	48	50	47	44	40
4	77	66	58	52	73	63	55	50	56	50	45	50	45	41	45	41	38	35
5	71	59	51	44	67	56	48	43	50	44	39	45	40	36	40	36	33	30
6	66	53	45	39	62	50	43	37	45	39	34	41	36	32	36	32	29	26
7	61	48	40	34	57	46	38	33	41	35	30	37	32	28	33	29	26	23
8	56	44	36	30	53	42	34	29	38	31	27	34	29	25	31	26	23	21
9	53	40	32	27	50	38	31	26	35	29	24	31	26	23	28	24	21	19
10	49	37	29	24	46	35	28	24	32	26	22	29	24	20	26	22	19	17

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

	0°	45°	90°
0°	7299	7299	7299
5°	7316	7247	7293
10°	7271	7195	7237
15°	7192	7109	7138
20°	7080	6988	7000
25°	6959	6844	6837
30°	6809	6689	6655
35°	6649	6522	6430
40°	6483	6340	6250
45°	6305	6175	6052
50°	6109	5974	5795
55°	5920	5749	5588
60°	5694	5521	5324
65°	5425	5248	5069
70°	5166	4930	4762
75°	4706	4551	4397
80°	4192	4125	4024
85°	3646	3712	3512



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.6	2.5
10°-20°	301.0	6.9
20°-30°	444.5	10.2
30°-40°	518.7	11.9
40°-50°	520.9	12.0
50°-60°	457.3	10.5
60°-70°	340.7	7.8
70°-80°	194.8	4.5
80°-90°	57.8	1.3
90°-100°	33.6	0.8
100°-110°	99.2	2.3
110°-120°	168.0	3.9
120°-130°	221.1	5.1
130°-140°	247.7	5.7
140°-150°	242.8	5.6
150°-160°	203.9	4.7
160°-170°	135.6	3.1
170°-180°	47.4	1.1
0°-30°	852.1	19.6
0°-40°	1370.8	31.6
0°-60°	2348.9	54.1
0°-90°	2942.3	67.8
90°-120°	300.8	6.9
90°-150°	1012.4	23.3
90°-180°	1399.0	32.2
0°-180°	4341.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1128	1126	1118	1125	1125	107
15°	1076	1073	1063	1067	1068	303
25°	976	972	960	962	960	449
35°	843	839	827	823	816	527
45°	690	686	676	666	663	532
55°	526	523	511	503	496	469
65°	355	353	343	336	332	352
75°	189	187	182	180	176	201
85°	49	50	50	49	47	55
90°	0	4	6	8	9	4
95°	25	26	30	33	34	27
105°	89	91	93	96	97	95
115°	168	170	171	170	170	166
125°	246	248	248	247	247	220
135°	319	321	322	322	320	246
145°	387	388	389	389	388	242
155°	443	443	443	444	443	204
165°	481	480	481	482	480	136
175°	500	499	499	501	498	48
180°	501	501	501	501	501	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2
2.5°	1133.2	1132.6	1132.2	1131.7	1131.2	1130.1	1128.6	1127.0	1125.4	1123.9	1125.4
5°	1128.5	1128.1	1127.7	1127.3	1126.9	1125.7	1123.7	1121.7	1119.7	1117.8	1119.6
7.5°	1118.1	1117.8	1117.3	1116.9	1116.5	1115.3	1113.0	1110.9	1108.7	1106.5	1108.2
10°	1108.8	1108.5	1108.0	1107.6	1107.2	1106.0	1103.7	1101.6	1099.4	1097.2	1098.8
12.5°	1097.3	1096.7	1096.0	1095.2	1094.5	1093.1	1091.1	1089.1	1087.0	1085.0	1086.3
15°	1075.7	1075.1	1074.5	1073.9	1073.3	1071.9	1069.8	1067.6	1065.4	1063.2	1064.2
17.5°	1050.9	1050.0	1049.1	1048.3	1047.4	1045.8	1043.5	1041.3	1039.0	1036.7	1037.9
20°	1030.1	1029.8	1029.3	1028.9	1028.6	1027.0	1024.4	1021.8	1019.3	1016.7	1018.1
22.5°	1009.4	1008.7	1008.0	1007.2	1006.5	1005.0	1002.5	1000.1	997.6	995.2	996.2
25°	976.5	975.5	974.5	973.4	972.5	970.7	968.1	965.5	962.9	960.4	960.8
