

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: P331360-935

Luminaire Tested: **S122DIP-S675D925U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331360-935  
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-S675D925U935-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5501.1 lumens  
Efficiency: N/A  
Efficacy: 105.8 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-Indirect

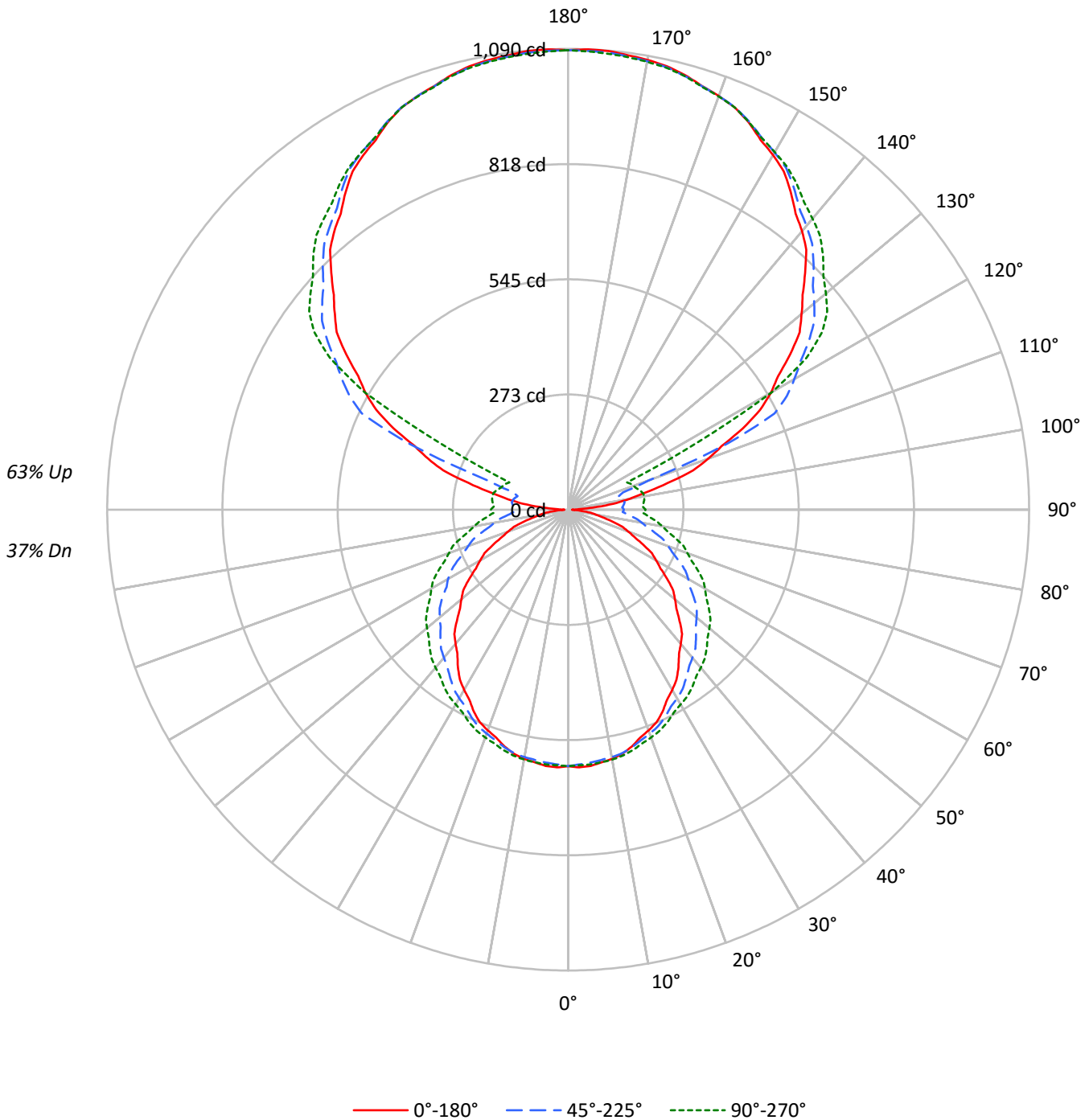
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	94	89	85	81	85	81	77	74	65	63	60	51	49	47	38	36	35	29
2	85	77	71	65	77	70	64	60	56	52	49	44	41	39	32	31	29	24
3	77	67	60	54	69	61	55	49	49	45	41	38	35	32	28	26	24	19
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	20	16
5	64	53	44	38	58	48	41	35	39	33	29	30	26	23	22	20	18	14
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15	12
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	18	16	14	11
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12	9
9	47	35	27	22	42	32	25	21	26	21	17	21	17	14	16	13	11	8
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	14	12	10	8

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

	0°	45°	90°
0°	9792	9792	9792
5°	9839	9426	9390
10°	9778	9148	9044
15°	9643	8853	8681
20°	9473	8536	8331
25°	9305	8231	8014
30°	9067	7919	7694
35°	8828	7615	7468
40°	8576	7358	7243
45°	8334	7127	7051
50°	8078	6920	6861
55°	7810	6696	6668
60°	7480	6465	6465
65°	7135	6192	6222
70°	6751	5899	5960
75°	6257	5612	5720
80°	5488	5319	5476
85°	4743	5064	5286



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.5	1.0
10°-20°	164.8	3.0
20°-30°	249.7	4.5
30°-40°	304.2	5.5
40°-50°	327.2	5.9
50°-60°	317.8	5.8
60°-70°	277.5	5.0
70°-80°	213.6	3.9
80°-90°	146.0	2.7
90°-100°	135.0	2.5
100°-110°	205.1	3.7
110°-120°	403.0	7.3
120°-130°	613.2	11.1
130°-140°	635.0	11.5
140°-150°	581.8	10.6
150°-160°	466.2	8.5
160°-170°	300.4	5.5
170°-180°	103.4	1.9
0°-30°	472.0	8.6
0°-40°	776.1	14.1
0°-60°	1421.1	25.8
0°-90°	2058.3	37.4
90°-120°	743.0	13.5
90°-150°	2572.9	46.8
90°-180°	3443.0	62.6
0°-180°	5501.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	608	605	600	605	605	58
15°	580	582	582	589	589	163
25°	527	534	541	552	555	242
35°	454	469	486	505	512	284
45°	373	397	427	453	463	288
55°	286	318	363	394	406	255
65°	195	239	290	325	338	194
75°	108	158	214	250	263	114
85°	32	86	142	178	192	34
90°	10	69	132	169	183	8
95°	58	76	132	168	179	68
105°	243	280	124	162	176	260
