

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: P331546

Luminaire Tested: **S122DIW-S675D1240U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331546
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-S675D1240U835-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6989.8 lumens
Efficiency: N/A
Efficacy: 113.8 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

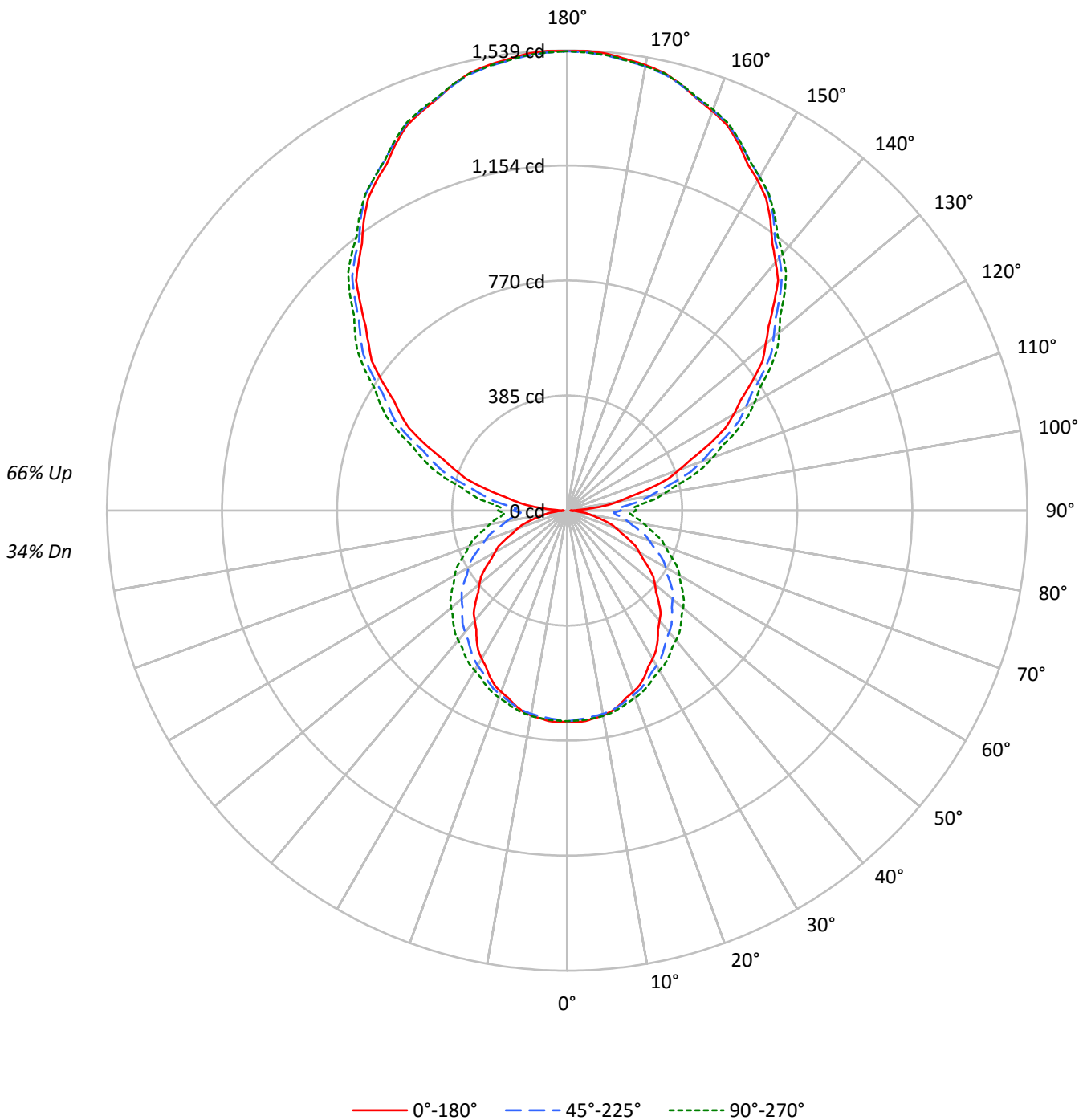
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	103	103	103	103	93	93	93	93	75	75	75	57	57	57	42	42	42	34					34			
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27					27			
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27	22					22			
3	77	67	59	54	69	61	54	49	48	44	40	37	34	31	27	24	23	18					18			
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	23	21	19	15					15			
5	64	52	44	38	57	47	40	35	38	33	29	29	25	22	21	18	16	13					13			
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	19	16	14	11					11			
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10					10			
8	50	38	30	25	45	34	28	23	28	23	19	22	18	15	16	13	11	9					9			
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10	8					8			
10	43	32	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7					7			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11373	11373	11373
5°	11428	10947	10905
10°	11356	10624	10504
15°	11200	10282	10083
20°	11002	9915	9676
25°	10807	9560	9307
30°	10532	9197	8935
35°	10254	8846	8673
40°	9960	8547	8413
45°	9681	8279	8190
50°	9382	8037	7969
55°	9070	7777	7745
60°	8686	7508	7509
65°	8287	7191	7227
70°	7841	6852	6923
75°	7270	6518	6643
80°	6370	6177	6361
85°	5506	5882	6138



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	1.0
10°-20°	191.4	2.7
20°-30°	290.0	4.1
30°-40°	353.3	5.1
40°-50°	380.0	5.4
50°-60°	369.1	5.3
60°-70°	322.3	4.6
70°-80°	248.1	3.5
80°-90°	172.6	2.5
90°-100°	212.1	3.0
100°-110°	386.2	5.5
110°-120°	572.2	8.2
120°-130°	710.6	10.2
130°-140°	775.9	11.1
140°-150°	750.3	10.7
150°-160°	627.4	9.0
160°-170°	416.2	6.0
170°-180°	145.5	2.1
0°-30°	548.2	7.8
0°-40°	901.4	12.9
0°-60°	1650.6	23.6
0°-90°	2393.5	34.2
90°-120°	1170.4	16.7
90°-150°	3407.2	48.7
90°-180°	4596.0	65.8
0°-180°	6989.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	706	703	697	703	702	67
15°	674	676	676	684	684	190
25°	612	620	629	641	644	281
35°	528	545	564	586	594	330
45°	433	461	496	527	538	334
55°	332	369	422	457	472	297
65°	227	277	337	377	392	225
75°	126	183	248	290	305	133
85°	37	100	165	207	222	40
