

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: P331545-927

Luminaire Tested: **S122DIW-S675D1240U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331545-927  
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: S122DIW-S675D1240U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1240 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6056.8 lumens  
Efficiency: N/A  
Efficacy: 98.6 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-Indirect

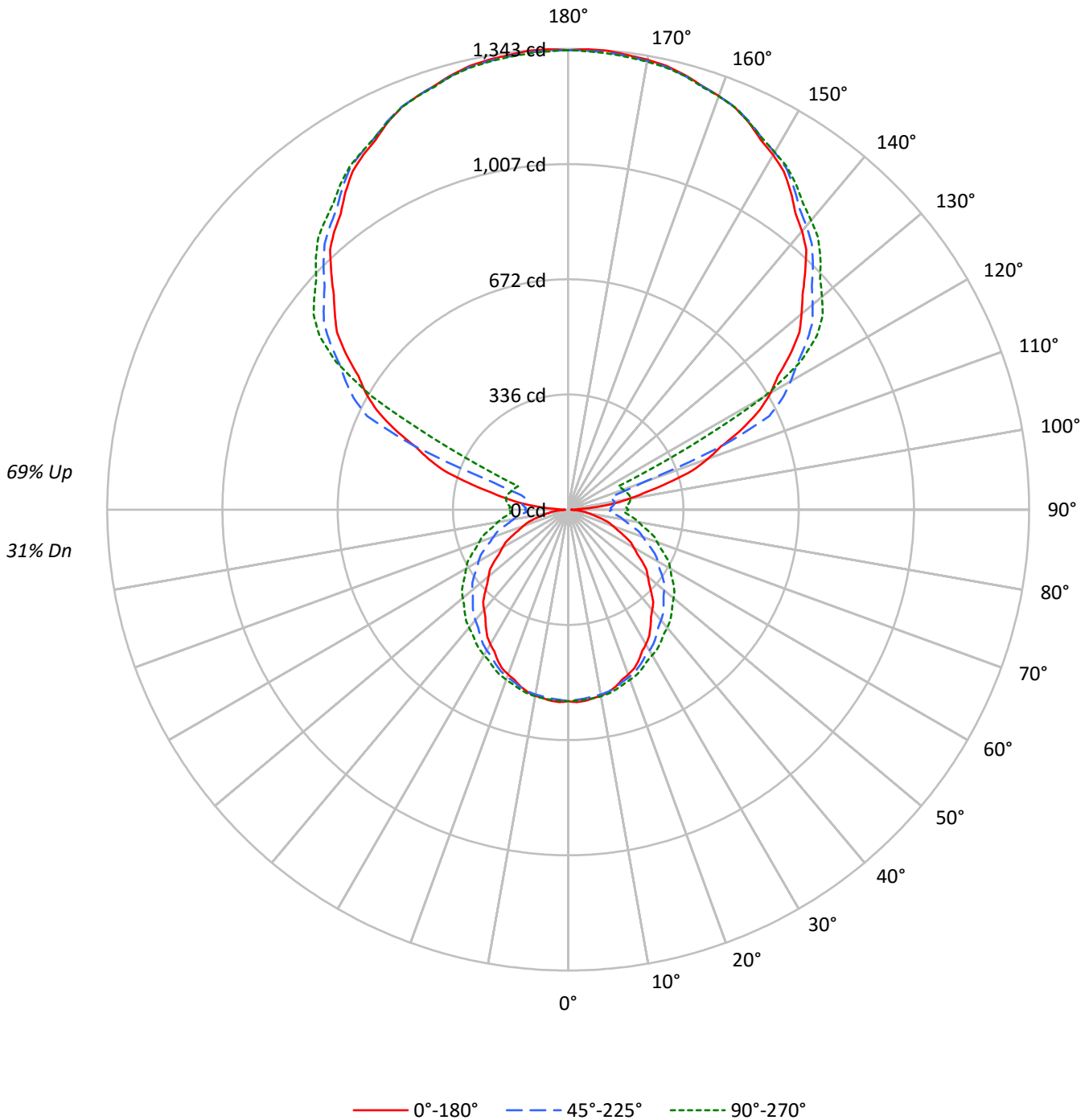
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331545-927

CATALOG NUMBER: S122DIW-S675D1240U927-4F0-1E-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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31	24
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25	20
3	76	67	59	53	68	60	54	48	47	43	39	36	33	30	25	23	21	16
4	70	59	51	45	62	53	46	41	42	37	33	32	28	25	22	20	18	14
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	20	17	15	12
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12	9
8	50	38	30	25	45	34	27	23	27	22	19	21	17	15	15	12	11	8
9	46	34	27	22	41	31	25	20	25	20	16	19	15	13	14	11	9	7
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	8	6