115°	456	481	538	216	153	448
125°	641	653	694	722	734	572
135°	792	805	820	846	852	612
145°	918	918	930	940	942	574
155°	1010	1004	1013	1017	1011	465
165°	1065	1060	1062	1067	1062	301
175°	1089	1084	1085	1090	1083	104
180°	1087	1087	1087	1087	1087	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	610.0	609.5	609.1	608.6	608.1	607.3	606.2	605.1	604.1	603.0	603.7
5°	608.2	607.6	607.1	606.5	605.9	605.0	603.8	602.7	601.5	600.3	601.5
7.5°	602.8	602.4	602.0	601.6	601.2	600.5	599.7	598.7	597.9	597.0	598.4
10°	598.6	598.1	597.8	597.4	597.0	596.5	595.9	595.4	594.8	594.2	595.7
12.5°	591.5	591.6	591.7	591.8	591.9	591.7	591.2	590.8	590.4	590.0	591.5
15°	580.1	580.5	580.9	581.3	581.7	581.9	581.9	581.9	581.9	581.9	583.6
17.5°	565.3	566.2	567.0	567.8	568.6	569.4	570.0	570.6	571.2	571.9	573.7
20°	555.5	556.5	557.4	558.4	559.4	560.3	561.0	561.9	562.7	563.4	565.6
22.5°	544.9	546.0	547.3	548.4	549.5	550.6	551.7	552.8	553.9	555.0	557.2
25°	527.4	528.7	530.1	531.5	532.9	534.4	536.1	538.0	539.7	541.4	543.8
27.5°	506.3	508.5	510.7	513.0	515.2	517.4	519.4	521.5	523.6	525.6	528.6
30°	492.2	494.7	497.3	499.8	502.4	504.9	507.5	510.0	512.6	515.1	518.1
32.5°	476.7	479.6	482.4	485.3	488.2	491.1	494.1	497.1	500.1	503.1	506.7
35°	454.4	457.7	461.1	464.3	467.7	471.2	474.9	478.6	482.3	486.0	490.3
37.5°	430.2	434.0	437.8	441.6	445.5	449.8	454.6	459.4	464.2	469.0	473.8
40°	414.0	418.3	422.6	426.9	431.2	435.9	441.3	446.5	451.8	457.0	462.1
42.5°	398.6	402.8	407.1	411.4	415.7	420.9	427.0	433.0	439.0	445.1	450.6
45°	372.6	378.0	383.2	388.5	393.7	399.8	406.7	413.5	420.3	427.1	433.3
47.5°	347.2	352.9	358.7	364.4	370.1	377.0	385.0	393.0	401.1	409.1	415.4
50°	329.6	335.7	341.7	347.8	353.8	361.3	370.1	378.8	387.6	396.4	403.0
52.5°	312.7	319.1	325.5	331.8	338.2	346.0	355.2	364.5	373.8	383.1	389.9
55°	285.7	292.7	299.7	306.8	313.7	322.4	332.5	342.7	352.8	363.0	370.1
57.5°	258.9	266.9	274.8	282.8	290.7	299.8	310.1	320.5	330.9	341.2	348.8
60°	240.0	248.3	256.8	265.2	273.5	283.4	294.5	305.6	316.7	327.9	335.3
62.5°	223.1	231.8	240.5	249.2	258.0	267.9	279.0	290.1	301.3	312.4	320.3
65°	195.1	204.7	214.3	223.9	233.4	243.9	255.5	267.0	278.5	290.1	298.1
67.5°	169.4	179.4	189.5	199.5	209.5	220.3	232.1	243.9	255.7	267.5	275.6
70°	151.2	161.4	171.5	181.7	191.8	202.9	215.1	227.1	239.3	251.4	259.8
72.5°	134.3	144.7	155.2	165.7	176.2	187.5	199.8	212.1	224.4	236.6	244.9
75°	108.1	119.1	130.0	140.9	151.9	163.6	176.1	188.6	201.0	213.6	222.0
