

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: P331432-840

Luminaire Tested: **S122DIP-S1005D530U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331432-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S1005D530U840-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6210.3 lumens  
Efficiency: N/A  
Efficacy: 112.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

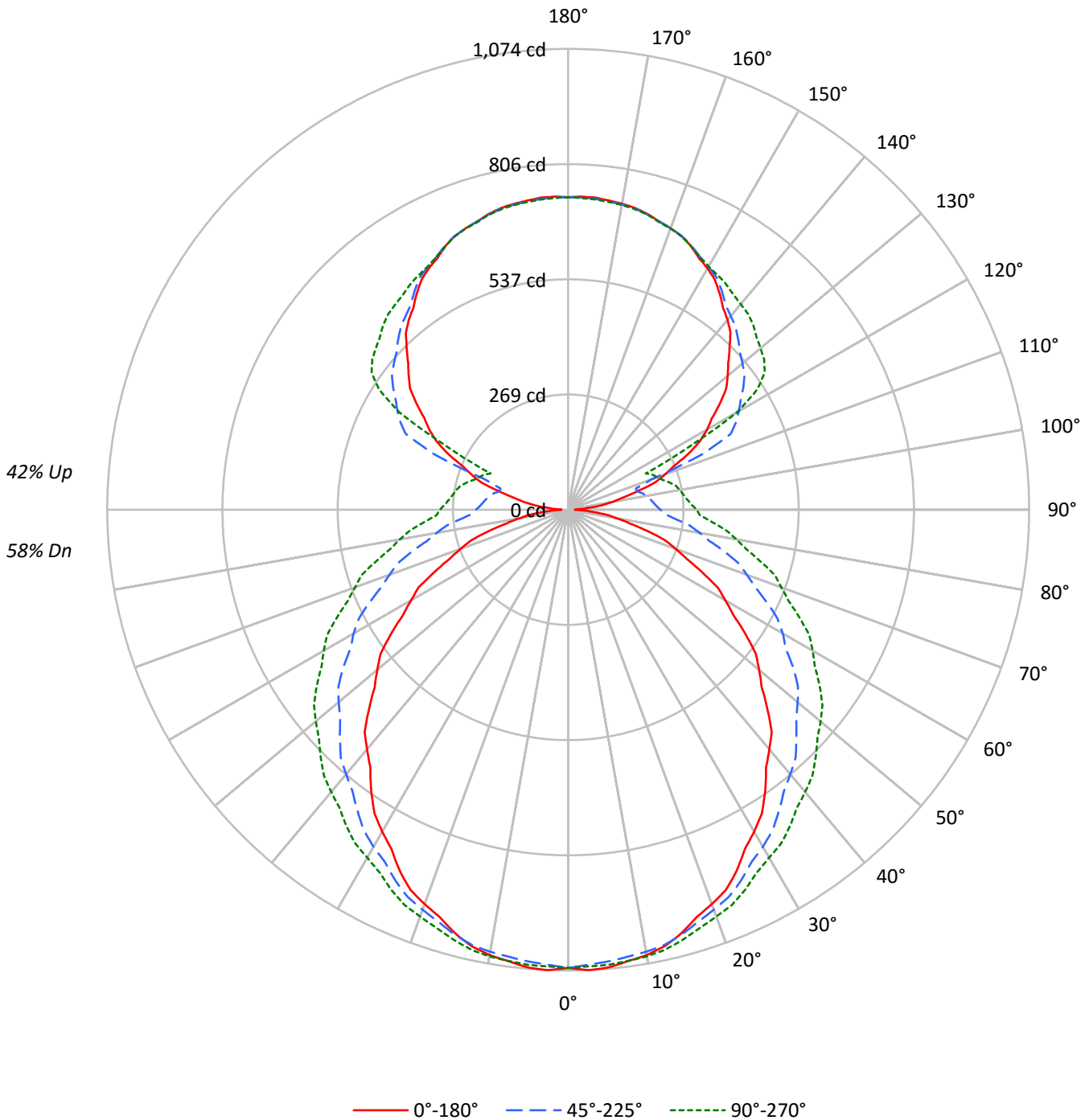
Input Watts (W): 55.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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CATALOG NUMBER: S122DIP-S1005D530U840-4F0-1E-UDD-D