27.5°	938.0	937.5	936.9	936.3	935.6	934.0	931.3	928.7	926.0	923.3	923.4
30°	913.0	912.4	911.8	911.2	910.6	908.8	905.9	902.8	899.8	896.9	896.5
32.5°	885.8	884.8	884.0	883.0	882.2	880.4	877.7	875.0	872.4	869.7	869.0
35°	843.3	842.4	841.6	840.9	840.1	838.3	835.5	832.7	829.9	827.2	826.1
37.5°	799.1	798.1	797.0	796.1	795.0	793.2	790.7	788.0	785.4	782.8	781.3
40°	769.0	768.0	767.1	766.0	765.0	763.2	760.3	757.6	754.8	752.0	750.3
42.5°	736.8	736.0	735.1	734.3	733.5	731.7	728.9	726.1	723.3	720.6	718.9
45°	690.3	689.5	688.7	687.9	687.2	685.5	683.2	680.8	678.4	676.1	673.6
47.5°	640.2	640.3	640.3	640.3	640.4	639.0	636.1	633.3	630.4	627.6	625.1
50°	608.0	607.4	606.8	606.2	605.7	604.2	601.8	599.4	597.0	594.6	592.0
52.5°	575.1	574.7	574.3	573.9	573.4	571.9	569.4	566.8	564.3	561.7	559.5
55°	525.8	525.2	524.6	524.0	523.4	521.7	518.9	516.2	513.3	510.6	508.8
57.5°	473.7	473.5	473.1	472.8	472.5	471.1	468.8	466.5	464.1	461.8	459.4
60°	440.8	440.1	439.3	438.4	437.6	436.2	433.9	431.8	429.6	427.4	425.4
62.5°	406.5	405.9	405.3	404.6	404.0	402.7	400.9	399.0	397.1	395.2	393.1
65°	355.0	354.6	354.2	353.8	353.4	352.1	349.9	347.8	345.5	343.4	341.6
67.5°	305.1	304.3	303.4	302.6	301.8	300.5	298.9	297.3	295.7	294.0	292.5
70°	273.6	272.6	271.6	270.6	269.7	268.3	266.5	264.7	262.9	261.1	259.9
72.5°	239.3	238.6	237.9	237.3	236.6	235.7	234.5	233.3	232.2	231.1	229.7
75°	188.6	188.3	187.9	187.5	187.1	186.4	185.4	184.4	183.4	182.4	181.8
77.5°	142.0	141.8	141.7	141.5	141.4	141.0	140.4	139.9	139.3	138.8	138.4
80°	112.7	112.7	112.7	112.7	112.7	112.4	112.1	111.7	111.2	110.9	110.7
82.5°	86.9	86.6	86.3	85.9	85.7	85.4	85.3	85.3	85.2	85.2	84.8
85°	49.2	49.4	49.6	49.8	49.9	50.1	50.1	50.1	50.1	50.1	49.9
87.5°	19.4	19.5	19.6	19.8	20.0	20.0	20.0	19.9	19.9	19.9	20.0
90°	0.4	1.1	1.8	2.5	3.2	3.8	4.4	5.0	5.6	6.3	6.7
92.5°	9.5	9.9	10.4	10.9	11.4	12.0	12.7	13.5	14.2	15.0	15.6
95°	25.4	25.6	25.7	25.9	26.1	26.6	27.5	28.3	29.2	30.0	30.7
97.5°	42.1	42.2	42.3	42.4	42.4	43.0	44.3	45.5	46.7	47.9	48.4
100°	54.7	54.7	54.7	54.7	54.7	55.2	56.3	57.4	58.5	59.7	60.5
102.5°	68.0	68.4	68.8	69.1	69.5	69.9	70.5	71.0	71.6	72.2	73.0
105°	88.9	89.4	89.8	90.2	90.7	91.2	91.7	92.2	92.7	93.2	93.8
107.5°	112.1	112.5	113.0	113.4	113.8	114.3	114.6	115.0	115.5	115.8	116.1
110°	128.0	128.5	128.9	129.3	129.8	130.1	130.4	130.6	130.9	131.1	131.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	144.2	144.5	144.6	144.9	145.2	145.4	145.8	146.1	146.4	146.7	146.9
115°	168.2	168.5	168.9	169.3	169.6	169.9	170.0	170.2	170.4	170.6	170.5
117.5°	192.3	192.3	192.5	192.7	192.9	193.0	193.2	193.3	193.5	193.6	193.7
120°	207.2	207.7	208.1	208.5	209.0	209.2	209.3	209.4	209.5	209.6	209.6
122.5°	223.4	223.6	223.8	223.9	224.0	224.3	224.5	224.7	225.0	225.2	225.1
125°	245.5	246.0	246.5	247.0	247.5	247.9	248.0	248.1	248.1	248.2	248.1
