

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: P331433-840

Luminaire Tested: **S122DIP-S1005D530U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331433-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
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-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5984.9 lumens  
Efficiency: N/A  
Efficacy: 108.6 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: Semi-Direct

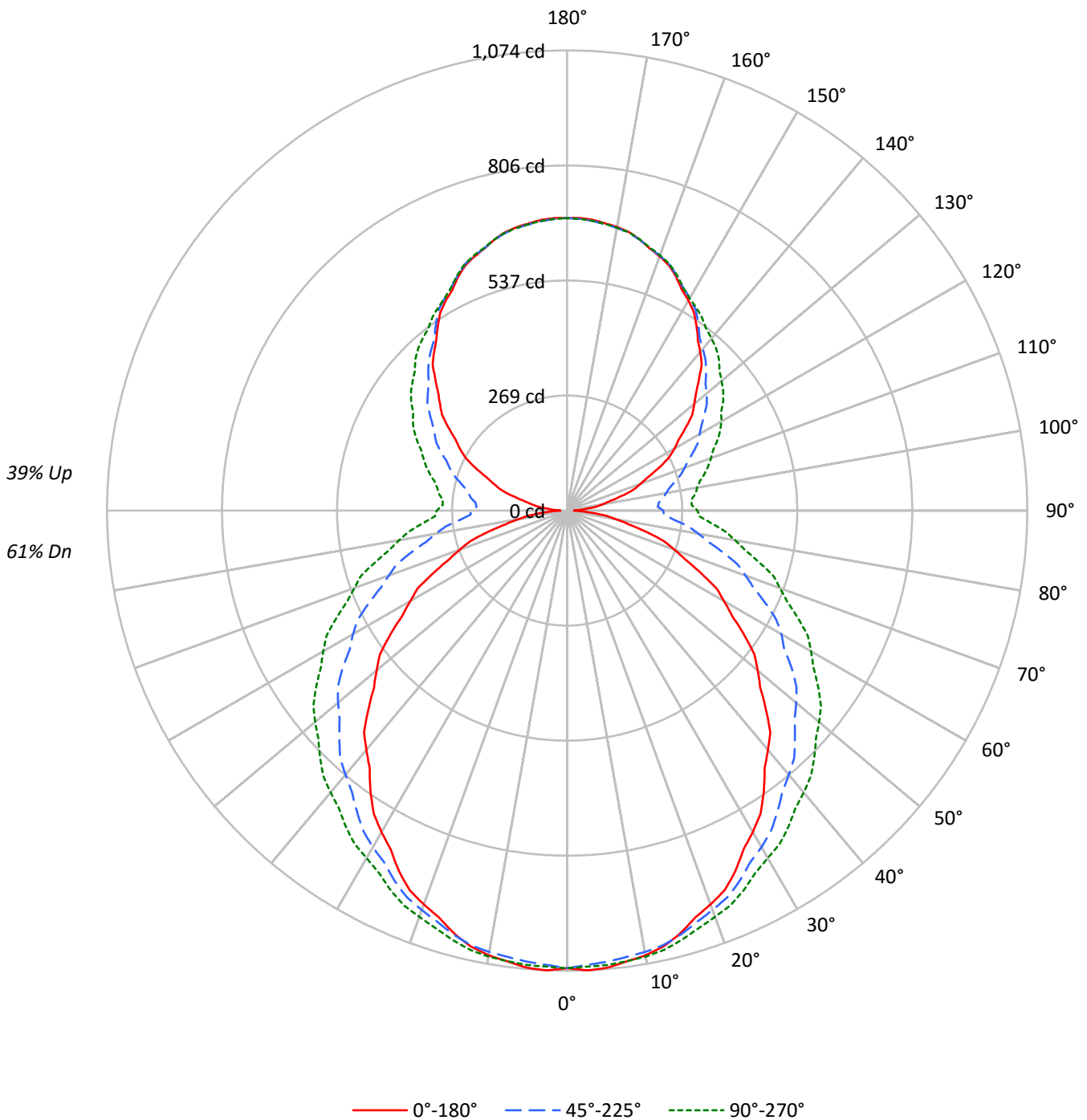
Input Watts (W): 55.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66
1	98	93	88	84	92	87	83	79	76	72	70	65	63	60	55	54	52
2	89	80	73	67	82	75	69	64	65	60	56	56	52	49	48	45	42
3	81	70	62	55	75	65	58	52	57	51	46	49	44	41	42	38	35
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	37	33	30
5	67	55	46	39	62	51	43	37	45	38	33	39	34	30	33	29	26
6	62	49	40	34	57	46	38	32	40	34	29	35	30	26	30	26	22
7	57	44	36	30	53	41	34	28	36	30	25	32	26	23	27	23	20
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	21	18
9	49	37	29	23	46	34	27	22	30	24	20	27	22	18	23	19	16
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	21	17	14