77.5°	82.8	94.3	105.7	117.1	128.5	140.7	153.3	166.1	178.7	191.4	199.8
80°	66.0	77.8	89.7	101.7	113.6	125.9	138.6	151.3	163.9	176.7	184.9
82.5°	51.8	63.6	75.3	87.1	98.9	111.2	124.1	136.9	149.7	162.6	170.8
85°	31.7	43.7	55.9	67.9	80.1	92.4	104.9	117.4	129.9	142.4	150.6
87.5°	17.4	29.4	41.4	53.5	65.5	77.9	90.7	103.5	116.2	129.0	137.2
90°	9.6	22.8	36.1	49.3	62.6	76.1	90.1	103.9	117.9	131.7	140.4
92.5°	23.9	34.4	44.7	55.1	65.4	77.0	89.7	102.5	115.2	127.9	136.0
95°	58.1	61.6	65.0	68.4	71.8	80.0	92.9	105.9	118.8	131.7	140.1
97.5°	107.6	99.5	91.4	83.3	75.3	78.3	92.3	106.4	120.5	134.6	142.5
100°	145.3	128.6	111.9	95.2	78.5	77.1	91.0	104.9	118.8	132.7	141.4
102.5°	186.1	187.7	189.2	190.8	192.3	186.0	171.7	157.5	143.3	129.1	137.9
105°	243.4	254.3	265.3	276.1	287.1	273.7	236.2	198.6	161.1	123.6	132.3
107.5°	309.8	318.6	327.4	336.0	344.8	325.5	278.0	230.5	183.0	135.5	140.2
110°	351.9	359.5	367.0	374.6	382.2	365.5	324.6	283.6	242.7	201.7	190.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	392.1	398.6	405.2	411.7	418.3	419.8	416.5	413.1	409.7	406.3	348.9
115°	455.6	460.8	465.9	471.1	476.1	485.3	498.4	511.6	524.8	538.0	462.9
117.5°	511.5	516.3	521.0	525.7	530.5	538.4	549.5	560.7	571.8	582.9	569.1
120°	553.1	556.5	559.9	563.3	566.7	573.9	584.8	595.8	606.7	617.7	625.3
122.5°	588.3	591.4	594.4	597.5	600.6	607.5	618.3	629.0	639.8	650.6	657.2
125°	641.0	643.3	645.6	647.9	650.1	656.1	665.6	675.2	684.8	694.3	700.9
127.5°	689.7	692.0	694.3	696.6	699.0	703.9	711.4	718.9	726.4	733.9	740.5
130°	720.5	723.1	725.7	728.3	730.9	735.2	741.2	747.3	753.3	759.3	765.9
132.5°	751.9	754.1	756.3	758.5	760.7	764.3	769.4	774.5	779.5	784.6	790.8
135°	791.9	794.7	797.5	800.3	803.1	806.3	809.8	813.3	816.8	820.4	826.2
137.5°	833.3	835.3	837.2	839.0	840.9	843.3	845.9	848.5	851.2	853.9	859.1
140°	860.4	861.5	862.7	863.9	865.1	866.9	869.3	871.6	873.8	876.2	880.9
142.5°	883.0	884.1	885.1	886.2	887.3	888.9	891.2	893.5	895.8	898.0	902.0
145°	917.7	917.5	917.3	917.1	917.0	918.3	921.4	924.3	927.3	930.2	932.6
147.5°	948.6	948.0	947.4	946.7	946.0	947.1	950.0	953.0	956.0	958.9	959.9
150°	968.8	967.6	966.3	965.1	963.9	964.7	967.5	970.3	973.1	975.9	976.9
152.5°	985.8	984.4	983.0	981.7	980.3	980.9	983.6	986.3	988.9	991.6	992.6
155°	1010.5	1008.9	1007.3	1005.7	1004.2	1004.4	1006.5	1008.7	1010.7	1012.8	1013.8
157.5°	1029.8	1028.5	1027.2	1025.8	1024.5	1024.6	1026.1	1027.5	1029.0	1030.4	1031.7