90°	12	87	180	217	232	10
95°	76	137	200	238	249	84
105°	284	319	373	410	423	300
115°	523	543	585	613	622	517
125°	757	769	797	820	829	676
135°	977	992	1004	1024	1029	755
145°	1185	1194	1202	1209	1209	740
155°	1355	1359	1363	1369	1365	623
165°	1474	1473	1473	1481	1476	416
175°	1534	1530	1527	1536	1529	146
180°	1536	1536	1536	1536	1536	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	708.5	707.9	707.4	706.8	706.3	705.4	704.1	702.8	701.6	700.3	701.2
5°	706.4	705.7	705.1	704.4	703.7	702.7	701.3	700.0	698.6	697.2	698.6
7.5°	700.1	699.6	699.2	698.7	698.3	697.5	696.5	695.4	694.4	693.4	695.0
10°	695.2	694.7	694.3	693.8	693.4	692.8	692.1	691.5	690.8	690.1	691.9
12.5°	687.0	687.1	687.2	687.3	687.4	687.2	686.7	686.2	685.7	685.2	687.0
15°	673.8	674.2	674.7	675.1	675.6	675.8	675.8	675.8	675.8	675.8	677.8
17.5°	656.6	657.6	658.5	659.5	660.4	661.3	662.0	662.7	663.4	664.2	666.3
20°	645.2	646.3	647.4	648.6	649.7	650.7	651.6	652.6	653.5	654.4	656.9
22.5°	632.9	634.2	635.6	636.9	638.2	639.5	640.8	642.0	643.3	644.6	647.1
25°	612.5	614.1	615.7	617.3	618.9	620.7	622.7	624.8	626.8	628.8	631.6
27.5°	588.0	590.6	593.2	595.8	598.4	600.9	603.3	605.7	608.1	610.5	613.9
30°	571.7	574.6	577.6	580.5	583.5	586.4	589.4	592.3	595.3	598.2	601.8
32.5°	553.7	557.0	560.3	563.6	567.0	570.4	573.9	577.3	580.8	584.3	588.5
35°	527.8	531.6	535.5	539.3	543.2	547.3	551.6	555.9	560.2	564.5	569.5
37.5°	499.6	504.1	508.5	512.9	517.4	522.4	528.0	533.6	539.1	544.7	550.3
40°	480.8	485.8	490.8	495.8	500.8	506.3	512.5	518.6	524.7	530.8	536.7
42.5°	462.9	467.8	472.8	477.8	482.8	488.8	495.9	502.9	509.9	517.0	523.4
45°	432.8	439.0	445.1	451.2	457.3	464.4	472.3	480.3	488.2	496.1	503.2
47.5°	403.2	409.9	416.6	423.2	429.9	437.9	447.2	456.5	465.8	475.1	482.5
50°	382.8	389.9	396.9	403.9	410.9	419.6	429.8	440.0	450.2	460.4	468.1
52.5°	363.2	370.6	378.0	385.4	392.8	401.9	412.6	423.4	434.1	444.9	452.8
55°	331.8	339.9	348.1	356.3	364.4	374.4	386.2	398.0	409.8	421.6	429.8
57.5°	300.7	310.0	319.2	328.4	337.6	348.2	360.2	372.2	384.3	396.3	405.1
60°	278.7	288.4	298.2	308.0	317.7	329.1	342.0	354.9	367.8	380.8	389.4
62.5°	259.1	269.2	279.3	289.4	299.6	311.1	324.0	336.9	349.9	362.8	372.0
65°	226.6	237.7	248.9	260.0	271.1	283.3	296.7	310.1	323.5	336.9	346.2
67.5°	196.8	208.4	220.1	231.7	243.3	255.9	269.6	283.3	297.0	310.7	320.1
70°	175.6	187.4	199.2	211.0	222.8	235.7	249.8	263.8	277.9	292.0	301.7
72.5°	156.0	168.1	180.3	192.5	204.6	217.8	232.1	246.3	260.6	274.8	284.4