127.5°	268.9	269.1	269.5	269.8	270.1	270.3	270.4	270.4	270.5	270.7	270.6
130°	282.9	283.4	283.8	284.2	284.6	285.0	285.2	285.3	285.5	285.7	285.6
132.5°	297.0	297.6	298.4	299.1	299.8	300.1	300.1	300.1	300.1	300.0	299.9
135°	319.2	319.8	320.3	320.8	321.3	321.6	321.7	321.8	321.8	321.9	321.9
137.5°	340.1	340.6	341.1	341.6	342.2	342.5	342.7	342.9	343.0	343.3	343.4
140°	353.5	354.0	354.4	354.8	355.2	355.7	355.9	356.2	356.5	356.7	356.9
142.5°	367.0	367.3	367.7	368.1	368.4	368.8	369.1	369.5	369.8	370.1	370.2
145°	386.8	387.1	387.4	387.8	388.1	388.4	388.7	388.9	389.2	389.4	389.4
147.5°	405.0	405.2	405.4	405.5	405.8	406.0	406.1	406.4	406.6	406.8	407.0
150°	417.2	417.1	417.0	416.9	416.8	417.0	417.3	417.7	418.0	418.4	418.4
152.5°	427.1	427.3	427.4	427.5	427.7	427.7	427.9	428.1	428.2	428.3	428.5
155°	442.6	442.6	442.6	442.6	442.6	442.6	442.6	442.7	442.8	442.9	443.2
157.5°	456.2	456.1	455.9	455.7	455.5	455.5	455.6	455.6	455.7	455.8	456.2
160°	464.4	464.2	463.8	463.6	463.3	463.2	463.3	463.4	463.5	463.6	464.0
162.5°	471.6	471.4	471.2	471.0	470.8	470.7	470.7	470.7	470.8	470.8	471.2
165°	481.1	481.0	480.8	480.6	480.4	480.4	480.5	480.6	480.7	480.8	481.1
167.5°	489.3	489.0	488.6	488.3	487.9	487.8	487.8	487.8	487.8	487.8	488.3
170°	493.6	493.3	492.9	492.6	492.2	492.1	492.1	492.1	492.1	492.1	492.6
172.5°	496.8	496.5	496.1	495.8	495.4	495.2	495.2	495.2	495.2	495.2	495.8
175°	500.3	499.9	499.6	499.2	498.9	498.7	498.7	498.7	498.7	498.7	499.2
177.5°	502.0	501.8	501.5	501.3	500.9	500.8	500.8	500.7	500.6	500.5	500.9
180°	501.4	501.4	501.4	501.4	501.4	501.4	501.4	501.4	501.4	501.4	501.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2	1130.2
2.5°	1127.0	1128.6	1130.1	1130.9	1130.8	1130.6	1130.4	1130.2
5°	1121.4	1123.1	1124.9	1125.7	1125.5	1125.3	1125.1	1124.9
7.5°	1110.0	1111.7	1113.4	1114.2	1114.0	1113.9	1113.6	1113.4
10°	1100.4	1102.0	1103.5	1104.2	1104.1	1103.8	1103.6	1103.5
12.5°	1087.5	1088.8	1090.1	1090.7	1090.7	1090.6	1090.6	1090.5
15°	1065.2	1066.2	1067.2	1067.6	1067.6	1067.6	1067.6	1067.6
17.5°	1039.2	1040.4	1041.6	1041.8	1040.8	1039.8	1038.8	1037.8
20°	1019.5	1020.9	1022.3	1022.4	1021.5	1020.5	1019.5	1018.5
22.5°	997.0	998.0	998.9	999.0	998.3	997.6	997.0	996.3
25°	961.1	961.6	962.0	961.8	961.3	960.7	960.1	959.5
27.5°	923.5	923.6	923.7	923.4	922.8	922.2	921.6	921.0
30°	896.1	895.7	895.3	894.8	894.2	893.6	893.0	892.4
32.5°	868.2	867.5	866.9	865.9	864.9	863.8	862.7	861.7
35°	825.2	824.1	823.2	821.9	820.3	818.7	817.1	815.5
37.5°	779.8	778.3	776.9	775.7	774.8	773.9	773.0	772.1
40°	748.5	746.7	744.9	743.6	743.0	742.5	741.9	741.3
42.5°	717.3	715.7	714.0	712.7	711.9	710.9	710.0	709.1
45°	671.2	668.8	666.5	665.0	664.4	663.8	663.2	662.6
47.5°	622.7	620.3	617.9	616.0	614.6	613.2	611.7	610.4
50°	589.4	586.9	584.3	582.3	580.9	579.5	578.2	576.8
52.5°	557.2	554.9	552.7	550.8	549.2	547.7	546.1	544.6