**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	1.7
10°-20°	290.2	4.8
20°-30°	439.7	7.3
30°-40°	535.6	8.9
40°-50°	576.2	9.6
50°-60°	559.5	9.3
60°-70°	488.6	8.2
70°-80°	376.1	6.3
80°-90°	255.2	4.3
90°-100°	217.1	3.6
100°-110°	261.3	4.4
110°-120°	313.4	5.2
120°-130°	348.7	5.8
130°-140°	358.5	6.0
140°-150°	335.6	5.6
150°-160°	278.7	4.7
160°-170°	184.8	3.1
170°-180°	64.6	1.1
0°-30°	831.1	13.9
0°-40°	1366.6	22.8
0°-60°	2502.3	41.8
0°-90°	3622.1	60.5
90°-120°	791.9	13.2
90°-150°	1834.7	30.7
90°-180°	2363.0	39.5
0°-180°	5984.9	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	114	224	283	304	12
95°	42	122	215	271	291	44
105°	132	180	260	313	332	140
115°	236	260	326	370	387	233
125°	338	346	391	430	445	303
135°	435	442	458	489	501	337
145°	526	530	534	543	549	329
155°	602	604	605	608	606	277
165°	655	654	654	658	655	185
175°	681	680	678	682	679	65
180°	682	682	682	682	682	



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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°	30.5	51.3	72.1	92.9	113.7	135.3	157.9	180.5	203.1	225.7	239.6
90°	16.1	37.6	59.0	80.5	102.0	125.1	150.0	174.8	199.7	224.5	237.9
92.5°	24.4	44.2	63.9	83.6	103.3	124.0	145.9	167.7	189.7	211.5	225.0
95°	42.3	59.8	77.3	94.6	112.1	131.3	152.2	173.1	193.9	214.8	227.9
97.5°	65.5	81.1	96.5	112.1	127.5	145.4	165.7	186.0	206.3	226.6	239.3
100°	83.9	97.8	111.5	125.2	139.0	155.6	175.3	194.9	214.6	234.2	246.9
102.5°	102.1	114.5	126.9	139.4	151.9	167.6	186.8	206.1	225.3	244.5	257.0
105°	131.6	141.9	152.3	162.6	173.0	187.2	205.4	223.5	241.7	259.8	272.1
107.5°	162.8	171.4	179.9	188.4	196.9	209.8	226.9	244.1	261.2	278.3	289.9
110°	181.9	189.5	197.1	204.8	212.4	224.7	241.6	258.3	275.2	292.1	303.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	204.0	210.5	217.0	223.6	230.1	241.4	257.3	273.2	289.1	305.1	315.8
115°	236.5	241.1	245.6	250.1	254.8	264.6	279.8	295.1	310.3	325.5	335.7
117.5°	267.5	270.9	274.5	278.0	281.4	290.0	303.6	317.2	330.8	344.4	354.3
120°	289.1	291.5	294.0	296.3	298.7	306.3	319.0	331.7	344.5	357.2	366.9
122.5°	308.9	310.7	312.5	314.3	316.1	323.1	335.3	347.5	359.7	371.9	380.9
125°	338.2	339.4	340.5	341.7	342.8	348.7	359.4	370.0	380.6	391.2	400.1
127.5°	368.3	369.4	370.5	371.6	372.7	377.5	386.0	394.4	402.7	411.2	419.3
130°	387.2	388.5	389.8	391.1	392.4	396.6	403.5	410.5	417.5	424.4	432.5
132.5°	408.4	409.4	410.4	411.4	412.4	415.8	421.4	427.0	432.6	438.3	445.7
135°	435.2	436.6	438.0	439.4	440.8	443.3	447.1	450.7	454.4	458.2	465.2
137.5°	465.0	466.1	467.2	468.3	469.4	470.8	472.6	474.5	476.4	478.2	484.4
140°	483.0	483.8	484.6	485.4	486.3	487.3	488.6	489.9	491.3	492.6	498.1
142.5°	501.4	502.2	503.0	503.8	504.6	505.3	505.9	506.4	507.1	507.7	512.1
145°	526.3	527.3	528.2	529.1	530.0	530.8	531.5	532.3	533.1	533.8	536.0
147.5°	550.0	551.0	552.1	553.2	554.2	555.0	555.5	556.0	556.5	557.1	557.6
150°	566.1	566.8	567.6	568.4	569.2	569.8	570.3	570.8	571.3	571.9	572.2
152.5°	580.4	581.2	581.9	582.7	583.4	584.1	584.7	585.3	585.9	586.6	587.0
155°	601.8	602.2	602.6	602.9	603.3	603.7	604.1	604.5	604.8	605.2	605.9
157.5°	620.1	620.4	620.6	620.9	621.2	621.4	621.6	621.9	622.1	622.3	623.2
160°	631.2	631.4	631.7	631.9	632.2	632.4	632.5	632.6	632.8	632.9	633.7
162.5°	641.3	641.4	641.4	641.5	641.5	641.6	641.7	641.9	642.0	642.1	643.0
165°	654.8	654.6	654.5	654.4	654.3	654.2	654.2	654.2	654.2	654.2	655.1
167.5°	666.0	665.7	665.3	664.9	664.5	664.3	664.3	664.3	664.2	664.2	665.1
170°	672.1	671.7	671.3	670.9	670.6	670.2	670.1	669.9	669.8	669.7	670.7
172.5°	676.2	675.8	675.4	675.0	674.7	674.4	674.3	674.2	674.0	673.9	674.8
175°	681.3	680.9	680.4	680.1	679.7	679.4	679.1	678.9	678.6	678.3	679.2
177.5°	683.4	683.0	682.7	682.4	682.1	681.9	681.7	681.5	681.3	681.1	681.7
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4



