

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: P333409-840

Luminaire Tested: **S125DIW-S850D770U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333409-840
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-S850D770U840-4F0-1E-UDD-D1
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6003.6 lumens
Efficiency: N/A
Efficacy: 133.4 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

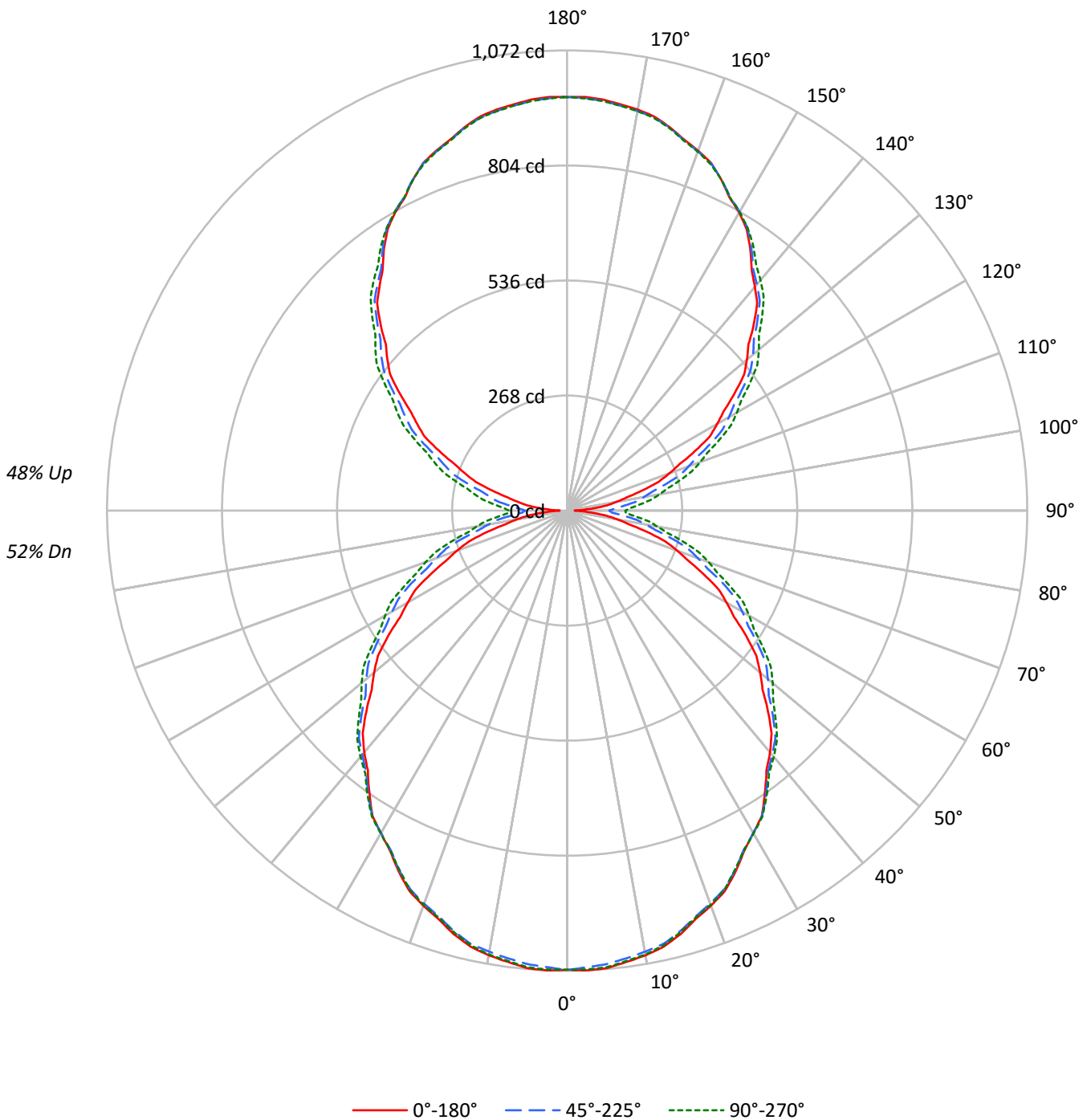
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	99	99	99	99	84	84	84	71	71	71	58	58	58	52
1	97	93	89	85	90	86	82	79	73	70	68	61	59	57	50	49	47	42
2	88	81	74	69	81	75	69	64	63	59	55	53	50	47	43	41	39	35
3	80	71	63	57	74	65	59	53	56	50	46	47	43	40	38	35	33	29
4	73	62	54	48	68	58	51	45	49	44	39	41	37	34	34	31	28	25
5	67	55	47	41	62	51	44	38	44	38	34	37	33	29	31	27	25	21
6	62	50	41	35	57	46	39	33	40	34	29	33	29	25	28	24	21	19
7	57	45	37	31	53	42	34	29	36	30	26	30	26	22	25	22	19	16
8	53	41	33	27	49	38	31	26	33	27	23	28	23	20	23	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	21	18	15	13
10	46	34	27	22	43	32	25	21	28	22	18	24	19	16	20	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	1.7
10°-20°	287.2	4.8
20°-30°	427.1	7.1
30°-40°	505.9	8.4
40°-50°	523.0	8.7
50°-60°	481.8	8.0
60°-70°	389.5	6.5
70°-80°	260.8	4.3
80°-90°	137.4	2.3
90°-100°	140.4	2.3
100°-110°	246.5	4.1
110°-120°	360.2	6.0
120°-130°	446.0	7.4
130°-140°	485.2	8.1
140°-150°	468.3	7.8
150°-160°	391.8	6.5
160°-170°	260.4	4.3
170°-180°	91.1	1.5
0°-30°	815.4	13.6
0°-40°	1321.2	22.0
0°-60°	2326.0	38.7
0°-90°	3113.7	51.9
90°-120°	747.1	12.4
90°-150°	2146.6	35.8
90°-180°	2890.0	48.1
0°-180°	6003.6	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	57	98	125	135	14
95°	62	92	134	162	172	63
105°	180	202	237	261	272	193
115°	329	341	368	386	392	326
125°	476	480	501	516	521	426
135°	615	619	627	640	643	474
145°	744	746	748	753	755	465
155°	850	850	851	853	850	391
165°	924	923	924	926	922	261
175°	961	958	958	962	957	91
180°	963	963	963	963	963	