75°	125.6	138.3	151.0	163.7	176.4	190.0	204.5	219.0	233.5	248.1	257.8
77.5°	96.2	109.5	122.8	136.0	149.3	163.4	178.1	192.9	207.6	222.3	232.1
80°	76.6	90.4	104.2	118.1	131.9	146.2	161.0	175.7	190.4	205.2	214.7
82.5°	60.2	73.9	87.5	101.2	114.9	129.1	144.1	159.0	173.9	188.9	198.4
85°	36.8	50.8	64.9	78.9	93.0	107.3	121.8	136.3	150.9	165.4	174.9
87.5°	20.3	34.5	48.7	62.9	77.1	92.1	107.9	123.7	139.5	155.3	164.4
90°	11.5	28.1	44.7	61.4	78.0	96.7	117.6	138.4	159.3	180.1	188.6
92.5°	32.5	47.3	62.0	76.8	91.6	106.7	122.2	137.7	153.2	168.6	177.6
95°	75.6	89.1	102.7	116.2	129.8	143.6	157.8	172.0	186.2	200.4	209.0
97.5°	130.3	142.3	154.4	166.4	178.4	191.5	205.7	219.8	234.0	248.1	256.5
100°	171.8	182.5	193.2	203.9	214.6	226.7	240.3	253.9	267.5	281.0	289.4
102.5°	214.6	224.1	233.6	243.1	252.6	264.1	277.5	291.0	304.4	317.8	326.3
105°	283.9	291.3	298.8	306.2	313.7	323.6	335.9	348.3	360.7	373.1	381.6
107.5°	354.7	361.3	367.8	374.3	380.9	389.8	401.1	412.4	423.7	435.0	442.8
110°	399.6	405.8	412.1	418.4	424.6	433.3	444.4	455.5	466.7	477.8	485.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	449.4	454.9	460.4	466.0	471.5	479.5	489.8	500.1	510.5	520.8	527.4
115°	522.7	527.0	531.2	535.4	539.6	546.6	556.2	565.8	575.5	585.1	591.6
117.5°	594.9	598.8	602.7	606.7	610.6	616.5	624.3	632.1	640.0	647.8	653.8
120°	643.6	646.8	650.0	653.2	656.5	661.4	668.2	675.0	681.8	688.5	694.9
122.5°	688.2	691.3	694.5	697.6	700.7	705.7	712.7	719.6	726.5	733.4	738.9
125°	756.7	759.3	761.9	764.5	767.1	771.6	778.0	784.3	790.7	797.1	802.4
127.5°	824.4	827.4	830.5	833.5	836.6	840.5	845.4	850.2	855.0	859.8	864.4
130°	866.9	870.4	873.9	877.5	881.0	884.8	889.0	893.2	897.4	901.6	906.5
132.5°	914.6	917.4	920.3	923.1	925.9	929.2	933.0	936.8	940.6	944.4	948.4
135°	977.4	980.6	983.7	986.9	990.1	993.1	995.9	998.8	1001.6	1004.5	1008.9
137.5°	1044.6	1047.1	1049.7	1052.2	1054.8	1056.9	1058.6	1060.4	1062.1	1063.9	1067.8
140°	1085.0	1087.4	1089.7	1092.1	1094.5	1096.6	1098.5	1100.4	1102.3	1104.2	1107.8
142.5°	1126.5	1128.9	1131.2	1133.6	1136.0	1137.7	1138.8	1139.8	1140.9	1142.0	1145.1
145°	1185.1	1187.2	1189.2	1191.2	1193.2	1195.1	1196.8	1198.5	1200.3	1202.0	1203.6
147.5°	1238.3	1240.7	1243.1	1245.6	1248.0	1249.8	1250.9	1252.1	1253.2	1254.4	1255.2
150°	1274.6	1276.3	1278.1	1279.8	1281.5	1283.0	1284.1	1285.3	1286.4	1287.6	1288.4
152.5°	1306.8	1308.5	1310.2	1311.9	1313.7	1315.2	1316.6	1318.0	1319.4	1320.8	1321.9
155°	1355.0	1355.9	1356.7	1357.6	1358.5	1359.3	1360.2	1361.0	1361.9	1362.8	1364.2
