

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: P331342-830

Luminaire Tested: **S122DIP-S675D530U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331342-830  
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-S675D530U830-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 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: 4526.7 lumens  
Efficiency: N/A  
Efficacy: 112.3 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

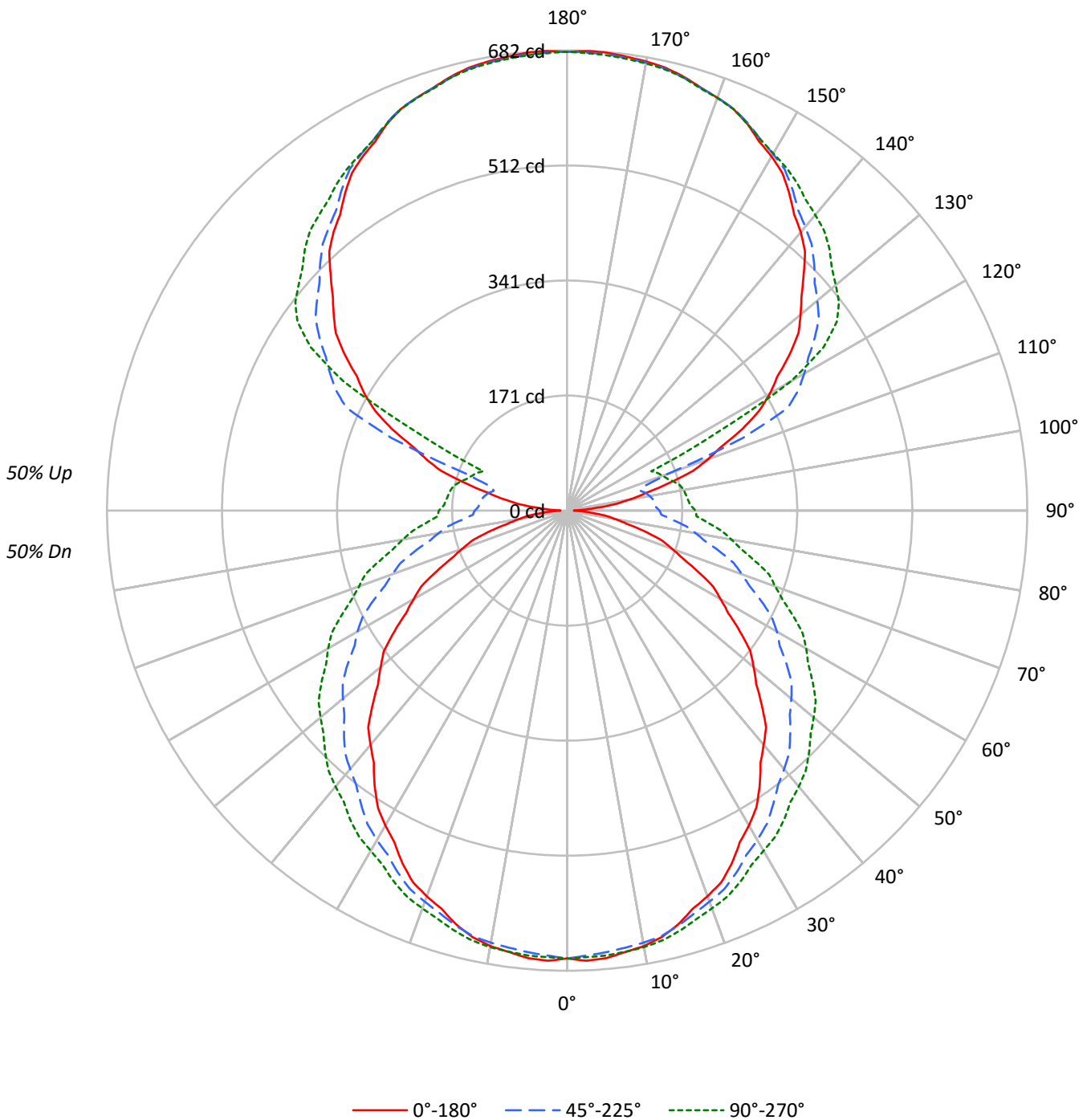
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331342-830

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### Luminous Intensity Polar Plot





