

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: P333219-840

Luminaire Tested: **S125DIP-S850D590U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333219-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-19,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S850D590U840-4F0-1E-UDD-D4  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 850 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

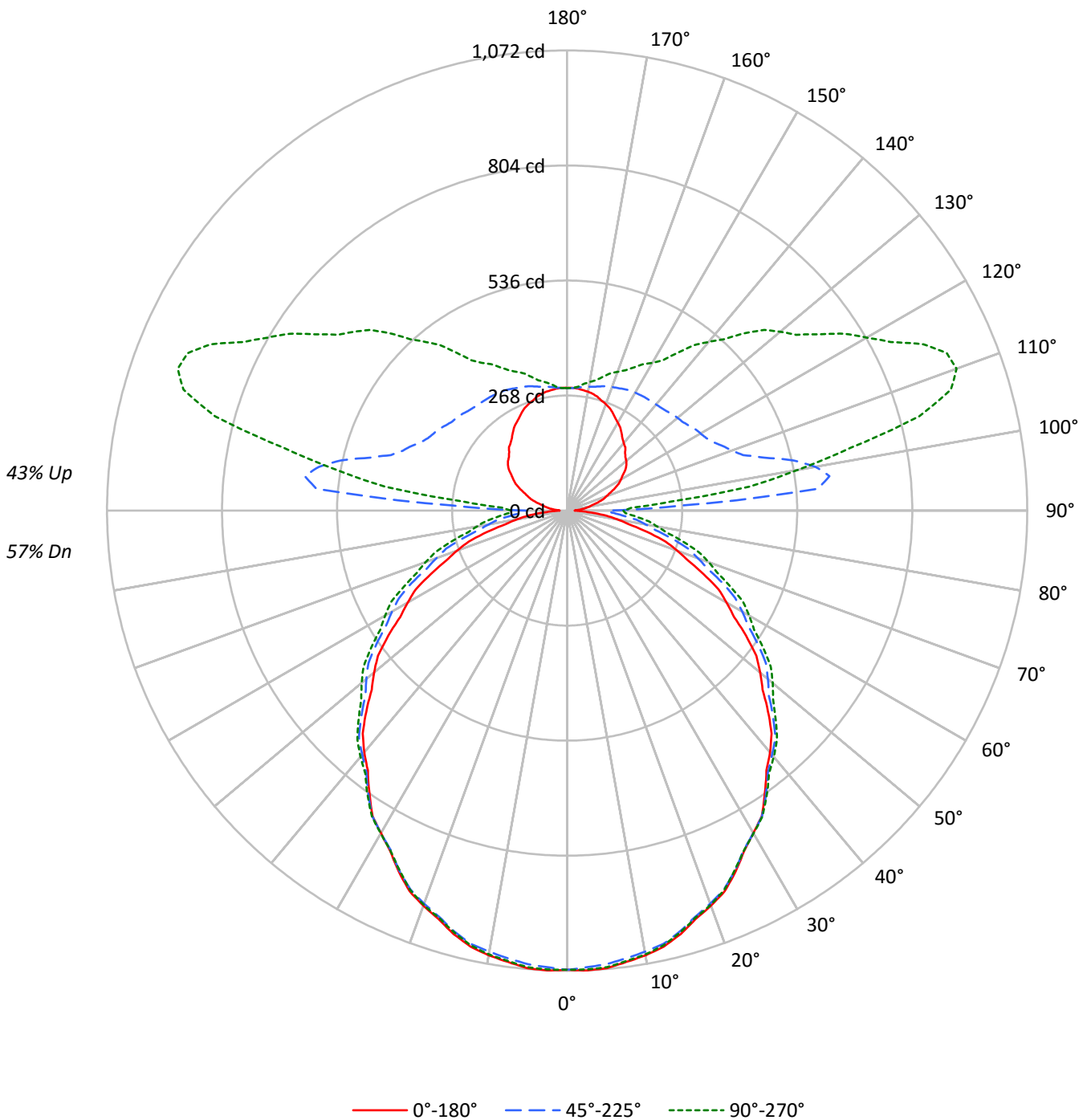
Lumens per Lamp: N/A  
Luminaire Lumens: 5457.7 lumens  
Efficiency: N/A  
Efficacy: 135.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 40.3  
Input Voltage (V): 120  
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	101	101	101	101	87	87	87	74	74	74	63	63	63	57
1	99	94	90	86	91	87	84	80	75	72	70	64	62	60	54	53	51	46
2	89	81	75	69	83	76	70	65	65	61	57	56	53	50	47	45	42	38
3	81	71	64	57	75	67	60	54	57	52	48	49	45	42	41	38	36	32
4	74	63	55	48	69	59	51	46	51	45	41	44	39	35	37	33	31	27
5	68	56	48	41	63	52	45	39	45	39	35	39	34	31	33	29	27	23
6	63	50	42	36	58	47	39	34	41	35	30	35	30	27	30	26	23	20
7	58	45	37	31	54	42	35	30	37	31	27	32	27	24	27	24	21	18
8	54	41	33	28	50	39	31	26	34	28	24	29	25	21	25	21	18	16
9	50	38	30	25	47	35	28	23	31	25	21	27	22	19	23	19	17	14
10	47	34	27	22	44	32	26	21	29	23	19	25	20	17	21	18	15	13