160°	1041.1	1040.1	1039.1	1037.9	1036.9	1036.9	1037.9	1039.1	1040.1	1041.1	1042.2
162.5°	1051.2	1050.2	1049.1	1048.0	1047.0	1046.9	1047.8	1048.7	1049.6	1050.6	1051.7
165°	1064.7	1063.7	1062.6	1061.5	1060.5	1060.2	1060.8	1061.3	1061.9	1062.4	1063.6
167.5°	1074.8	1073.8	1072.7	1071.6	1070.6	1070.3	1070.8	1071.3	1071.8	1072.3	1073.5
170°	1080.5	1079.3	1078.3	1077.3	1076.2	1075.9	1076.2	1076.6	1076.9	1077.3	1078.5
172.5°	1084.2	1083.1	1082.1	1081.1	1080.0	1079.7	1080.0	1080.4	1080.7	1081.1	1082.3
175°	1089.1	1087.9	1086.7	1085.4	1084.2	1083.7	1084.1	1084.4	1084.8	1085.1	1086.4
177.5°	1089.9	1088.9	1088.0	1086.9	1086.0	1085.5	1085.7	1085.8	1086.0	1086.1	1087.1
180°	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	606.5	606.5	606.5	606.5	606.5	606.5	606.5	606.5
2.5°	604.5	605.3	606.1	606.3	606.0	605.7	605.4	605.1
5°	602.7	603.8	605.0	605.5	605.3	605.1	604.9	604.7
7.5°	599.8	601.2	602.6	603.2	603.0	602.8	602.6	602.4
10°	597.3	598.8	600.5	601.1	600.9	600.7	600.5	600.3
12.5°	593.1	594.6	596.2	596.8	596.7	596.5	596.3	596.1
15°	585.4	587.1	588.9	589.7	589.5	589.3	589.1	588.9
17.5°	575.5	577.4	579.2	580.1	580.1	580.1	580.1	580.1
20°	567.7	569.9	572.0	573.1	573.1	573.1	573.1	573.1
22.5°	559.3	561.5	563.5	564.8	565.1	565.4	565.8	566.0
25°	546.1	548.5	550.8	552.2	552.8	553.5	554.1	554.7
27.5°	531.6	534.5	537.5	539.2	539.6	540.0	540.4	540.9
30°	521.3	524.4	527.5	529.4	530.0	530.6	531.2	531.8
32.5°	510.3	513.9	517.5	519.8	520.9	521.9	523.0	524.0
35°	494.6	498.9	503.3	506.1	507.5	508.9	510.1	511.5
37.5°	478.5	483.3	488.1	491.2	492.7	494.0	495.5	497.0
40°	467.2	472.3	477.3	480.8	482.5	484.3	486.0	487.8
42.5°	456.2	461.8	467.3	471.0	472.7	474.5	476.2	477.9
45°	439.3	445.3	451.4	455.4	457.4	459.3	461.2	463.2
47.5°	421.7	428.1	434.4	438.6	440.7	442.9	445.1	447.2
50°	409.7	416.3	423.0	427.4	429.6	431.7	433.8	435.9
52.5°	396.7	403.5	410.3	414.8	417.1	419.4	421.7	424.0
55°	377.0	384.1	391.2	395.9	398.5	401.0	403.6	406.0
57.5°	356.4	363.9	371.5	376.6	379.2	381.8	384.4	386.9
60°	342.7	350.1	357.6	362.7	365.3	368.1	370.8	373.6
62.5°	328.1	336.0	344.0	349.2	351.7	354.3	356.9	359.5
65°	306.1	314.1	322.1	327.4	329.9	332.4	335.0	337.5
67.5°	283.7	291.8	299.9	305.3	307.9	310.6	313.2	315.9
70°	268.2	276.6	285.0	290.3	292.7	295.1	297.4	299.7
72.5°	253.1	261.3	269.6	275.1	277.9	280.8	283.5	286.4
75°	230.4	238.8	247.2	252.6	255.2	257.7	260.3	262.8
77.5°	208.2	216.5	224.9	230.4	233.2	235.9	238.6	241.3
80°	193.0	201.3	209.5	215.0	217.7	220.4	223.2	225.9