TEST NUMBER: P331342-830

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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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	96	91	87	83	88	84	80	77	71	68	65	58	56	54	47	46	44	39				
2	87	79	72	66	80	73	67	62	61	57	53	50	47	44	41	38	36	31				
3	79	69	61	55	72	63	57	51	53	48	44	44	40	37	35	33	30	26				
4	72	61	52	46	66	56	48	43	47	41	37	39	35	31	31	28	25	22				
5	66	54	45	39	60	50	42	36	42	36	31	35	30	27	28	25	22	19				
6	61	48	40	34	56	44	37	31	38	32	27	31	27	23	25	22	19	16				
7	56	43	35	29	51	40	33	27	34	28	24	28	24	20	23	20	17	14				
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	18	15	13				
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11				
10	45	33	25	20	41	30	24	19	26	21	17	22	18	15	18	15	12	10				

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

	0°	45°	90°
0°	10719	10719	10719
5°	10771	10318	10278
10°	10704	10013	9900
15°	10557	9691	9503
20°	10370	9345	9120
25°	10186	9011	8772
30°	9928	8668	8421
35°	9665	8338	8176
40°	9388	8055	7929
45°	9124	7803	7719
50°	8843	7574	7511
55°	8548	7331	7300
60°	8188	7076	7078
65°	7811	6777	6812
70°	7390	6457	6525
75°	6853	6143	6262
80°	6004	5822	5995
85°	5192	5544	5785



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	1.4
10°-20°	180.4	4.0
20°-30°	273.4	6.0
30°-40°	333.0	7.4
40°-50°	358.2	7.9
50°-60°	347.9	7.7
60°-70°	303.7	6.7
70°-80°	233.8	5.2
80°-90°	158.6	3.5
90°-100°	130.8	2.9
100°-110°	162.1	3.6
110°-120°	274.4	6.1
120°-130°	396.0	8.7
130°-140°	402.4	8.9
140°-150°	364.8	8.1
150°-160°	291.6	6.4
160°-170°	187.9	4.2
170°-180°	64.7	1.4
0°-30°	516.7	11.4
0°-40°	849.6	18.8
0°-60°	1555.7	34.4
0°-90°	2251.9	49.7
90°-120°	567.3	12.5
90°-150°	1730.6	38.2
90°-180°	2275.0	50.3
0°-180°	4526.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	666	663	657	663	662	63
15°	635	637	637	645	645	179
25°	577	584	593	604	607	265
35°	498	514	532	552	560	311
45°	408	434	468	496	507	315
55°	313	348	397	431	444	279
65°	214	261	318	356	370	212
75°	118	173	234	274	288	125
85°	35	94	156	195	210	37
90°	10	72	137	176	190	8
95°	40	70	130	167	180	45
105°	154	190	113	150	164	165
115°	287	308	361	172	138	282
125°	402	410	448	477	488	359
135°	496	504	518	542	550	383
145°	574	574	582	591	593	359
155°	632	628	634	636	632	291
165°	666	663	664	668	664	188
175°	681	678	679	682	677	65
180°	680	680	680	680	680	



