

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: P331542

Luminaire Tested: **S122DIW-S675D970U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331542
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: S122DIW-S675D970U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6061.9 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

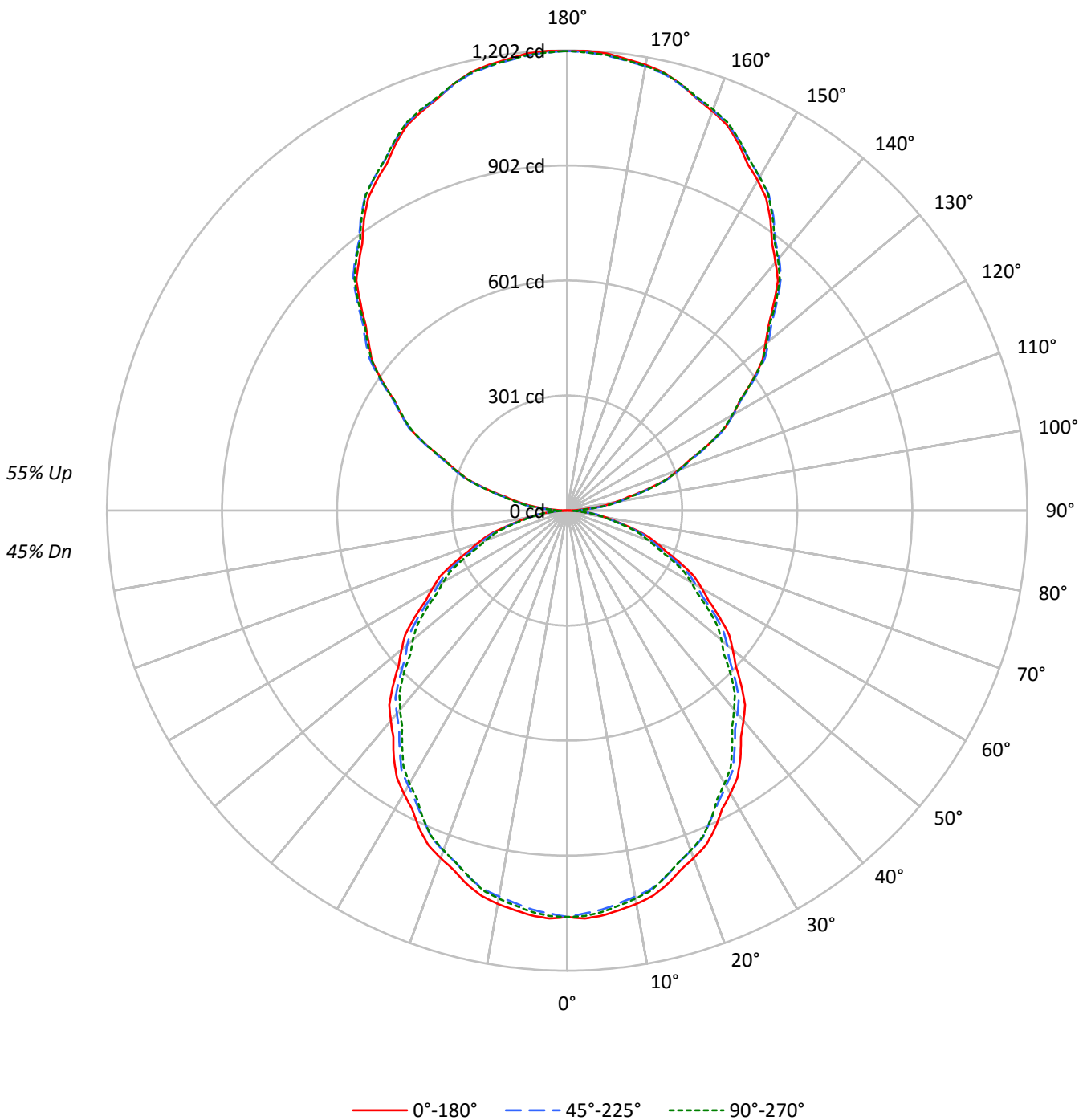
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45				
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38				
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	31				
3	80	71	64	58	73	65	59	54	54	50	46	44	41	38	35	33	31	27				
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27	23				
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20				
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17				
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	20	18	15				
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14				
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	13				
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	16	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17142	17142	17142
5°	17208	16960	17058
10°	17105	16787	16870
15°	16893	16568	16552
20°	16593	16242	16225
25°	16295	15841	15841
30°	15910	15474	15340
35°	15554	15031	14808
40°	15104	14587	14309
45°	14661	14150	13798
50°	14179	13692	13205
55°	13678	13163	12673
60°	13120	12526	12064
65°	12520	11897	11351
70°	11759	11131	10603
75°	10699	10256	10000
80°	9493	9205	8731
85°	7762	7373	6614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	1.6
10°-20°	280.9	4.6
20°-30°	412.9	6.8
30°-40°	479.6	7.9
40°-50°	479.1	7.9
50°-60°	417.8	6.9
60°-70°	308.9	5.1
70°-80°	175.0	2.9
80°-90°	51.8	0.9
90°-100°	76.0	1.3
100°-110°	236.2	3.9
110°-120°	403.8	6.7
120°-130°	531.0	8.8
130°-140°	595.9	9.8
140°-150°	584.3	9.6
150°-160°	490.1	8.1
160°-170°	325.1	5.4
170°-180°	113.6	1.9
0°-30°	793.6	13.1
0°-40°	1273.2	21.0
0°-60°	2170.1	35.8
0°-90°	2705.9	44.6
90°-120°	716.0	11.8
90°-150°	2427.3	40.0
90°-180°	3356.0	55.4
0°-180°	6061.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1062	1057	1046	1054	1052	101
15°	1011	1004	991	995	990	284
25°	915	906	889	891	889	421
35°	789	779	763	756	751	492
45°	642	635	620	609	604	495
55°	486	479	468	456	450	434
65°	328	321	311	302	297	324
75°	172	169	164	159	160	183
85°	42	41	40	37	36	48
90°	1	14	35	34	34	5
95°	53	62	65	65	63	60
105°	218	221	223	225	225	230