55°	507.0	505.2	503.4	501.9	500.4	499.0	497.7	496.3
57.5°	457.2	454.9	452.5	451.0	450.2	449.5	448.8	448.0
60°	423.4	421.5	419.5	417.8	416.4	415.0	413.6	412.2
62.5°	391.0	388.8	386.7	385.0	384.0	382.9	381.9	380.7
65°	339.8	338.0	336.2	334.9	334.2	333.4	332.5	331.7
67.5°	291.0	289.5	288.0	287.0	286.5	286.0	285.5	285.1
70°	258.7	257.5	256.3	255.4	254.5	253.7	253.0	252.2
72.5°	228.3	227.0	225.7	224.5	223.8	223.0	222.2	221.4
75°	181.2	180.6	180.0	179.3	178.6	177.7	176.9	176.2
77.5°	138.1	137.7	137.3	136.9	136.3	135.8	135.3	134.7
80°	110.5	110.3	110.1	109.8	109.4	109.0	108.6	108.2
82.5°	84.4	84.0	83.7	83.5	83.4	83.3	83.3	83.2
85°	49.7	49.5	49.2	49.0	48.6	48.2	47.8	47.4
87.5°	20.1	20.1	20.2	20.1	19.8	19.5	19.3	19.0
90°	7.1	7.6	8.0	8.4	8.6	8.9	9.1	9.4
92.5°	16.1	16.7	17.3	17.7	17.8	18.0	18.3	18.4
95°	31.3	31.9	32.5	32.9	33.1	33.2	33.4	33.6
97.5°	49.0	49.6	50.1	50.5	50.5	50.7	50.8	50.9
100°	61.3	62.1	62.9	63.3	63.5	63.6	63.8	64.0
102.5°	73.9	74.7	75.6	76.1	76.4	76.6	76.9	77.1
105°	94.3	94.8	95.3	95.7	96.0	96.3	96.5	96.8
107.5°	116.3	116.6	116.8	117.0	117.0	116.9	116.9	116.9
110°	131.6	131.9	132.2	132.2	132.2	132.1	132.0	131.9





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CATALOG NUMBER: S125DIW-S850D470U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	147.0	147.1	147.2	147.2	147.1	146.9	146.7	146.5
115°	170.4	170.3	170.2	170.1	170.0	170.0	169.9	169.8
117.5°	193.8	193.8	193.9	193.8	193.5	193.1	192.7	192.3
120°	209.6	209.6	209.6	209.4	209.1	208.7	208.4	208.0
122.5°	225.1	225.0	224.9	224.7	224.5	224.2	223.9	223.6
125°	247.9	247.7	247.5	247.4	247.3	247.2	247.1	247.0
127.5°	270.5	270.4	270.4	270.2	270.0	269.8	269.7	269.5
130°	285.5	285.4	285.3	285.2	285.0	284.8	284.6	284.5
132.5°	299.8	299.7	299.6	299.5	299.3	299.0	298.8	298.5
135°	321.9	321.9	321.9	321.8	321.4	321.1	320.7	320.4
137.5°	343.5	343.5	343.7	343.5	343.1	342.7	342.2	341.7
140°	357.1	357.2	357.4	357.2	356.8	356.4	355.9	355.5
142.5°	370.3	370.4	370.5	370.3	369.9	369.5	369.0	368.6
145°	389.4	389.4	389.4	389.3	389.1	388.8	388.6	388.3
147.5°	407.2	407.4	407.6	407.4	406.8	406.2	405.6	405.1
150°	418.4	418.4	418.4	418.3	418.1	417.9	417.8	417.6
152.5°	428.8	429.0	429.1	429.1	428.8	428.5	428.2	427.8
155°	443.6	443.9	444.3	444.3	443.8	443.4	443.0	442.6
157.5°	456.5	456.8	457.2	457.1	456.5	455.9	455.4	454.8
160°	464.3	464.7	465.0	464.9	464.5	464.1	463.6	463.2
162.5°	471.7	472.0	472.4	472.4	471.9	471.4	470.9	470.4
165°	481.5	481.8	482.2	482.1	481.6	481.0	480.5	480.0
167.5°	488.8	489.3	489.8	489.8	489.2	488.7	488.2	487.7
170°	493.1	493.6	494.2	494.1	493.5	492.9	492.3	491.7
172.5°	496.3	496.8	497.3	497.3	496.7	496.2	495.7	495.2
175°	499.7	500.3	500.8	500.8	500.2	499.6	498.9	498.3
177.5°	501.4	501.8	502.2	502.1	501.7	501.2	500.7	500.2
180°	501.4	501.4	501.4	501.4	501.4	501.4	501.4	501.4

(END OF REPORT)