TEST NUMBER: P331342-830

CATALOG NUMBER: S122DIP-S675D530U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	667.8	667.2	666.8	666.2	665.7	664.9	663.6	662.4	661.3	660.1	660.9
5°	665.8	665.2	664.6	663.9	663.3	662.3	661.0	659.8	658.5	657.1	658.5
7.5°	659.9	659.4	659.0	658.6	658.2	657.4	656.5	655.4	654.5	653.6	655.1
10°	655.3	654.8	654.4	653.9	653.6	653.0	652.3	651.8	651.1	650.4	652.1
12.5°	647.5	647.6	647.7	647.8	647.9	647.7	647.2	646.8	646.3	645.8	647.5
15°	635.1	635.5	635.9	636.3	636.8	637.0	637.0	637.0	637.0	637.0	638.9
17.5°	618.9	619.8	620.7	621.6	622.5	623.3	624.0	624.6	625.3	626.0	628.0
20°	608.1	609.2	610.2	611.3	612.4	613.3	614.2	615.1	616.0	616.8	619.2
22.5°	596.5	597.8	599.1	600.3	601.5	602.8	604.0	605.1	606.3	607.6	609.9
25°	577.3	578.8	580.3	581.8	583.3	585.0	586.9	588.9	590.8	592.7	595.3
27.5°	554.2	556.7	559.1	561.6	564.0	566.4	568.6	570.9	573.2	575.4	578.6
30°	538.9	541.6	544.4	547.1	550.0	552.7	555.5	558.3	561.1	563.8	567.2
32.5°	521.9	525.0	528.1	531.2	534.4	537.6	540.9	544.1	547.4	550.7	554.7
35°	497.5	501.1	504.7	508.3	512.0	515.9	519.9	524.0	528.0	532.1	536.8
37.5°	470.9	475.1	479.3	483.4	487.7	492.4	497.7	502.9	508.1	513.4	518.7
40°	453.2	457.9	462.6	467.3	472.0	477.2	483.1	488.8	494.6	500.3	505.9
42.5°	436.3	440.9	445.6	450.3	455.1	460.7	467.4	474.0	480.6	487.3	493.3
45°	407.9	413.8	419.5	425.3	431.0	437.7	445.2	452.7	460.1	467.6	474.3
47.5°	380.0	386.3	392.7	398.9	405.2	412.7	421.5	430.3	439.0	447.8	454.8
50°	360.8	367.5	374.1	380.7	387.3	395.5	405.1	414.7	424.3	433.9	441.2
52.5°	342.3	349.3	356.3	363.3	370.2	378.8	388.9	399.1	409.2	419.3	426.8
55°	312.7	320.4	328.1	335.8	343.5	352.9	364.0	375.1	386.3	397.4	405.1
57.5°	283.4	292.2	300.9	309.5	318.2	328.2	339.5	350.8	362.2	373.5	381.8
60°	262.7	271.8	281.1	290.3	299.4	310.2	322.3	334.5	346.7	358.9	367.0
62.5°	244.2	253.7	263.3	272.8	282.4	293.2	305.4	317.5	329.8	342.0	350.6
65°	213.6	224.0	234.6	245.1	255.5	267.0	279.7	292.3	304.9	317.5	326.3
67.5°	185.5	196.4	207.5	218.4	229.3	241.2	254.1	267.0	279.9	292.8	301.7
70°	165.5	176.6	187.8	198.9	210.0	222.2	235.4	248.6	261.9	275.2	284.4
72.5°	147.0	158.4	169.9	181.4	192.8	205.3	218.8	232.1	245.6	259.0	268.1
75°	118.4	130.4	142.3	154.3	166.3	179.1	192.7	206.4	220.1	233.8	243.0
77.5°	90.7	103.2	115.7	128.2	140.7	154.0	167.9	181.8	195.7	209.5	218.8
80°	72.2	85.2	98.2	111.3	124.3	137.8	151.7	165.6	179.5	193.4	202.4
82.5°	56.7	69.7	82.5	95.4	108.3	121.7	135.8	149.9	163.9	178.0	187.0
85°	34.7	47.9	61.2	74.4	87.7	101.1	114.8	128.5	142.2	155.9	164.9
87.5°	18.9	32.0	45.0	57.9	70.9	84.4	98.2	112.1	125.9	139.8	148.5
90°	10.1	23.8	37.3	50.9	64.6	78.6	93.2	107.7	122.2	136.9	145.9
92.5°	18.8	30.3	41.7	53.1	64.6	77.1	90.7	104.2	117.9	131.5	140.2
95°	39.7	46.1	52.6	59.0	65.4	75.5	89.1	102.6	116.2	129.9	138.6
97.5°	70.2	69.0	67.8	66.5	65.3	71.7	85.8	99.9	114.0	128.1	136.4
100°	93.8	86.7	79.6	72.6	65.5	68.9	82.8	96.6	110.5	124.2	133.1
102.5°	119.0	123.1	127.1	131.2	135.3	135.3	131.4	127.5	123.6	119.6	128.6
105°	154.4	163.8	173.3	182.8	192.3	187.7	168.9	150.2	131.5	112.7	121.4
107.5°	195.8	203.4	210.9	218.6	226.2	217.4	192.3	167.1	142.0	116.9	122.8
110°	221.8	228.3	234.9	241.5	248.1	240.7	219.6	198.5	177.4	156.3	152.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	246.9	252.6	258.2	263.8	269.5	273.3	275.5	277.7	279.8	282.0	248.9
115°	286.7	290.9	295.1	299.4	303.5	311.8	324.1	336.5	348.8	361.2	317.1
117.5°	321.2	324.9	328.5	332.1	335.7	342.9	353.6	364.5	375.2	386.0	380.1
120°	347.2	349.7	352.2	354.7	357.2	363.7	374.2	384.7	395.2	405.8	413.1
122.5°	369.3	371.3	373.3	375.4	377.5	383.6	393.8	404.0	414.2	424.3	430.9
125°	401.8	403.2	404.6	406.0	407.6	412.6	421.6	430.6	439.4	448.4	454.9
127.5°	432.3	433.6	435.0	436.3	437.6	441.9	448.9	456.0	463.1	470.1	476.5
130°	451.5	453.1	454.6	456.1	457.6	461.3	466.9	472.7	478.3	484.0	490.4