115°	405	411	409	408	405	401
125°	590	598	596	593	592	527
135°	763	773	776	775	772	589
145°	926	933	939	940	936	578
155°	1058	1061	1064	1069	1066	487
165°	1152	1151	1151	1157	1153	325
175°	1198	1195	1193	1200	1194	114
180°	1200	1200	1200	1200	1200	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1066.6	1065.7	1064.8	1063.9	1063.0	1061.5	1059.5	1057.5	1055.5	1053.5	1055.3
5°	1061.7	1060.8	1059.9	1059.0	1058.1	1056.4	1053.9	1051.4	1048.9	1046.4	1048.2
7.5°	1052.3	1050.9	1049.5	1048.1	1046.7	1044.7	1042.2	1039.6	1037.1	1034.5	1036.3
10°	1043.3	1041.7	1040.1	1038.5	1037.0	1034.8	1032.1	1029.4	1026.6	1023.9	1025.7
12.5°	1031.1	1029.7	1028.2	1026.8	1025.4	1023.4	1020.6	1017.9	1015.2	1012.5	1013.8
15°	1010.6	1009.3	1007.9	1006.6	1005.2	1003.0	1000.1	997.1	994.2	991.2	992.2
17.5°	984.5	983.1	981.8	980.4	979.1	976.9	973.9	970.9	967.9	964.9	966.0
20°	965.7	964.4	963.0	961.6	960.3	958.0	954.8	951.7	948.5	945.3	946.0
22.5°	946.9	945.0	943.1	941.2	939.3	936.9	933.9	930.9	927.9	924.9	925.0
25°	914.7	912.9	911.1	909.2	907.4	904.6	900.7	896.9	893.0	889.2	889.6
27.5°	877.9	876.3	874.7	873.0	871.4	869.1	866.0	863.0	859.9	856.9	856.2
30°	853.4	851.6	849.8	848.0	846.2	843.6	840.2	836.8	833.4	830.0	829.3
32.5°	827.3	825.8	824.4	822.9	821.5	819.0	815.4	811.8	808.2	804.6	803.4
35°	789.1	786.9	784.6	782.3	780.0	777.1	773.5	769.8	766.2	762.6	761.2
37.5°	746.0	744.0	742.0	740.0	738.1	735.2	731.6	728.0	724.4	720.7	719.0
40°	716.6	714.8	713.0	711.2	709.4	706.7	703.0	699.4	695.8	692.1	690.1
42.5°	688.1	686.2	684.4	682.6	680.8	678.1	674.4	670.8	667.2	663.6	661.3
45°	642.1	640.5	638.9	637.4	635.8	633.3	629.9	626.5	623.1	619.7	617.2
47.5°	596.4	594.9	593.4	591.9	590.4	587.9	584.3	580.8	577.3	573.7	571.1
50°	564.5	563.4	562.3	561.1	560.0	557.8	554.7	551.5	548.3	545.1	542.0
52.5°	533.5	532.0	530.5	529.0	527.5	525.3	522.3	519.3	516.3	513.3	510.7
55°	485.9	484.6	483.2	481.8	480.5	478.4	475.7	473.0	470.3	467.6	464.8
57.5°	438.1	437.1	436.0	434.9	433.8	431.8	428.8	425.8	422.8	419.8	417.1
60°	406.3	405.4	404.5	403.6	402.7	400.6	397.5	394.3	391.1	387.9	385.4
62.5°	375.3	373.8	372.4	370.9	369.5	367.5	365.1	362.6	360.2	357.7	355.4
65°	327.7	326.3	325.0	323.6	322.2	320.4	318.2	315.9	313.6	311.4	309.3
67.5°	279.3	278.2	277.1	276.0	274.9	273.4	271.3	269.3	267.3	265.2	263.6
70°	249.1	248.2	247.3	246.4	245.5	244.0	241.9	239.9	237.9	235.8	234.2
72.5°	218.1	217.1	216.2	215.3	214.4	213.3	212.0	210.7	209.4	208.0	206.5