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

	0°	45°	90°
0°	9009	9009	9009
5°	9053	8672	8638
10°	8996	8417	8321
15°	8873	8146	7988
20°	8716	7854	7665
25°	8561	7573	7372
30°	8343	7286	7079
35°	8122	7007	6870
40°	7890	6771	6665
45°	7670	6558	6488
50°	7431	6366	6313
55°	7184	6161	6135
60°	6882	5948	5948
65°	6564	5697	5724
70°	6211	5427	5485
75°	5759	5163	5263
80°	5048	4895	5040
85°	4369	4658	4864



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.9	0.9
10°-20°	151.6	2.5
20°-30°	229.8	3.8
30°-40°	279.8	4.6
40°-50°	301.1	5.0
50°-60°	292.4	4.8
60°-70°	255.3	4.2
70°-80°	196.5	3.2
80°-90°	135.2	2.2
90°-100°	135.5	2.2
100°-110°	230.2	3.8
110°-120°	481.7	8.0
120°-130°	747.3	12.3
130°-140°	779.0	12.9
140°-150°	716.3	11.8
150°-160°	574.5	9.5
160°-170°	370.2	6.1
170°-180°	127.4	2.1
0°-30°	434.3	7.2
0°-40°	714.1	11.8
0°-60°	1307.5	21.6
0°-90°	1894.6	31.3
90°-120°	847.5	14.0
90°-150°	3090.1	51.0
90°-180°	4162.0	68.7
0°-180°	6056.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	560	557	552	557	556	53
15°	534	535	535	542	542	150
25°	485	491	498	507	510	223
35°	418	432	447	464	471	261
45°	343	365	393	417	426	265
55°	263	293	334	362	374	235
65°	180	220	267	299	310	178
75°	100	145	196	230	242	105
85°	29	79	131	164	176	31
90°	9	67	126	162	175	8
95°	70	78	131	165	175	82
105°	299	336	129	166	180	319
115°	560	588	646	242	161	551
125°	790	804	846	874	885	704
135°	976	991	1008	1033	1039	754
145°	1131	1131	1146	1157	1157	707
155°	1245	1238	1248	1253	1246	574
165°	1312	1307	1309	1315	1309	371
175°	1342	1336	1337	1343	1334	128
180°	1339	1339	1339	1339	1339	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	561.3	560.8	560.4	559.9	559.5	558.8	557.8	556.7	555.8	554.8	555.5
5°	559.6	559.0	558.6	558.0	557.5	556.7	555.6	554.5	553.4	552.3	553.4
7.5°	554.6	554.2	553.9	553.5	553.2	552.5	551.8	550.9	550.1	549.3	550.6
10°	550.7	550.3	550.0	549.6	549.3	548.8	548.3	547.8	547.2	546.7	548.1
12.5°	544.2	544.3	544.4	544.5	544.5	544.4	544.0	543.6	543.2	542.8	544.2
15°	533.8	534.1	534.5	534.8	535.2	535.4	535.4	535.4	535.4	535.4	536.9
17.5°	520.1	520.9	521.7	522.4	523.2	523.9	524.4	525.0	525.5	526.2	527.8
20°	511.1	512.0	512.9	513.8	514.7	515.5	516.2	517.0	517.7	518.4	520.4
22.5°	501.4	502.4	503.5	504.5	505.6	506.6	507.6	508.6	509.6	510.6	512.6
25°	485.2	486.5	487.7	489.0	490.3	491.7	493.3	495.0	496.5	498.1	500.3
27.5°	465.8	467.9	469.9	472.0	474.0	476.0	477.9	479.8	481.7	483.6	486.3
30°	452.9	455.2	457.6	459.9	462.2	464.5	466.9	469.2	471.6	473.9	476.7
32.5°	438.6	441.2	443.9	446.5	449.2	451.9	454.6	457.3	460.1	462.9	466.2
35°	418.1	421.1	424.2	427.2	430.3	433.6	437.0	440.4	443.8	447.2	451.1
37.5°	395.8	399.3	402.8	406.3	409.9	413.8	418.3	422.7	427.1	431.5	435.9
40°	380.9	384.8	388.8	392.8	396.7	401.1	406.0	410.8	415.7	420.5	425.2
42.5°	366.7	370.6	374.5	378.5	382.5	387.2	392.8	398.4	403.9	409.6	414.6
45°	342.9	347.8	352.6	357.4	362.3	367.9	374.1	380.5	386.7	393.0	398.6
47.5°	319.4	324.7	330.0	335.3	340.6	346.9	354.3	361.6	369.0	376.4	382.2
50°	303.2	308.9	314.4	320.0	325.5	332.4	340.5	348.6	356.6	364.7	370.8
52.5°	287.7	293.6	299.4	305.3	311.2	318.4	326.9	335.4	343.9	352.4	358.7