132.5°	471.2	472.5	473.7	475.0	476.3	479.3	483.9	488.6	493.2	497.9	503.9
135°	495.8	497.6	499.3	501.1	502.8	505.2	508.3	511.5	514.6	517.7	523.3
137.5°	521.7	522.8	524.1	525.2	526.4	528.0	530.1	532.2	534.1	536.2	541.2
140°	538.6	539.2	539.9	540.5	541.2	542.3	544.0	545.6	547.2	548.9	553.3
142.5°	552.8	553.4	553.9	554.5	555.1	556.1	557.5	559.0	560.4	561.9	565.5
145°	574.0	573.9	573.8	573.7	573.6	574.5	576.4	578.2	580.0	581.9	583.9
147.5°	593.4	593.0	592.6	592.2	591.7	592.5	594.3	596.2	597.9	599.8	600.6
150°	606.0	605.2	604.5	603.7	602.9	603.4	605.2	606.9	608.7	610.4	611.1
152.5°	616.6	615.8	614.9	614.1	613.2	613.6	615.3	617.0	618.6	620.3	620.9
155°	632.1	631.1	630.1	629.1	628.1	628.3	629.6	630.9	632.3	633.6	634.2
157.5°	644.1	643.4	642.5	641.7	640.8	640.9	641.8	642.7	643.7	644.6	645.3
160°	651.3	650.6	650.0	649.3	648.7	648.7	649.3	650.0	650.6	651.3	652.0
162.5°	657.5	656.9	656.2	655.5	655.0	654.9	655.4	656.0	656.6	657.1	657.9
165°	666.0	665.3	664.7	664.0	663.4	663.3	663.5	663.8	664.2	664.5	665.3
167.5°	672.3	671.7	671.0	670.3	669.7	669.5	669.8	670.1	670.4	670.7	671.5
170°	675.8	675.2	674.6	673.9	673.3	673.0	673.3	673.4	673.6	673.9	674.7
172.5°	678.3	677.6	676.9	676.3	675.6	675.3	675.6	675.8	676.0	676.3	677.0
175°	681.3	680.5	679.8	679.0	678.2	678.0	678.2	678.3	678.5	678.8	679.6
177.5°	681.7	681.2	680.5	680.0	679.3	679.0	679.1	679.2	679.3	679.4	680.0
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	661.8	662.6	663.5	663.7	663.4	663.1	662.7	662.4
5°	659.8	661.0	662.3	662.9	662.6	662.4	662.2	661.9
7.5°	656.6	658.2	659.7	660.3	660.2	659.9	659.7	659.5
10°	653.8	655.5	657.3	658.0	657.8	657.6	657.4	657.1
12.5°	649.2	650.9	652.7	653.4	653.2	653.0	652.8	652.5
15°	640.8	642.7	644.7	645.5	645.4	645.1	644.9	644.7
17.5°	630.0	632.1	634.0	635.1	635.1	635.1	635.1	635.1
20°	621.5	623.9	626.1	627.4	627.4	627.4	627.4	627.4
22.5°	612.3	614.6	616.9	618.3	618.6	619.0	619.3	619.6
25°	597.9	600.4	602.9	604.5	605.2	605.9	606.5	607.2
27.5°	581.9	585.1	588.4	590.2	590.7	591.2	591.6	592.1
30°	570.7	574.1	577.5	579.6	580.2	580.9	581.5	582.1
32.5°	558.6	562.6	566.5	569.0	570.2	571.4	572.5	573.6
35°	541.5	546.2	550.9	554.0	555.5	557.0	558.5	560.0
37.5°	523.9	529.0	534.3	537.7	539.3	540.8	542.4	544.0
40°	511.4	517.0	522.5	526.3	528.2	530.2	532.1	534.0
42.5°	499.4	505.5	511.5	515.6	517.5	519.4	521.3	523.2
45°	480.9	487.5	494.2	498.5	500.7	502.8	504.9	507.1
47.5°	461.7	468.6	475.5	480.1	482.5	484.8	487.2	489.6
50°	448.5	455.7	463.1	467.9	470.2	472.6	474.9	477.2
52.5°	434.2	441.7	449.1	454.1	456.6	459.1	461.7	464.2
55°	412.7	420.5	428.2	433.4	436.2	438.9	441.8	444.5
57.5°	390.1	398.4	406.7	412.3	415.1	417.9	420.8	423.6
60°	375.1	383.2	391.4	397.0	399.9	402.9	406.0	409.0
62.5°	359.2	367.9	376.5	382.3	385.0	387.9	390.7	393.5
65°	335.1	343.8	352.6	358.4	361.2	363.9	366.7	369.5
67.5°	310.6	319.4	328.3	334.2	337.1	340.0	342.9	345.8
70°	293.6	302.7	312.0	317.8	320.4	323.0	325.6	328.1
72.5°	277.1	286.1	295.1	301.1	304.3	307.4	310.4	313.5
75°	252.2	261.4	270.6	276.5	279.4	282.1	284.9	287.7
77.5°	227.9	237.0	246.2	252.2	255.2	258.3	261.2	264.2
80°	211.3	220.4	229.3	235.4	238.3	241.3	244.3	247.3
82.5°	196.0	204.9	214.0	219.8	222.6	225.5	228.3	231.1
85°	173.8	182.9	191.8	197.7	200.8	203.8	206.8	209.7
87.5°	157.4	166.3	175.1	180.9	183.7	186.4	189.3	192.0
90°	155.0	164.2	173.2	179.2	182.0	184.7	187.6	190.3
92.5°	148.8	157.5	166.2	171.8	174.6	177.2	179.9	182.7
95°	147.2	155.9	164.6	170.1	172.6	175.0	177.5	179.9
97.5°	144.8	153.1	161.5	166.9	169.6	172.3	174.9	177.6
100°	141.9	150.6	159.4	165.0	167.7	170.2	172.8	175.4
102.5°	137.4	146.3	155.1	160.9	163.6	166.3	168.9	171.5
105°	130.2	138.8	147.5	153.3	156.0	158.8	161.6	164.4
107.5°	128.8	134.8	140.7	145.1	147.9	150.6	153.4	156.3
110°	148.2	144.0	140.0	139.3	142.1	144.9	147.7	150.4