**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	88	88	88	75	75	75	64	64	64	58
1	98	93	88	84	91	86	82	79	75	71	69	64	61	59	54	52	50	46
2	88	80	73	67	82	75	68	63	64	60	55	55	51	48	46	43	41	37
3	80	70	62	55	74	65	58	52	56	51	46	48	44	40	40	37	34	30
4	73	61	53	46	68	57	50	44	50	43	39	42	38	34	36	32	29	26
5	67	55	46	39	62	51	43	37	44	38	33	38	33	29	32	28	25	22
6	62	49	40	34	57	46	38	32	40	33	29	34	29	25	29	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	26	22	19	17
8	53	40	32	26	49	37	30	25	33	27	22	28	23	20	24	20	17	15
9	49	36	28	23	46	34	27	22	30	24	20	26	21	18	22	18	15	13
10	46	33	26	21	43	31	24	20	28	22	18	24	19	16	21	17	14	12

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

	0°	45°	90°
0°	17241	17241	17241
5°	17327	16597	16534
10°	17217	16106	15925
15°	16980	15587	15284
20°	16681	15031	14669
25°	16384	14494	14107
30°	15966	13945	13546
35°	15544	13412	13150
40°	15099	12958	12754
45°	14678	12551	12415
50°	14226	12185	12082
55°	13750	11789	11742
60°	13168	11380	11382
65°	12566	10901	10957
70°	11886	10385	10497
75°	11021	9881	10071
80°	9646	9362	9643
85°	8334	8915	9308