55°	262.8	269.3	275.8	282.3	288.7	296.6	305.9	315.3	324.6	334.0	340.5
57.5°	238.2	245.6	252.9	260.2	267.4	275.8	285.3	294.9	304.4	313.9	320.9
60°	220.8	228.5	236.2	244.0	251.7	260.7	270.9	281.1	291.4	301.7	308.5
62.5°	205.3	213.3	221.3	229.3	237.3	246.4	256.7	266.9	277.2	287.4	294.7
65°	179.5	188.3	197.2	206.0	214.8	224.4	235.0	245.7	256.3	266.9	274.3
67.5°	155.9	165.1	174.4	183.5	192.7	202.7	213.6	224.4	235.3	246.1	253.6
70°	139.1	148.5	157.8	167.2	176.5	186.7	197.9	209.0	220.1	231.3	239.0
72.5°	123.6	133.2	142.8	152.5	162.1	172.5	183.9	195.1	206.4	217.7	225.3
75°	99.5	109.6	119.6	129.7	139.7	150.5	162.0	173.5	185.0	196.5	204.2
77.5°	76.2	86.7	97.3	107.7	118.3	129.4	141.1	152.8	164.5	176.1	183.9
80°	60.7	71.6	82.5	93.6	104.5	115.8	127.5	139.2	150.8	162.6	170.1
82.5°	47.7	58.5	69.3	80.2	91.0	102.3	114.2	126.0	137.8	149.6	157.2
85°	29.2	40.2	51.4	62.5	73.7	85.0	96.5	108.0	119.5	131.0	138.6
87.5°	16.1	27.3	38.4	49.6	60.8	72.3	84.1	96.0	107.8	119.7	127.2
90°	9.0	21.9	34.6	47.5	60.2	73.2	86.4	99.7	112.9	126.1	134.4
92.5°	27.0	36.5	46.0	55.5	65.0	75.7	87.6	99.6	111.5	123.4	131.0
95°	69.5	70.8	72.2	73.5	74.8	81.6	94.0	106.2	118.5	130.8	138.7
97.5°	130.6	118.1	105.7	93.2	80.6	81.3	95.1	108.9	122.8	136.7	144.2
100°	177.2	154.3	131.5	108.6	85.8	81.2	94.9	108.7	122.4	136.1	144.5
102.5°	227.7	227.5	227.4	227.2	227.0	216.5	195.7	174.8	154.0	133.2	141.9
105°	298.7	310.3	321.9	333.7	345.3	326.5	277.0	227.5	178.1	128.7	137.3
107.5°	380.5	389.8	399.2	408.6	418.0	391.9	330.3	268.8	207.2	145.7	149.3
110°	432.5	440.6	448.8	456.9	465.0	442.4	388.9	335.5	282.0	228.6	212.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	482.1	489.2	496.2	503.2	510.2	510.2	503.3	496.2	489.3	482.3	409.4
115°	560.5	566.1	571.7	577.3	583.0	592.6	606.0	619.5	633.0	646.4	552.1
117.5°	629.6	635.0	640.4	645.8	651.1	659.4	670.6	681.8	692.9	704.2	685.3
120°	680.7	684.7	688.6	692.6	696.6	704.1	715.1	726.2	737.3	748.3	755.9
122.5°	724.1	727.9	731.6	735.2	738.9	746.2	757.2	768.3	779.2	790.2	796.6
125°	789.5	792.3	795.0	797.9	800.7	807.0	816.8	826.6	836.5	846.4	852.7
127.5°	849.3	852.2	855.2	858.1	861.0	866.3	874.0	881.7	889.4	897.1	903.8
130°	887.3	890.6	893.8	897.1	900.4	905.1	911.2	917.3	923.5	929.6	936.4
132.5°	926.1	928.8	931.6	934.3	937.1	941.1	946.3	951.6	957.0	962.2	968.4
135°	975.7	979.1	982.5	986.0	989.4	993.0	996.8	1000.5	1004.2	1008.0	1013.9
137.5°	1026.7	1029.0	1031.4	1033.8	1036.2	1038.8	1041.8	1044.8	1047.8	1050.8	1056.2
140°	1059.9	1061.5	1063.0	1064.6	1066.1	1068.3	1071.0	1073.7	1076.5	1079.2	1084.0
142.5°	1087.9	1089.3	1090.6	1092.0	1093.4	1095.4	1098.2	1101.0	1103.8	1106.6	1110.6
145°	1130.8	1130.7	1130.4	1130.2	1130.0	1131.7	1135.4	1139.1	1142.7	1146.4	1149.0
147.5°	1169.0	1168.2	1167.4	1166.6	1165.8	1167.2	1170.8	1174.4	1178.1	1181.6	1182.9
150°	1193.9	1192.4	1190.9	1189.3	1187.8	1188.8	1192.2	1195.7	1199.1	1202.6	1203.9
152.5°	1214.8	1213.1	1211.4	1209.7	1208.1	1208.9	1212.1	1215.4	1218.7	1221.9	1223.3
155°	1245.2	1243.3	1241.3	1239.4	1237.5	1237.8	1240.4	1242.9	1245.5	1248.2	1249.4
157.5°	1269.1	1267.4	1265.7	1264.2	1262.5	1262.6	1264.4	1266.2	1268.0	1269.9	1271.3