75°	171.5	171.0	170.6	170.1	169.7	168.9	167.8	166.6	165.5	164.4	163.0
77.5°	129.9	129.1	128.3	127.5	126.8	126.2	125.7	125.2	124.8	124.3	123.7
80°	102.1	101.9	101.6	101.4	101.2	100.8	100.4	99.9	99.5	99.0	98.3
82.5°	76.0	75.9	75.9	75.8	75.8	75.6	75.3	75.1	74.8	74.5	73.7
85°	41.9	41.6	41.4	41.2	40.9	40.7	40.5	40.3	40.0	39.8	39.1
87.5°	14.9	15.1	15.3	15.4	15.6	16.0	16.6	17.3	17.9	18.5	17.9
90°	1.0	3.7	6.4	9.1	11.8	15.6	20.6	25.5	30.5	35.4	35.0
92.5°	18.0	20.0	22.0	24.0	26.0	27.5	28.7	29.9	31.0	32.2	32.3
95°	52.7	54.9	57.2	59.4	61.7	63.0	63.5	63.9	64.4	64.8	64.8
97.5°	96.2	98.2	100.2	102.2	104.1	105.6	106.4	107.3	108.1	109.0	109.0
100°	128.6	130.4	132.2	134.0	135.8	137.1	137.7	138.4	139.1	139.8	139.8
102.5°	162.7	164.1	165.5	167.0	168.4	169.6	170.4	171.3	172.1	173.0	173.2
105°	217.8	218.4	219.1	219.8	220.5	221.0	221.5	221.9	222.4	222.8	223.3
107.5°	273.3	274.3	275.2	276.2	277.2	277.7	277.7	277.7	277.7	277.7	277.9
110°	308.9	310.3	311.6	313.0	314.3	315.0	315.0	315.0	315.0	315.0	315.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	347.8	349.2	350.5	351.9	353.2	353.8	353.6	353.4	353.3	353.1	352.5
115°	405.1	406.5	407.8	409.2	410.5	411.0	410.5	410.1	409.6	409.2	409.0
117.5°	462.3	464.1	465.9	467.7	469.5	469.7	468.5	467.2	466.0	464.7	464.2
120°	500.4	502.2	504.0	505.8	507.6	507.6	505.8	504.0	502.2	500.4	500.4
122.5°	535.2	537.4	539.5	541.7	543.8	544.3	543.0	541.8	540.5	539.2	538.7
125°	589.5	591.5	593.5	595.6	597.6	598.3	597.6	596.9	596.2	595.6	594.9
127.5°	642.4	644.9	647.5	650.1	652.6	653.5	652.7	651.9	651.1	650.3	649.4
130°	675.6	678.5	681.4	684.4	687.3	688.5	688.1	687.6	687.2	686.7	686.3
132.5°	712.8	715.2	717.6	720.0	722.4	723.6	723.7	723.8	723.9	724.0	723.0
135°	762.7	765.2	767.6	770.1	772.6	774.0	774.5	774.9	775.4	775.8	775.6
137.5°	815.1	817.2	819.2	821.2	823.2	824.6	825.1	825.7	826.3	826.9	826.7
140°	846.7	848.8	850.8	852.8	854.8	856.4	857.6	858.7	859.8	860.9	860.9
142.5°	879.2	881.2	883.2	885.2	887.3	888.7	889.4	890.2	891.0	891.7	891.9
145°	925.7	927.3	928.9	930.5	932.1	933.5	934.9	936.2	937.6	938.9	939.1
147.5°	967.3	969.2	971.1	972.9	974.8	976.2	977.1	978.0	978.9	979.8	980.3
150°	995.6	997.0	998.3	999.7	1001.0	1002.2	1003.1	1004.0	1004.9	1005.8	1006.4
152.5°	1020.8	1022.1	1023.5	1024.8	1026.2	1027.4	1028.5	1029.5	1030.6	1031.7	1032.5
155°	1058.4	1059.1	1059.8	1060.5	1061.1	1061.8	1062.5	1063.2	1063.8	1064.5	1065.6
157.5°	1090.6	1091.1	1091.5	1092.0	1092.4	1092.9	1093.3	1093.7	1094.1	1094.5	1096.0