157.5°	1396.2	1396.8	1397.4	1398.0	1398.5	1399.1	1399.6	1400.1	1400.6	1401.2	1403.1
160°	1421.1	1421.7	1422.3	1422.9	1423.4	1423.9	1424.1	1424.4	1424.7	1425.0	1426.7
162.5°	1443.9	1444.1	1444.2	1444.3	1444.4	1444.6	1444.9	1445.2	1445.5	1445.8	1447.7
165°	1474.3	1474.0	1473.7	1473.4	1473.1	1473.0	1473.0	1473.0	1473.0	1473.0	1475.0
167.5°	1499.7	1498.8	1498.0	1497.1	1496.2	1495.8	1495.7	1495.7	1495.6	1495.5	1497.6
170°	1513.2	1512.3	1511.5	1510.6	1509.7	1509.2	1508.9	1508.6	1508.3	1508.0	1510.0
172.5°	1522.5	1521.7	1520.8	1519.9	1519.1	1518.5	1518.2	1517.9	1517.6	1517.3	1519.4
175°	1533.9	1533.1	1532.2	1531.3	1530.5	1529.8	1529.2	1528.6	1528.0	1527.4	1529.5
177.5°	1538.6	1537.9	1537.2	1536.5	1535.8	1535.3	1534.8	1534.3	1533.9	1533.4	1534.8
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	704.4	704.4	704.4	704.4	704.4	704.4	704.4	704.4
2.5°	702.1	703.0	703.9	704.2	703.8	703.5	703.1	702.8
5°	700.0	701.3	702.7	703.3	703.0	702.8	702.6	702.3
7.5°	696.6	698.3	699.9	700.6	700.4	700.1	699.9	699.7
10°	693.7	695.5	697.4	698.1	697.9	697.7	697.5	697.2
12.5°	688.8	690.6	692.5	693.2	693.0	692.8	692.6	692.3
15°	679.9	681.9	684.0	684.9	684.7	684.4	684.2	684.0
17.5°	668.4	670.6	672.7	673.8	673.8	673.8	673.8	673.8
20°	659.4	661.9	664.3	665.6	665.6	665.6	665.6	665.6
22.5°	649.6	652.1	654.5	656.0	656.3	656.7	657.1	657.4
25°	634.3	637.0	639.7	641.4	642.1	642.8	643.5	644.2
27.5°	617.4	620.8	624.3	626.2	626.7	627.2	627.7	628.2
30°	605.5	609.1	612.7	614.9	615.6	616.3	616.9	617.6
32.5°	592.7	596.9	601.0	603.7	605.0	606.2	607.4	608.6
35°	574.5	579.5	584.5	587.8	589.4	591.0	592.5	594.1
37.5°	555.8	561.3	566.9	570.5	572.2	573.8	575.5	577.2
40°	542.6	548.5	554.4	558.4	560.4	562.5	564.5	566.6
42.5°	529.8	536.3	542.7	547.0	549.0	551.1	553.1	555.1
45°	510.2	517.2	524.3	528.9	531.2	533.5	535.7	538.0
47.5°	489.8	497.2	504.5	509.4	511.9	514.4	516.9	519.4
50°	475.8	483.5	491.3	496.4	498.9	501.4	503.8	506.3
52.5°	460.7	468.6	476.5	481.8	484.4	487.1	489.8	492.5
55°	437.9	446.1	454.3	459.8	462.8	465.7	468.7	471.6
57.5°	413.9	422.7	431.5	437.4	440.4	443.4	446.4	449.4
60°	398.0	406.6	415.3	421.2	424.3	427.5	430.7	433.9
62.5°	381.1	390.3	399.5	405.6	408.5	411.5	414.5	417.5
65°	355.5	364.8	374.1	380.2	383.2	386.1	389.1	392.0
67.5°	329.5	338.9	348.3	354.6	357.6	360.7	363.8	366.9
70°	311.5	321.2	331.0	337.2	339.9	342.7	345.4	348.1
72.5°	294.0	303.5	313.1	319.5	322.8	326.1	329.3	332.6
75°	267.6	277.3	287.1	293.4	296.4	299.3	302.3	305.2
77.5°	241.8	251.5	261.2	267.6	270.8	274.0	277.1	280.3