160°	1283.0	1281.8	1280.4	1279.1	1277.9	1277.9	1279.1	1280.4	1281.8	1283.0	1284.3
162.5°	1295.5	1294.1	1292.8	1291.6	1290.2	1290.1	1291.3	1292.4	1293.6	1294.7	1296.1
165°	1312.1	1310.8	1309.5	1308.2	1306.9	1306.6	1307.3	1307.9	1308.5	1309.2	1310.7
167.5°	1324.5	1323.2	1321.9	1320.6	1319.3	1319.0	1319.6	1320.2	1320.8	1321.4	1322.9
170°	1331.5	1330.2	1328.9	1327.6	1326.3	1325.9	1326.3	1326.7	1327.1	1327.6	1329.1
172.5°	1336.1	1334.8	1333.6	1332.2	1330.9	1330.5	1330.9	1331.3	1331.8	1332.2	1333.7
175°	1342.1	1340.6	1339.1	1337.6	1336.1	1335.5	1336.0	1336.4	1336.9	1337.3	1338.8
177.5°	1343.1	1341.9	1340.7	1339.5	1338.2	1337.8	1337.9	1338.1	1338.2	1338.5	1339.7
180°	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	558.0	558.0	558.0	558.0	558.0	558.0	558.0	558.0
2.5°	556.2	556.9	557.6	557.9	557.5	557.3	557.0	556.7
5°	554.5	555.6	556.7	557.1	556.9	556.7	556.6	556.3
7.5°	551.8	553.2	554.4	555.0	554.8	554.6	554.4	554.3
10°	549.5	551.0	552.5	553.0	552.9	552.7	552.5	552.3
12.5°	545.7	547.1	548.6	549.1	549.0	548.8	548.7	548.4
15°	538.6	540.2	541.9	542.6	542.4	542.2	542.0	541.9
17.5°	529.5	531.2	532.9	533.8	533.8	533.8	533.8	533.8
20°	522.4	524.3	526.2	527.3	527.3	527.3	527.3	527.3
22.5°	514.6	516.6	518.5	519.7	519.9	520.2	520.5	520.8
25°	502.5	504.6	506.8	508.1	508.7	509.2	509.8	510.3
27.5°	489.1	491.8	494.6	496.1	496.5	496.9	497.3	497.6
30°	479.7	482.5	485.4	487.1	487.7	488.2	488.7	489.3
32.5°	469.5	472.9	476.1	478.2	479.3	480.2	481.2	482.1
35°	455.1	459.1	463.0	465.6	466.9	468.2	469.4	470.6
37.5°	440.3	444.7	449.1	451.9	453.3	454.6	455.9	457.2
40°	429.8	434.5	439.2	442.4	443.9	445.6	447.2	448.9
42.5°	419.7	424.8	429.9	433.3	434.9	436.6	438.2	439.7
45°	404.2	409.7	415.3	419.0	420.8	422.6	424.4	426.2
47.5°	388.0	393.9	399.7	403.5	405.5	407.5	409.5	411.5
50°	376.9	383.0	389.2	393.2	395.2	397.2	399.1	401.1
52.5°	365.0	371.2	377.5	381.7	383.7	385.9	388.0	390.1
55°	346.9	353.4	359.9	364.2	366.6	368.9	371.3	373.6
57.5°	327.9	334.9	341.8	346.5	348.9	351.3	353.6	356.0
60°	315.3	322.1	329.0	333.7	336.1	338.7	341.2	343.7
62.5°	301.9	309.2	316.5	321.3	323.6	326.0	328.4	330.7
65°	281.6	289.0	296.4	301.2	303.6	305.9	308.2	310.5
67.5°	261.0	268.5	275.9	280.9	283.3	285.7	288.2	290.7
70°	246.8	254.4	262.2	267.1	269.3	271.5	273.6	275.8
72.5°	232.9	240.4	248.0	253.1	255.7	258.3	260.9	263.5
75°	212.0	219.7	227.4	232.4	234.8	237.1	239.5	241.8
77.5°	191.5	199.2	206.9	212.0	214.5	217.1	219.5	222.0
80°	177.6	185.2	192.7	197.8	200.3	202.8	205.3	207.9
82.5°	164.7	172.2	179.8	184.7	187.1	189.5	191.9	194.2
85°	146.1	153.7	161.2	166.2	168.7	171.3	173.8	176.3
87.5°	134.8	142.4	149.9	154.9	157.2	159.6	162.0	164.4
90°	142.7	150.9	159.2	164.6	167.2	169.8	172.4	175.0
92.5°	138.6	146.2	153.8	158.8	161.3	163.7	166.0	168.5
95°	146.6	154.5	162.4	167.3	169.3	171.2	173.2	175.1
97.5°	151.6	159.1	166.7	171.6	174.0	176.3	178.7	181.2
100°	152.8	161.2	169.6	175.0	177.4	179.8	182.2	184.6
102.5°	150.6	159.4	168.1	173.8	176.3	179.0	181.5	184.1
105°	146.0	154.6	163.3	169.1	171.9	174.8	177.5	180.4
107.5°	152.9	156.5	160.2	163.4	166.3	169.1	171.9	174.8
110°	197.0	181.3	165.5	159.0	161.8	164.7	167.5	170.4