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.2	1.6
10°-20°	290.2	4.7
20°-30°	439.7	7.1
30°-40°	535.6	8.6
40°-50°	576.2	9.3
50°-60°	559.5	9.0
60°-70°	488.6	7.9
70°-80°	376.1	6.1
80°-90°	254.2	4.1
90°-100°	198.2	3.2
100°-110°	216.1	3.5
110°-120°	322.0	5.2
120°-130°	439.9	7.1
130°-140°	437.7	7.0
140°-150°	392.0	6.3
150°-160°	312.4	5.0
160°-170°	201.3	3.2
170°-180°	69.3	1.1
0°-30°	831.1	13.4
0°-40°	1366.6	22.0
0°-60°	2502.3	40.3
0°-90°	3621.2	58.3
90°-120°	736.3	11.9
90°-150°	2006.0	32.3
90°-180°	2589.0	41.7
0°-180°	6210.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1071	1066	1057	1066	1065	102
15°	1022	1024	1024	1038	1037	288
25°	929	940	953	971	976	427
35°	800	827	856	889	901	500
45°	656	699	752	798	816	506
55°	503	560	639	693	715	450
65°	344	420	511	572	594	341
75°	190	278	376	440	463	201
85°	56	152	251	313	337	60
90°	16	112	215	277	299	12
95°	47	104	198	258	278	52
105°	168	222	165	223	244	180
115°	309	338	418	230	200	304
125°	432	441	498	542	559	385
135°	532	541	560	597	610	411
145°	615	615	624	636	642	385
155°	677	673	679	682	678	312
165°	714	711	712	715	712	202
175°	730	726	727	730	726	69
180°	728	728	728	728	728	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1074.1	1073.3	1072.4	1071.6	1070.8	1069.3	1067.4	1065.5	1063.6	1061.7	1063.1
5°	1071.0	1070.0	1068.9	1067.8	1066.8	1065.3	1063.3	1061.2	1059.1	1057.0	1059.1
7.5°	1061.4	1060.7	1060.0	1059.3	1058.6	1057.5	1055.9	1054.3	1052.8	1051.2	1053.6
10°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.4	1049.4	1048.2	1047.2	1046.2	1048.9
12.5°	1041.6	1041.7	1041.9	1042.0	1042.1	1041.8	1041.1	1040.3	1039.6	1038.7	1041.6
15°	1021.5	1022.2	1022.8	1023.5	1024.2	1024.5	1024.5	1024.5	1024.5	1024.5	1027.6
17.5°	995.4	996.9	998.4	999.8	1001.2	1002.5	1003.6	1004.7	1005.8	1006.9	1010.2
20°	978.2	979.9	981.6	983.3	985.0	986.5	988.0	989.3	990.7	992.1	995.8
22.5°	959.6	961.5	963.5	965.5	967.6	969.5	971.4	973.3	975.2	977.1	981.0
25°	928.6	931.0	933.4	935.8	938.3	941.0	944.0	947.2	950.3	953.3	957.5
27.5°	891.4	895.3	899.3	903.2	907.2	910.9	914.5	918.2	921.8	925.5	930.7
30°	866.7	871.1	875.7	880.1	884.5	889.1	893.5	898.0	902.4	907.0	912.4
32.5°	839.4	844.4	849.5	854.5	859.5	864.6	870.0	875.3	880.6	885.9	892.2
35°	800.1	806.0	811.8	817.7	823.5	829.7	836.3	842.7	849.3	855.9	863.4
37.5°	757.4	764.2	770.9	777.6	784.4	791.9	800.4	808.9	817.4	825.9	834.2
40°	728.9	736.5	744.1	751.6	759.2	767.6	776.9	786.2	795.5	804.8	813.7
42.5°	701.8	709.2	716.8	724.4	732.0	741.0	751.7	762.4	773.1	783.8	793.5
45°	656.2	665.5	674.8	684.1	693.4	704.0	716.1	728.1	740.1	752.1	762.9
47.5°	611.4	621.5	631.6	641.7	651.8	663.9	678.0	692.1	706.2	720.2	731.4
50°	580.4	591.1	601.7	612.4	623.0	636.1	651.6	667.0	682.5	698.0	709.7
52.5°	550.7	561.9	573.1	584.3	595.5	609.3	625.5	641.9	658.1	674.5	686.4
55°	503.0	515.3	527.8	540.2	552.5	567.6	585.5	603.4	621.3	639.1	651.6
57.5°	456.0	469.9	483.8	497.9	511.8	527.9	546.1	564.3	582.6	600.8	614.1
60°	422.5	437.3	452.1	466.9	481.7	498.9	518.5	538.1	557.6	577.2	590.4
62.5°	392.8	408.1	423.4	438.8	454.1	471.6	491.2	510.8	530.5	550.1	563.9
65°	343.6	360.4	377.3	394.2	411.0	429.6	449.9	470.1	490.4	510.7	524.8
67.5°	298.4	316.0	333.6	351.2	368.8	388.0	408.8	429.6	450.3	471.1	485.3
70°	266.2	284.1	301.9	319.8	337.7	357.3	378.7	400.0	421.3	442.6	457.4
72.5°	236.5	254.9	273.4	291.8	310.2	330.2	351.8	373.4	395.1	416.7	431.1
75°	190.4	209.6	228.8	248.1	267.4	288.0	310.0	332.0	354.1	376.1	390.8
77.5°	145.8	165.9	186.1	206.2	226.4	247.6	270.0	292.4	314.7	337.1	351.8
80°	116.0	137.0	158.0	179.0	200.0	221.7	244.0	266.4	288.7	311.0	325.5
82.5°	91.3	112.0	132.7	153.4	174.1	195.8	218.4	241.1	263.7	286.3	300.7
85°	55.7	77.1	98.4	119.7	141.0	162.7	184.7	206.7	228.7	250.7	265.2
87.5°	30.4	51.2	71.9	92.7	113.5	134.9	157.1	179.4	201.6	223.7	237.9
90°	16.0	37.3	58.5	79.7	101.0	123.0	146.0	169.0	191.9	214.8	229.1
92.5°	24.8	43.3	61.8	80.3	98.7	118.8	140.4	162.1	183.7	205.4	219.1
95°	46.7	59.0	71.2	83.5	95.8	112.7	134.2	155.6	177.0	198.5	212.2
97.5°	78.8	82.3	85.7	89.3	92.7	105.3	127.0	148.8	170.5	192.2	205.4
100°	104.1	100.8	97.5	94.1	90.8	99.8	121.1	142.3	163.6	184.8	198.4
102.5°	130.7	139.0	147.1	155.4	163.6	168.7	170.8	172.9	174.9	177.0	190.7
105°	167.9	181.5	194.9	208.4	221.9	221.6	207.5	193.4	179.4	165.2	178.5
107.5°	212.3	223.1	233.9	244.7	255.5	250.2	229.0	207.8	186.6	165.4	175.6
110°	239.6	249.0	258.3	267.7	277.0	273.2	256.2	239.2	222.2	205.2	204.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	266.6	274.6	282.6	290.5	298.5	306.3	314.0	321.6	329.3	336.9	305.2