80°	224.2	233.8	243.3	249.7	252.8	256.0	259.2	262.4
82.5°	207.9	217.4	227.0	233.2	236.2	239.2	242.2	245.2
85°	184.4	194.0	203.5	209.8	213.0	216.2	219.4	222.5
87.5°	173.5	182.7	191.8	197.9	200.8	203.8	206.8	209.7
90°	197.1	205.6	214.1	219.9	222.9	225.9	228.9	231.9
92.5°	186.7	195.7	204.7	210.6	213.3	216.1	218.9	221.7
95°	217.6	226.2	234.9	240.2	242.4	244.5	246.7	248.8
97.5°	264.9	273.3	281.7	287.2	289.8	292.5	295.1	297.7
100°	297.8	306.2	314.6	319.9	322.1	324.3	326.5	328.7
102.5°	334.7	343.2	351.6	356.9	359.1	361.3	363.6	365.8
105°	390.1	398.6	407.1	412.6	415.1	417.6	420.1	422.6
107.5°	450.7	458.5	466.4	470.9	472.1	473.2	474.4	475.6
110°	492.3	499.6	506.8	511.3	512.9	514.5	516.2	517.8



TEST NUMBER: P331546

CATALOG NUMBER: S122DIW-S675D1240U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	534.0	540.5	547.1	551.3	553.2	555.0	556.9	558.7
115°	598.1	604.6	611.2	615.2	616.9	618.5	620.1	621.8
117.5°	659.8	665.9	671.9	675.6	677.1	678.5	680.0	681.4
120°	701.2	707.6	713.9	717.9	719.6	721.2	722.8	724.4
122.5°	744.4	749.9	755.3	758.8	760.3	761.8	763.3	764.8
125°	807.7	812.9	818.2	821.7	823.4	825.2	826.9	828.7
127.5°	869.0	873.6	878.2	881.0	882.1	883.1	884.2	885.3
130°	911.3	916.2	921.1	923.8	924.5	925.1	925.8	926.5
132.5°	952.4	956.4	960.4	962.8	963.7	964.6	965.5	966.4
135°	1013.4	1017.9	1022.4	1025.1	1026.0	1027.0	1027.9	1028.9
137.5°	1071.8	1075.7	1079.7	1081.8	1082.2	1082.6	1083.0	1083.4
140°	1111.4	1115.1	1118.7	1120.6	1120.8	1121.0	1121.3	1121.5
142.5°	1148.2	1151.4	1154.5	1156.1	1156.1	1156.1	1156.2	1156.2
145°	1205.3	1206.9	1208.6	1209.4	1209.4	1209.4	1209.3	1209.3
147.5°	1256.0	1256.8	1257.6	1257.8	1257.2	1256.7	1256.1	1255.6
150°	1289.3	1290.2	1291.0	1291.0	1290.2	1289.3	1288.4	1287.6
152.5°	1323.0	1324.0	1325.1	1325.1	1324.0	1323.0	1321.9	1320.8
155°	1365.7	1367.1	1368.5	1368.8	1368.0	1367.1	1366.2	1365.4
157.5°	1405.1	1407.0	1409.0	1409.3	1407.9	1406.5	1405.1	1403.7
160°	1428.5	1430.2	1431.9	1432.2	1431.1	1429.9	1428.8	1427.6
162.5°	1449.7	1451.6	1453.6	1453.9	1452.5	1451.1	1449.7	1448.4
165°	1477.0	1479.0	1481.1	1481.3	1479.9	1478.5	1477.0	1475.6
167.5°	1499.6	1501.6	1503.6	1503.9	1502.4	1500.9	1499.4	1497.9
170°	1512.0	1514.0	1516.1	1516.2	1514.5	1512.8	1511.0	1509.3
172.5°	1521.4	1523.4	1525.4	1525.5	1523.8	1522.1	1520.4	1518.6
175°	1531.5	1533.5	1535.5	1535.7	1533.9	1532.2	1530.5	1528.7
177.5°	1536.2	1537.6	1538.9	1538.9	1537.6	1536.2	1534.8	1533.4
180°	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5	1536.5

(END OF REPORT)