**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	5.3
20°-30°	427.1	7.8
30°-40°	505.9	9.3
40°-50°	523.0	9.6
50°-60°	481.8	8.8
60°-70°	389.5	7.1
70°-80°	260.8	4.8
80°-90°	136.9	2.5
90°-100°	283.0	5.2
100°-110°	501.2	9.2
110°-120°	455.3	8.3
120°-130°	359.9	6.6
130°-140°	281.0	5.1
140°-150°	207.0	3.8
150°-160°	144.4	2.6
160°-170°	85.1	1.6
170°-180°	27.7	0.5
0°-30°	815.4	14.9
0°-40°	1321.2	24.2
0°-60°	2326.0	42.6
0°-90°	3113.2	57.0
90°-120°	1239.5	22.7
90°-150°	2087.4	38.2
90°-180°	2345.0	43.0
0°-180°	5457.7	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	56	95	121	131	12
95°	33	98	587	330	242	31
105°	74	118	475	900	849	79
115°	123	155	376	782	916	121
125°	166	193	346	615	716	147
135°	191	229	328	503	584	148
145°	221	252	320	404	448	138
155°	251	270	312	353	368	116
165°	274	282	300	318	323	77
175°	285	285	287	291	290	27
180°	286	286	286	286	286	



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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	55.7	63.5	71.4	79.5	87.6	95.6	103.8	109.3
90°	17.4	25.3	34.0	42.6	51.2	60.1	68.6	77.7	86.1	95.2	101.2
92.5°	22.1	30.5	42.3	56.4	73.1	97.5	137.0	197.8	263.3	268.3	238.1
95°	32.6	39.3	50.0	62.3	81.1	114.0	183.6	318.2	485.1	586.9	581.2
97.5°	43.9	50.1	58.8	70.6	87.5	112.6	161.1	261.6	435.6	616.4	708.1
100°	51.9	57.9	65.1	76.3	92.2	115.6	156.5	238.8	391.4	587.3	736.2
102.5°	60.7	65.9	72.3	83.6	98.2	120.9	157.8	228.0	357.9	540.2	713.3
105°	74.5	78.3	84.8	94.3	107.3	128.8	161.2	219.4	322.6	475.3	645.3
107.5°	88.1	92.3	98.3	106.1	118.9	138.4	169.7	220.3	305.4	429.9	577.1
110°	97.8	101.7	106.8	114.8	126.2	145.9	176.0	222.3	298.5	407.6	537.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	108.4	111.8	115.8	123.3	134.1	153.0	182.0	225.8	295.4	393.1	507.4
115°	122.7	125.4	128.8	135.6	145.9	164.1	191.5	231.0	292.4	376.2	473.1
117.5°	135.4	138.3	141.2	147.4	158.2	175.6	201.5	237.6	291.4	365.3	450.4
120°	144.6	147.0	150.1	155.9	166.4	183.9	209.4	242.5	292.2	359.1	437.4
122.5°	153.5	155.1	157.2	162.8	173.8	191.0	216.3	247.7	292.2	353.5	425.6
125°	165.5	166.4	169.1	174.0	184.7	201.9	225.6	255.0	293.1	345.6	409.2
127.5°	174.0	175.5	178.9	185.3	196.7	213.5	235.6	262.3	295.2	339.3	393.7
130°	180.0	181.5	185.9	193.1	205.0	221.5	242.6	267.7	296.9	335.9	384.2
132.5°	183.8	185.9	191.4	199.8	212.3	228.4	248.8	271.9	298.5	332.5	375.3
135°	191.1	193.1	199.8	208.7	220.7	236.9	256.4	277.0	299.9	327.5	363.3
137.5°	200.3	201.9	208.1	217.1	228.8	245.1	262.2	281.1	302.3	324.5	353.5
140°	205.0	206.7	213.6	222.9	233.8	249.4	266.4	283.9	302.6	322.3	348.0
142.5°	211.5	212.5	218.7	227.8	238.1	252.7	268.5	284.9	302.5	321.1	343.7
145°	221.1	222.1	227.5	235.4	245.5	258.6	273.7	288.0	303.6	320.3	338.7
147.5°	230.1	230.9	235.8	243.3	252.3	264.0	277.1	290.1	304.2	318.8	334.4
150°	236.2	237.3	241.4	248.8	256.9	266.7	279.4	291.4	304.2	317.4	331.2
152.5°	242.7	243.3	246.9	253.5	261.1	269.9	281.7	292.4	303.7	315.6	328.0
155°	251.2	251.2	254.6	260.3	266.1	274.2	284.0	293.2	302.5	312.3	322.6
157.5°	258.7	258.6	261.5	266.4	271.5	277.5	286.0	293.8	300.9	308.7	317.5
160°	263.9	263.3	265.6	269.6	274.2	279.4	286.9	293.8	299.5	306.5	313.4
162.5°	268.0	267.4	269.7	273.3	277.0	281.2	287.8	293.4	298.2	303.7	309.7
165°	274.2	273.1	274.8	277.6	279.9	283.5	288.0	292.7	296.1	299.5	304.2
167.5°	278.3	277.8	278.8	280.4	282.1	284.2	288.0	291.2	292.9	295.5	298.7
170°	281.1	280.5	281.1	282.3	283.5	285.2	288.0	290.3	291.4	293.2	295.5
172.5°	283.0	282.0	282.5	283.7	284.4	285.2	287.6	289.4	289.6	290.4	292.3
175°	285.2	284.0	284.6	285.2	285.2	285.2	286.9	288.0	287.4	287.4	288.0
177.5°	286.2	285.3	285.3	285.7	285.3	285.3	286.2	286.6	285.7	285.7	286.2
180°	285.7	285.7	285.7	285.7	285.7	285.7	285.7	285.7	285.7	285.7	285.7