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CATALOG NUMBER: S122DIW-S675D1240U927-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	336.6	263.8	191.0	156.0	158.6	161.3	164.0	166.6
115°	457.8	363.5	269.2	215.2	201.7	188.2	174.7	161.1
117.5°	666.5	647.8	628.9	595.0	545.9	496.8	447.7	398.5
120°	763.6	771.2	778.8	769.1	742.0	714.9	687.8	660.7
122.5°	803.0	809.5	815.9	817.1	813.3	809.3	805.3	801.4
125°	859.0	865.4	871.8	876.1	878.4	880.6	882.9	885.1
127.5°	910.4	917.0	923.7	927.9	929.6	931.3	933.0	934.8
130°	943.0	949.7	956.4	960.4	961.6	962.8	964.0	965.2
132.5°	974.6	980.8	987.0	990.7	991.9	993.2	994.3	995.6
135°	1019.9	1025.8	1031.7	1035.1	1036.2	1037.2	1038.2	1039.2
137.5°	1061.6	1067.0	1072.5	1075.4	1075.9	1076.3	1076.9	1077.4
140°	1088.9	1093.6	1098.4	1100.9	1100.9	1100.9	1100.9	1100.9
142.5°	1114.7	1118.8	1122.8	1124.8	1124.7	1124.5	1124.4	1124.3
145°	1151.5	1154.1	1156.7	1157.9	1157.8	1157.5	1157.4	1157.2
147.5°	1184.2	1185.4	1186.7	1187.1	1186.6	1186.1	1185.7	1185.2
150°	1205.1	1206.5	1207.8	1207.8	1206.8	1205.7	1204.6	1203.6
152.5°	1224.6	1225.8	1227.2	1227.1	1225.7	1224.2	1222.8	1221.4
155°	1250.7	1252.0	1253.3	1253.1	1251.3	1249.7	1247.9	1246.2
157.5°	1272.8	1274.2	1275.7	1275.6	1273.9	1272.2	1270.6	1268.8
160°	1285.6	1286.9	1288.2	1288.1	1286.6	1285.1	1283.6	1282.1
162.5°	1297.6	1299.0	1300.5	1300.3	1298.5	1296.6	1294.7	1292.9
165°	1312.2	1313.7	1315.2	1315.2	1313.7	1312.2	1310.7	1309.2
167.5°	1324.4	1325.9	1327.4	1327.2	1325.2	1323.3	1321.4	1319.5
170°	1330.6	1332.1	1333.6	1333.4	1331.5	1329.5	1327.6	1325.6
172.5°	1335.2	1336.7	1338.2	1338.1	1336.1	1334.2	1332.2	1330.3
175°	1340.3	1341.8	1343.3	1343.0	1340.8	1338.7	1336.5	1334.4
177.5°	1340.8	1342.0	1343.3	1343.1	1341.6	1340.0	1338.5	1336.9
180°	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2	1339.2

(END OF REPORT)