115°	309.2	315.0	320.7	326.6	332.3	344.4	362.8	381.2	399.6	418.0	374.2
117.5°	345.8	350.4	355.2	359.8	364.6	375.1	391.3	407.7	424.0	440.3	437.4
120°	373.5	376.7	379.8	382.9	386.1	395.6	411.4	427.3	443.1	459.1	470.1
122.5°	397.2	399.6	401.9	404.3	406.8	415.6	430.8	446.1	461.3	476.5	486.7
125°	431.5	433.1	434.6	436.2	437.7	445.0	458.3	471.5	484.7	498.0	508.1
127.5°	464.1	465.4	466.9	468.2	469.5	475.4	485.9	496.6	507.1	517.6	527.4
130°	484.8	486.4	487.9	489.4	490.9	495.9	504.4	512.9	521.5	530.0	539.5
132.5°	505.8	507.2	508.4	509.6	510.9	514.9	521.8	528.7	535.5	542.4	551.5
135°	531.7	533.6	535.4	537.3	539.3	542.4	546.9	551.4	555.9	560.4	568.8
137.5°	559.5	560.7	561.9	563.2	564.4	566.4	569.1	571.8	574.5	577.2	584.7
140°	577.5	578.1	578.8	579.4	580.0	581.3	583.2	585.2	587.1	589.2	595.7
142.5°	592.8	593.3	593.8	594.2	594.7	595.8	597.4	599.1	600.7	602.3	607.6
145°	615.0	614.9	614.8	614.7	614.6	615.5	617.5	619.5	621.5	623.5	626.3
147.5°	635.8	635.3	634.9	634.5	634.0	634.8	636.7	638.7	640.7	642.7	643.5
150°	649.2	648.4	647.6	646.8	646.0	646.5	648.4	650.3	652.2	654.0	654.7
152.5°	660.7	659.7	658.8	657.9	657.0	657.4	659.2	661.1	662.8	664.6	665.3
155°	677.2	676.2	675.1	674.1	673.0	673.2	674.6	676.0	677.4	678.8	679.5
157.5°	690.1	689.3	688.4	687.5	686.6	686.7	687.6	688.6	689.6	690.6	691.4
160°	697.8	697.1	696.4	695.7	695.0	695.0	695.7	696.4	697.1	697.8	698.5
162.5°	704.5	703.8	703.1	702.4	701.8	701.7	702.3	702.9	703.5	704.1	704.9
165°	713.6	712.9	712.2	711.4	710.7	710.6	710.9	711.2	711.7	712.0	712.9
167.5°	720.3	719.6	718.9	718.2	717.5	717.3	717.6	718.0	718.3	718.6	719.4
170°	724.1	723.5	722.8	722.1	721.3	721.0	721.3	721.5	721.8	722.1	722.9
172.5°	726.7	726.0	725.3	724.6	723.9	723.6	723.9	724.1	724.3	724.6	725.4
175°	729.9	729.1	728.3	727.5	726.6	726.4	726.6	726.8	727.0	727.3	728.1
177.5°	730.4	729.8	729.1	728.5	727.8	727.5	727.6	727.7	727.8	727.9	728.6
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1064.4	1065.8	1067.2	1067.6	1067.0	1066.5	1065.9	1065.4
5°	1061.2	1063.3	1065.3	1066.1	1065.8	1065.5	1065.1	1064.8
7.5°	1056.1	1058.6	1061.1	1062.2	1061.8	1061.5	1061.1	1060.8
10°	1051.7	1054.5	1057.2	1058.4	1058.0	1057.7	1057.4	1057.0
12.5°	1044.3	1047.0	1049.8	1051.0	1050.7	1050.3	1050.0	1049.7
15°	1030.8	1033.8	1036.9	1038.3	1037.9	1037.6	1037.2	1036.9
17.5°	1013.4	1016.6	1019.9	1021.5	1021.5	1021.5	1021.5	1021.5
20°	999.6	1003.4	1007.1	1009.1	1009.1	1009.1	1009.1	1009.1
22.5°	984.7	988.6	992.3	994.5	995.0	995.6	996.1	996.7
25°	961.6	965.7	969.9	972.4	973.5	974.5	975.5	976.5
27.5°	935.9	941.2	946.4	949.4	950.2	950.9	951.7	952.4
30°	918.0	923.4	929.0	932.2	933.2	934.2	935.3	936.3
32.5°	898.6	904.8	911.2	915.2	917.2	919.0	920.9	922.7
35°	871.0	878.6	886.2	891.1	893.5	896.0	898.4	900.7
37.5°	842.6	851.0	859.4	864.8	867.4	870.0	872.5	875.0
40°	822.6	831.6	840.5	846.6	849.7	852.7	855.9	859.0
42.5°	803.2	813.0	822.8	829.2	832.3	835.5	838.5	841.6
45°	773.5	784.2	794.8	801.8	805.3	808.7	812.1	815.6
47.5°	742.6	753.7	764.9	772.3	776.1	779.9	783.7	787.5
50°	721.3	733.1	744.8	752.6	756.3	760.0	763.9	767.6
52.5°	698.4	710.3	722.4	730.3	734.4	738.5	742.6	746.6
55°	664.0	676.3	688.7	697.1	701.6	706.1	710.5	715.0
57.5°	627.5	640.9	654.2	663.1	667.6	672.2	676.7	681.3
60°	603.4	616.5	629.5	638.5	643.3	648.1	653.0	657.7
62.5°	577.8	591.7	605.6	614.8	619.4	623.9	628.4	633.0
65°	539.0	553.0	567.1	576.4	580.9	585.3	589.9	594.3
67.5°	499.6	513.8	528.1	537.6	542.2	546.8	551.6	556.2
70°	472.2	487.0	501.8	511.2	515.3	519.5	523.6	527.8
72.5°	445.7	460.2	474.6	484.4	489.4	494.3	499.3	504.2
75°	405.7	420.4	435.3	444.8	449.3	453.8	458.3	462.7
77.5°	366.5	381.2	396.0	405.8	410.5	415.4	420.2	425.0
80°	339.9	354.5	368.9	378.5	383.3	388.1	392.9	397.8
82.5°	315.2	329.6	344.1	353.6	358.1	362.6	367.2	371.7
85°	279.6	294.1	308.5	318.1	323.0	327.8	332.5	337.4
87.5°	252.1	266.2	280.3	289.6	294.1	298.5	303.0	307.4
90°	243.5	257.8	272.2	281.6	285.9	290.2	294.7	299.0
92.5°	233.0	246.7	260.5	269.5	273.8	278.1	282.4	286.6
95°	225.8	239.5	253.2	262.0	266.0	270.0	274.0	278.0
97.5°	218.5	231.8	245.0	253.7	257.8	262.1	266.2	270.4
100°	212.2	225.8	239.4	248.3	252.3	256.3	260.3	264.4
102.5°	204.3	218.0	231.7	240.5	244.7	248.7	252.9	257.0
105°	191.9	205.2	218.5	227.3	231.6	235.8	240.0	244.4
107.5°	185.9	196.1	206.4	213.7	217.9	222.2	226.4	230.7
110°	203.8	203.1	202.4	204.2	208.4	212.7	216.9	221.2