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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°	114.7	120.2	125.7	129.5	131.1	132.7	134.4	136.0
90°	107.0	113.0	119.0	123.6	125.2	126.8	129.1	130.7
92.5°	195.1	172.3	159.2	154.0	148.2	148.5	149.4	150.1
95°	501.0	418.6	352.8	307.8	268.5	252.9	249.9	242.4
97.5°	697.9	641.5	577.3	513.3	479.3	448.6	433.4	427.7
100°	785.5	762.1	707.7	651.0	612.6	572.5	552.6	544.7
102.5°	812.6	834.8	810.9	773.5	732.4	704.3	682.5	677.0
105°	788.2	871.8	901.8	898.6	881.8	864.4	854.5	849.3
107.5°	718.1	828.1	897.8	930.9	941.6	942.9	940.6	937.5
110°	666.5	780.3	866.0	918.0	945.5	958.2	963.8	965.4





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CATALOG NUMBER: S125DIP-S850D590U840-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	624.9	733.1	819.5	880.2	919.7	940.1	951.8	957.6
115°	572.4	665.8	748.9	814.6	860.9	889.9	907.5	916.4
117.5°	536.2	617.1	689.0	749.4	796.0	826.1	843.7	849.9
120°	516.2	589.4	656.7	710.0	754.1	783.2	800.1	806.1
122.5°	500.1	567.9	628.1	678.2	717.6	744.4	761.3	766.9
125°	476.9	539.4	593.2	637.1	670.6	695.3	709.1	716.1
127.5°	453.0	511.3	561.6	602.8	633.4	655.6	668.9	672.9
130°	438.7	492.6	540.8	580.5	610.5	630.6	643.3	647.9
132.5°	423.7	474.5	518.6	556.7	586.5	606.5	618.0	623.0
135°	403.2	446.1	485.9	520.9	547.4	567.5	579.2	583.7
137.5°	386.3	421.2	454.5	484.3	508.0	526.1	536.6	541.4
140°	376.5	406.1	435.2	461.1	483.3	499.3	508.9	512.7
142.5°	368.1	393.1	418.2	440.7	459.7	473.3	482.4	485.8
145°	357.8	376.8	395.8	412.4	427.2	437.9	445.1	448.4
147.5°	348.8	363.7	377.8	389.9	401.3	409.5	413.6	415.1
150°	343.9	356.6	367.5	378.0	386.9	394.0	396.6	397.4
152.5°	339.3	350.6	360.6	368.7	376.0	381.6	384.0	384.6
155°	332.3	341.6	349.6	356.0	361.7	365.8	367.5	368.1
157.5°	325.5	333.1	339.3	344.3	348.7	352.0	353.7	353.6
160°	320.8	326.6	332.3	336.4	340.4	343.4	344.5	343.9
162.5°	315.8	321.1	325.9	329.5	332.6	335.1	335.3	335.2
165°	308.7	312.8	316.3	319.1	321.4	322.6	322.6	322.6
167.5°	302.1	304.8	307.4	309.4	310.6	311.6	311.1	311.0
170°	298.4	300.1	301.8	303.0	304.2	304.8	304.8	304.2
172.5°	294.3	296.0	297.2	297.9	298.2	299.2	298.3	297.7
175°	289.7	289.7	290.9	290.9	290.9	291.4	290.3	289.7
177.5°	286.6	287.1	287.1	287.1	286.6	287.1	285.7	285.7
180°	285.7	285.7	285.7	285.7	285.7	285.7	285.7	285.7

(END OF REPORT)