160°	1110.1	1110.5	1111.0	1111.4	1111.9	1112.2	1112.5	1112.7	1112.9	1113.1	1114.5
162.5°	1127.9	1128.0	1128.1	1128.2	1128.3	1128.4	1128.7	1128.9	1129.1	1129.3	1130.9
165°	1151.6	1151.4	1151.2	1150.9	1150.7	1150.6	1150.6	1150.6	1150.6	1150.6	1152.2
167.5°	1171.5	1170.8	1170.1	1169.4	1168.8	1168.4	1168.4	1168.3	1168.3	1168.2	1169.8
170°	1182.0	1181.3	1180.7	1180.0	1179.3	1178.9	1178.6	1178.4	1178.2	1178.0	1179.5
172.5°	1189.3	1188.6	1187.9	1187.3	1186.6	1186.1	1185.9	1185.7	1185.5	1185.2	1186.8
175°	1198.2	1197.5	1196.9	1196.2	1195.5	1194.9	1194.5	1194.0	1193.6	1193.1	1194.7
177.5°	1201.9	1201.3	1200.8	1200.2	1199.7	1199.2	1198.9	1198.5	1198.2	1197.8	1198.9
180°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1057.1	1059.0	1060.8	1061.5	1061.1	1060.8	1060.4	1060.1
5°	1050.0	1051.8	1053.6	1054.3	1053.9	1053.4	1053.0	1052.5
7.5°	1038.2	1040.0	1041.8	1042.4	1041.9	1041.5	1041.0	1040.5
10°	1027.5	1029.4	1031.2	1031.7	1031.1	1030.4	1029.7	1029.0
12.5°	1015.0	1016.3	1017.6	1017.9	1017.4	1017.0	1016.5	1016.0
15°	993.1	994.0	994.9	994.8	993.6	992.5	991.4	990.2
17.5°	967.0	968.0	969.1	969.1	968.0	966.9	965.8	964.7
20°	946.7	947.4	948.0	947.9	947.0	946.1	945.2	944.3
22.5°	925.2	925.3	925.4	925.2	924.7	924.1	923.6	923.1
25°	890.1	890.5	891.0	891.0	890.5	890.1	889.6	889.2
27.5°	855.5	854.9	854.2	853.3	852.2	851.1	850.0	848.9
30°	828.6	827.9	827.2	826.4	825.5	824.6	823.7	822.8
32.5°	802.2	801.0	799.7	798.7	797.8	796.9	795.9	795.0
35°	759.9	758.5	757.1	755.9	754.8	753.6	752.5	751.3
37.5°	717.4	715.7	714.0	712.6	711.5	710.4	709.4	708.3
40°	688.1	686.0	684.0	682.5	681.6	680.7	679.8	678.9
42.5°	659.1	656.9	654.7	652.9	651.6	650.4	649.1	647.8
45°	614.7	612.2	609.7	608.0	607.1	606.2	605.3	604.3
47.5°	568.5	565.8	563.2	561.2	559.9	558.6	557.3	556.0
50°	538.8	535.6	532.4	530.3	529.1	528.0	526.9	525.7
52.5°	508.0	505.4	502.8	500.7	499.2	497.7	496.2	494.7
55°	462.1	459.4	456.7	454.7	453.6	452.5	451.3	450.2
57.5°	414.4	411.7	409.1	407.3	406.4	405.6	404.7	403.8
60°	382.9	380.4	377.9	376.4	375.7	375.0	374.3	373.6
62.5°	353.1	350.8	348.5	346.9	346.0	345.1	344.3	343.4
65°	307.3	305.2	303.2	301.6	300.5	299.3	298.2	297.1
67.5°	262.0	260.5	258.9	257.6	256.7	255.8	254.9	254.0
70°	232.6	231.1	229.5	228.2	227.3	226.4	225.5	224.6
72.5°	204.9	203.3	201.7	200.5	199.8	199.1	198.4	197.6
75°	161.6	160.3	158.9	158.5	158.9	159.4	159.8	160.3