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CATALOG NUMBER: S122DIP-S1005D530U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.5	241.8	210.1	196.3	200.5	204.6	208.7	212.9
115°	330.2	286.3	242.4	218.1	213.5	208.8	204.2	199.5
117.5°	434.4	431.5	428.6	415.1	390.8	366.6	342.4	318.2
120°	481.1	492.1	503.2	502.7	490.7	478.7	466.6	454.5
122.5°	496.9	507.1	517.3	522.5	522.6	522.8	522.9	523.1
125°	518.2	528.3	538.4	545.1	548.6	552.0	555.5	559.0
127.5°	537.0	546.7	556.4	562.9	566.0	569.1	572.2	575.3
130°	549.1	558.6	568.2	574.2	576.8	579.5	582.1	584.8
132.5°	560.5	569.6	578.7	584.5	587.1	589.8	592.5	595.1
135°	577.1	585.5	594.0	599.5	601.9	604.4	606.9	609.5
137.5°	592.2	599.7	607.1	611.9	613.8	615.7	617.6	619.6
140°	602.3	608.8	615.4	619.4	620.9	622.4	623.8	625.3
142.5°	613.0	618.3	623.7	627.0	628.2	629.4	630.6	631.8
145°	629.2	632.1	635.0	637.0	638.1	639.2	640.5	641.6
147.5°	644.4	645.3	646.2	646.8	647.1	647.4	647.8	648.1
150°	655.4	656.1	656.8	656.9	656.3	655.7	655.1	654.6
152.5°	666.0	666.7	667.4	667.3	666.6	665.8	665.0	664.3
155°	680.2	681.0	681.7	681.5	680.5	679.6	678.7	677.7
157.5°	692.2	693.0	693.8	693.8	692.8	691.9	690.9	690.0
160°	699.1	699.8	700.5	700.5	699.7	698.9	698.0	697.2
162.5°	705.7	706.5	707.3	707.2	706.2	705.2	704.2	703.2
165°	713.7	714.5	715.3	715.3	714.5	713.7	712.9	712.0
167.5°	720.2	721.1	722.0	721.9	720.7	719.7	718.6	717.6
170°	723.7	724.5	725.3	725.2	724.1	723.1	722.1	720.9
172.5°	726.2	727.0	727.8	727.7	726.7	725.6	724.6	723.5
175°	728.9	729.7	730.5	730.4	729.2	728.0	726.9	725.7
177.5°	729.2	729.9	730.5	730.4	729.6	728.7	727.9	727.1
180°	728.3	728.3	728.3	728.3	728.3	728.3	728.3	728.3

(END OF REPORT)