82.5°	179.0	187.2	195.4	200.8	203.4	206.0	208.5	211.1
85°	158.8	167.0	175.2	180.6	183.4	186.1	188.9	191.6
87.5°	145.3	153.4	161.6	166.9	169.5	172.1	174.7	177.2
90°	149.1	157.8	166.5	172.2	174.9	177.5	180.3	183.0
92.5°	144.1	152.3	160.4	165.7	168.2	170.8	173.4	175.9
95°	148.4	156.6	165.0	170.1	172.4	174.5	176.7	178.8
97.5°	150.4	158.3	166.3	171.5	174.0	176.5	179.0	181.6
100°	150.0	158.6	167.2	172.8	175.3	177.8	180.3	182.8
102.5°	146.8	155.8	164.6	170.4	173.0	175.6	178.3	180.9
105°	141.0	149.8	158.6	164.4	167.2	170.0	173.0	175.8
107.5°	144.7	149.4	153.9	157.6	160.6	163.4	166.3	169.1
110°	179.3	168.1	156.9	152.7	155.5	158.4	161.3	164.1





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CATALOG NUMBER: S122DIP-S675D925U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	291.4	233.8	176.3	149.0	151.6	154.4	157.0	159.8
115°	387.8	312.8	237.7	195.0	184.5	174.1	163.7	153.3
117.5°	555.3	541.6	527.8	501.2	461.8	422.5	383.1	343.8
120°	632.8	640.4	648.0	641.0	619.6	598.1	576.7	555.3
122.5°	663.7	670.3	676.9	678.8	676.1	673.3	670.5	667.8
125°	707.3	713.9	720.3	724.7	727.0	729.3	731.6	733.8
127.5°	747.2	753.8	760.4	764.7	766.5	768.4	770.2	772.0
130°	772.5	779.1	785.7	789.7	791.1	792.5	793.9	795.3
132.5°	796.9	803.1	809.3	813.1	814.5	815.9	817.3	818.6
135°	832.1	837.9	843.8	847.3	848.5	849.7	850.9	852.1
137.5°	864.4	869.8	875.0	878.0	878.8	879.5	880.3	881.0
140°	885.5	890.3	894.9	897.5	897.8	898.0	898.4	898.6
142.5°	905.9	909.8	913.8	915.8	915.9	916.1	916.3	916.4
145°	935.0	937.5	939.9	941.1	941.2	941.2	941.4	941.5
147.5°	961.0	962.1	963.1	963.5	963.3	963.0	962.8	962.5
150°	977.9	979.0	980.1	980.2	979.3	978.4	977.5	976.6
152.5°	993.7	994.7	995.7	995.7	994.5	993.4	992.3	991.1
155°	1014.9	1016.0	1017.0	1016.8	1015.5	1014.0	1012.6	1011.2
157.5°	1032.8	1034.0	1035.2	1035.1	1033.7	1032.3	1031.0	1029.7
160°	1043.2	1044.3	1045.3	1045.3	1044.0	1042.8	1041.6	1040.3
162.5°	1052.9	1054.1	1055.3	1055.2	1053.7	1052.1	1050.7	1049.1
165°	1064.8	1066.0	1067.2	1067.2	1066.0	1064.8	1063.6	1062.4
167.5°	1074.7	1075.9	1077.2	1076.9	1075.4	1073.8	1072.3	1070.7
170°	1079.8	1081.0	1082.2	1082.0	1080.5	1078.8	1077.3	1075.7
172.5°	1083.5	1084.8	1086.0	1085.8	1084.2	1082.6	1081.1	1079.5
175°	1087.6	1088.8	1090.0	1089.8	1088.0	1086.3	1084.5	1082.8
177.5°	1088.0	1089.1	1090.0	1089.9	1088.6	1087.4	1086.1	1084.9
180°	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8	1086.8

(END OF REPORT)