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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	63.7	71.7	79.9	88.1	96.1	104.3	109.9
90°	17.6	26.4	35.1	43.9	52.7	61.6	70.7	79.8	88.9	98.0	104.2
92.5°	33.2	41.1	48.9	56.8	64.5	73.2	82.8	92.3	101.9	111.4	117.8
95°	62.4	68.8	75.1	81.5	88.0	95.9	105.5	115.1	124.7	134.3	140.6
97.5°	93.3	99.0	104.5	110.1	115.7	123.4	133.4	143.3	153.3	163.2	169.3
100°	116.5	121.4	126.2	131.2	136.0	143.3	153.0	162.6	172.2	181.8	188.2
102.5°	141.5	146.6	151.8	157.0	162.2	169.0	177.3	185.7	194.1	202.5	208.8
105°	180.4	184.9	189.5	194.1	198.6	204.9	212.9	220.9	228.8	236.8	242.5
107.5°	223.5	227.5	231.5	235.5	239.5	245.2	252.7	260.2	267.7	275.2	280.2
110°	253.3	256.9	260.4	264.1	267.7	273.1	280.1	287.1	294.2	301.1	306.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	284.4	287.1	289.7	292.5	295.1	299.9	306.9	313.9	320.8	327.8	332.2
115°	329.4	331.7	334.0	336.3	338.6	343.0	349.3	355.7	362.1	368.5	372.5
117.5°	374.6	375.9	377.3	378.6	380.0	383.7	389.7	395.8	401.8	407.9	411.9
120°	403.3	404.9	406.4	407.9	409.4	412.9	418.5	424.0	429.6	435.0	439.1
122.5°	433.6	434.2	434.9	435.6	436.2	439.3	444.8	450.5	456.2	461.7	465.3
125°	475.7	476.5	477.3	478.1	478.8	481.6	486.5	491.3	496.0	500.9	504.3
127.5°	519.7	520.0	520.4	520.7	521.0	523.2	527.3	531.2	535.2	539.3	542.6
130°	546.6	547.2	547.9	548.5	549.1	551.2	554.7	558.4	562.0	565.5	568.7
132.5°	572.8	574.1	575.4	576.7	578.0	580.0	582.4	584.9	587.3	589.8	592.9
135°	615.3	616.1	616.8	617.6	618.4	619.7	621.5	623.3	625.1	626.8	629.9
137.5°	655.3	656.1	656.8	657.6	658.4	659.3	660.6	661.7	662.9	664.0	667.0
140°	680.2	681.1	682.0	682.8	683.6	684.4	685.1	685.8	686.6	687.3	690.2
142.5°	706.0	706.6	707.1	707.6	708.1	708.7	709.3	710.0	710.7	711.4	713.8
145°	744.0	744.4	744.9	745.3	745.7	746.2	746.7	747.2	747.7	748.2	749.3
147.5°	778.0	778.4	778.7	779.1	779.5	779.8	780.2	780.6	781.0	781.4	782.2
150°	801.4	801.2	801.0	800.9	800.7	801.0	801.6	802.3	802.9	803.7	803.7
152.5°	820.6	820.8	821.0	821.3	821.5	821.7	822.0	822.3	822.5	822.8	823.2
155°	850.1	850.1	850.1	850.1	850.1	850.2	850.4	850.5	850.7	850.9	851.5
157.5°	876.6	876.2	875.8	875.5	875.0	874.9	875.1	875.3	875.5	875.7	876.3
160°	892.1	891.6	891.1	890.6	890.1	889.9	890.1	890.3	890.4	890.6	891.3
162.5°	905.9	905.5	905.1	904.8	904.4	904.2	904.3	904.3	904.3	904.4	905.2
165°	924.3	924.0	923.7	923.3	923.0	922.9	923.1	923.2	923.4	923.6	924.2
167.5°	940.0	939.3	938.6	938.0	937.3	937.0	937.0	937.0	937.0	937.0	938.0
170°	948.4	947.7	947.0	946.3	945.6	945.3	945.3	945.3	945.3	945.3	946.3
172.5°	954.3	953.6	953.0	952.3	951.7	951.3	951.3	951.3	951.3	951.3	952.3
175°	961.1	960.4	959.8	959.1	958.4	958.1	958.1	958.1	958.1	958.1	959.1
177.5°	964.5	964.0	963.4	962.9	962.4	962.1	961.9	961.8	961.7	961.5	962.3
180°	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3