77.5°	123.0	122.3	121.6	121.0	120.3	119.7	119.1	118.4
80°	97.7	97.0	96.3	95.7	95.3	94.8	94.4	93.9
82.5°	72.8	71.9	71.1	70.6	70.5	70.4	70.3	70.2
85°	38.5	37.8	37.1	36.6	36.4	36.2	36.0	35.7
87.5°	17.3	16.6	16.0	15.6	15.5	15.3	15.2	15.1
90°	34.5	34.1	33.6	33.5	33.8	34.0	34.2	34.4
92.5°	32.4	32.5	32.6	32.6	32.7	32.7	32.8	32.8
95°	64.8	64.8	64.8	64.6	64.1	63.7	63.2	62.8
97.5°	109.0	109.0	109.0	109.0	108.9	108.9	108.8	108.8
100°	139.8	139.8	139.8	139.7	139.4	139.2	139.0	138.8
102.5°	173.4	173.5	173.7	173.7	173.5	173.2	173.0	172.8
105°	223.7	224.2	224.6	224.9	224.9	224.9	224.9	224.9
107.5°	278.1	278.3	278.4	278.0	277.0	275.9	274.9	273.9
110°	315.0	315.0	315.0	314.7	314.0	313.3	312.6	312.0



TEST NUMBER: P331542

CATALOG NUMBER: S122DIW-S675D970U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	352.0	351.5	350.9	350.4	349.9	349.4	348.9	348.4
115°	408.7	408.5	408.3	407.8	407.2	406.5	405.8	405.1
117.5°	463.6	463.1	462.5	461.9	461.3	460.6	459.9	459.2
120°	500.4	500.4	500.4	500.0	499.3	498.7	498.0	497.3
122.5°	538.2	537.6	537.1	536.6	536.1	535.6	535.1	534.6
125°	594.2	593.5	592.9	592.4	592.2	592.0	591.7	591.5
127.5°	648.6	647.8	647.0	646.2	645.5	644.8	644.1	643.4
130°	685.8	685.4	684.9	684.2	683.3	682.4	681.5	680.6
132.5°	722.0	721.0	720.0	719.2	718.5	717.7	717.0	716.3
135°	775.4	775.2	774.9	774.5	773.8	773.1	772.5	771.8
137.5°	826.5	826.4	826.2	825.6	824.7	823.8	822.9	822.0
140°	860.9	860.9	860.9	860.5	859.6	858.7	857.8	856.9
142.5°	892.1	892.3	892.4	892.1	891.2	890.3	889.4	888.5
145°	939.4	939.6	939.8	939.5	938.6	937.7	936.8	935.9
147.5°	980.8	981.3	981.8	981.6	980.8	979.9	979.1	978.2
150°	1007.1	1007.8	1008.5	1008.5	1007.8	1007.1	1006.4	1005.8
152.5°	1033.4	1034.3	1035.1	1035.1	1034.3	1033.4	1032.5	1031.7
155°	1066.8	1067.9	1069.0	1069.2	1068.6	1067.9	1067.2	1066.5
157.5°	1097.6	1099.1	1100.6	1100.8	1099.8	1098.7	1097.6	1096.5
160°	1115.8	1117.2	1118.5	1118.8	1117.9	1117.0	1116.1	1115.2
162.5°	1132.4	1133.9	1135.5	1135.7	1134.6	1133.5	1132.4	1131.4
165°	1153.8	1155.3	1156.9	1157.1	1156.0	1154.9	1153.8	1152.6
167.5°	1171.4	1173.0	1174.5	1174.7	1173.6	1172.4	1171.2	1170.1
170°	1181.1	1182.7	1184.3	1184.4	1183.0	1181.7	1180.3	1179.0
172.5°	1188.4	1190.0	1191.5	1191.7	1190.3	1189.0	1187.6	1186.3
175°	1196.3	1197.9	1199.4	1199.6	1198.2	1196.9	1195.5	1194.2
177.5°	1200.0	1201.0	1202.1	1202.1	1201.0	1200.0	1198.9	1197.8
180°	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2	1200.2

(END OF REPORT)