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CATALOG NUMBER: S122DIP-S675D530U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	215.9	182.9	149.9	134.7	137.3	140.1	142.8	145.4
115°	272.9	228.7	184.5	159.6	154.1	148.5	143.1	137.5
117.5°	374.2	368.3	362.3	347.5	323.9	300.2	276.5	252.8
120°	420.4	427.6	435.0	432.4	420.0	407.6	395.2	382.8
122.5°	437.6	444.2	450.8	453.6	452.8	451.9	451.1	450.3
125°	461.5	468.0	474.5	478.9	481.2	483.4	485.7	488.0
127.5°	483.0	489.4	495.9	500.0	502.0	503.9	505.9	507.8
130°	496.7	503.0	509.3	513.3	514.9	516.5	518.1	519.7
132.5°	509.9	515.9	521.9	525.7	527.3	528.9	530.5	532.1
135°	528.9	534.4	540.1	543.6	545.1	546.6	548.1	549.6
137.5°	546.2	551.3	556.3	559.3	560.3	561.5	562.5	563.6
140°	557.7	562.1	566.6	569.1	569.9	570.5	571.3	572.0
142.5°	569.2	572.8	576.5	578.5	579.1	579.7	580.2	580.8
145°	586.0	588.1	590.1	591.4	591.9	592.4	593.0	593.4
147.5°	601.2	602.0	602.8	603.1	603.2	603.2	603.3	603.4
150°	611.7	612.4	613.0	613.1	612.6	612.0	611.4	611.0
152.5°	621.6	622.3	622.9	622.8	622.2	621.4	620.7	620.0
155°	634.9	635.6	636.2	636.0	635.2	634.3	633.5	632.5
157.5°	646.0	646.8	647.5	647.5	646.6	645.7	644.9	644.0
160°	652.5	653.2	653.8	653.8	653.1	652.3	651.5	650.7
162.5°	658.6	659.4	660.2	660.1	659.1	658.2	657.2	656.3
165°	666.1	666.8	667.6	667.6	666.8	666.1	665.3	664.5
167.5°	672.2	673.1	673.8	673.7	672.7	671.8	670.7	669.8
170°	675.4	676.2	676.9	676.8	675.8	674.9	673.9	672.9
172.5°	677.8	678.5	679.3	679.2	678.3	677.2	676.3	675.2
175°	680.3	681.1	681.8	681.7	680.6	679.5	678.4	677.3
177.5°	680.6	681.3	681.8	681.7	681.0	680.1	679.4	678.6
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8

(END OF REPORT)