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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°	253.6	267.6	281.6	290.7	295.2	299.6	304.1	308.5
90°	251.5	265.0	278.4	287.3	291.5	295.8	300.1	304.4
92.5°	238.5	252.1	265.6	274.5	278.6	282.8	286.9	291.0
95°	241.0	254.1	267.1	275.6	279.4	283.4	287.2	291.0
97.5°	252.1	264.8	277.5	285.9	289.9	294.0	298.0	302.1
100°	259.6	272.4	285.2	293.4	297.0	300.6	304.3	307.9
102.5°	269.5	282.2	294.7	302.8	306.4	310.1	313.8	317.4
105°	284.4	296.7	308.9	317.0	320.8	324.6	328.3	332.1
107.5°	301.6	313.3	325.0	332.3	335.6	338.7	341.9	345.2
110°	314.1	325.1	336.1	343.3	346.7	350.1	353.5	356.9





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CATALOG NUMBER: S122DIP-S1005D530U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	326.5	337.2	347.9	355.0	358.5	361.9	365.5	369.0
115°	345.9	356.1	366.3	373.0	376.5	379.9	383.2	386.7
117.5°	364.2	374.0	383.8	390.4	393.4	396.6	399.7	402.8
120°	376.5	386.1	395.8	402.2	405.7	409.1	412.4	415.9
122.5°	390.0	399.0	408.1	414.0	417.1	420.0	422.9	425.9
125°	409.0	418.0	426.9	432.7	435.8	438.7	441.7	444.6
127.5°	427.3	435.4	443.4	448.8	451.4	454.0	456.7	459.3
130°	440.5	448.5	456.5	461.6	463.8	466.1	468.3	470.6
132.5°	453.1	460.5	467.9	472.8	475.1	477.5	479.8	482.2
135°	472.3	479.4	486.6	491.3	493.6	495.9	498.4	500.7
137.5°	490.6	496.9	503.1	507.2	509.0	510.8	512.6	514.4
140°	503.6	509.1	514.6	518.2	519.7	521.2	522.8	524.3
142.5°	516.6	521.1	525.6	528.6	529.8	531.1	532.4	533.6
145°	538.3	540.4	542.6	544.3	545.5	546.7	548.0	549.2
147.5°	558.3	558.8	559.4	559.8	560.1	560.5	560.8	561.1
150°	572.6	573.0	573.4	573.4	573.0	572.6	572.2	571.9
152.5°	587.5	588.0	588.5	588.5	588.0	587.5	587.0	586.6
155°	606.5	607.1	607.8	607.9	607.5	607.1	606.7	606.4
157.5°	624.0	624.9	625.8	625.9	625.3	624.7	624.1	623.4
160°	634.4	635.2	635.9	636.1	635.6	635.1	634.5	634.0
162.5°	643.8	644.7	645.6	645.7	645.1	644.5	643.9	643.3
165°	656.0	656.9	657.7	657.9	657.2	656.6	656.0	655.3
167.5°	666.0	666.9	667.8	667.9	667.2	666.6	665.9	665.2
170°	671.6	672.5	673.3	673.4	672.6	671.9	671.1	670.3
172.5°	675.7	676.6	677.4	677.5	676.8	676.0	675.2	674.5
175°	680.1	681.1	682.0	682.1	681.3	680.4	679.7	678.9
177.5°	682.3	682.9	683.5	683.5	682.9	682.3	681.7	681.1
180°	682.4	682.4	682.4	682.4	682.4	682.4	682.4	682.4

(END OF REPORT)