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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°	115.4	120.9	126.4	130.1	131.8	133.5	135.3	137.0
90°	110.4	116.5	122.8	126.9	129.1	131.2	133.3	135.4
92.5°	124.0	130.3	136.5	140.7	142.7	144.6	146.6	148.7
95°	146.8	153.2	159.5	163.6	165.5	167.5	169.5	171.5
97.5°	175.2	181.2	187.2	191.1	192.9	194.7	196.4	198.2
100°	194.6	201.0	207.4	211.5	213.2	214.9	216.6	218.4
102.5°	215.1	221.5	227.8	232.0	233.8	235.6	237.5	239.3
105°	248.2	253.9	259.5	263.4	265.5	267.6	269.8	272.0
107.5°	285.4	290.5	295.6	298.9	300.3	301.6	303.1	304.5
110°	311.0	316.0	320.9	324.1	325.6	327.0	328.5	329.9



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CATALOG NUMBER: S125DIW-S850D770U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	336.8	341.2	345.7	348.6	349.9	351.2	352.6	354.0
115°	376.6	380.6	384.7	387.3	388.5	389.7	390.9	392.2
117.5°	416.1	420.1	424.2	426.8	427.7	428.6	429.5	430.4
120°	443.0	447.0	450.9	453.3	454.0	454.7	455.4	456.3
122.5°	469.0	472.6	476.3	478.6	479.4	480.3	481.1	482.0
125°	507.7	511.1	514.5	516.6	517.7	518.7	519.7	520.7
127.5°	545.8	549.2	552.4	554.5	555.5	556.6	557.6	558.7
130°	571.7	574.8	577.9	579.9	580.7	581.6	582.4	583.2
132.5°	595.9	599.1	602.2	604.0	604.5	605.0	605.5	606.0
135°	632.9	635.9	638.9	640.8	641.3	641.8	642.3	642.8
137.5°	669.9	672.9	675.8	677.3	677.4	677.5	677.6	677.7
140°	693.1	696.0	698.9	700.3	700.4	700.5	700.6	700.7
142.5°	716.2	718.6	720.9	722.3	722.4	722.5	722.6	722.7
145°	750.5	751.6	752.9	753.7	754.1	754.5	755.0	755.4
147.5°	783.0	783.8	784.6	784.6	783.9	783.2	782.4	781.7
150°	803.7	803.7	803.7	803.5	803.4	803.3	803.2	803.2
152.5°	823.6	824.0	824.5	824.4	823.8	823.2	822.7	822.1
155°	852.2	852.8	853.5	853.4	852.6	851.8	850.9	850.1
157.5°	877.0	877.6	878.3	878.1	877.0	875.9	874.7	873.6
160°	891.9	892.6	893.2	893.2	892.3	891.5	890.7	889.9
162.5°	906.1	906.8	907.6	907.6	906.6	905.5	904.6	903.6
165°	924.9	925.6	926.2	926.0	925.1	924.1	923.1	922.1
167.5°	939.0	940.0	940.9	940.9	939.9	938.9	937.9	936.8
170°	947.4	948.4	949.4	949.3	948.1	947.0	945.7	944.6
172.5°	953.3	954.3	955.3	955.3	954.3	953.2	952.2	951.2
175°	960.1	961.1	962.1	962.0	960.8	959.7	958.5	957.4
177.5°	963.1	963.9	964.7	964.6	963.7	962.8	961.9	960.9
180°	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3

(END OF REPORT)