

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: P331819-930

Luminaire Tested: **S122RDIW-S675D1240U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331819-930
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: S122RDIW-S675D1240U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5934.1 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

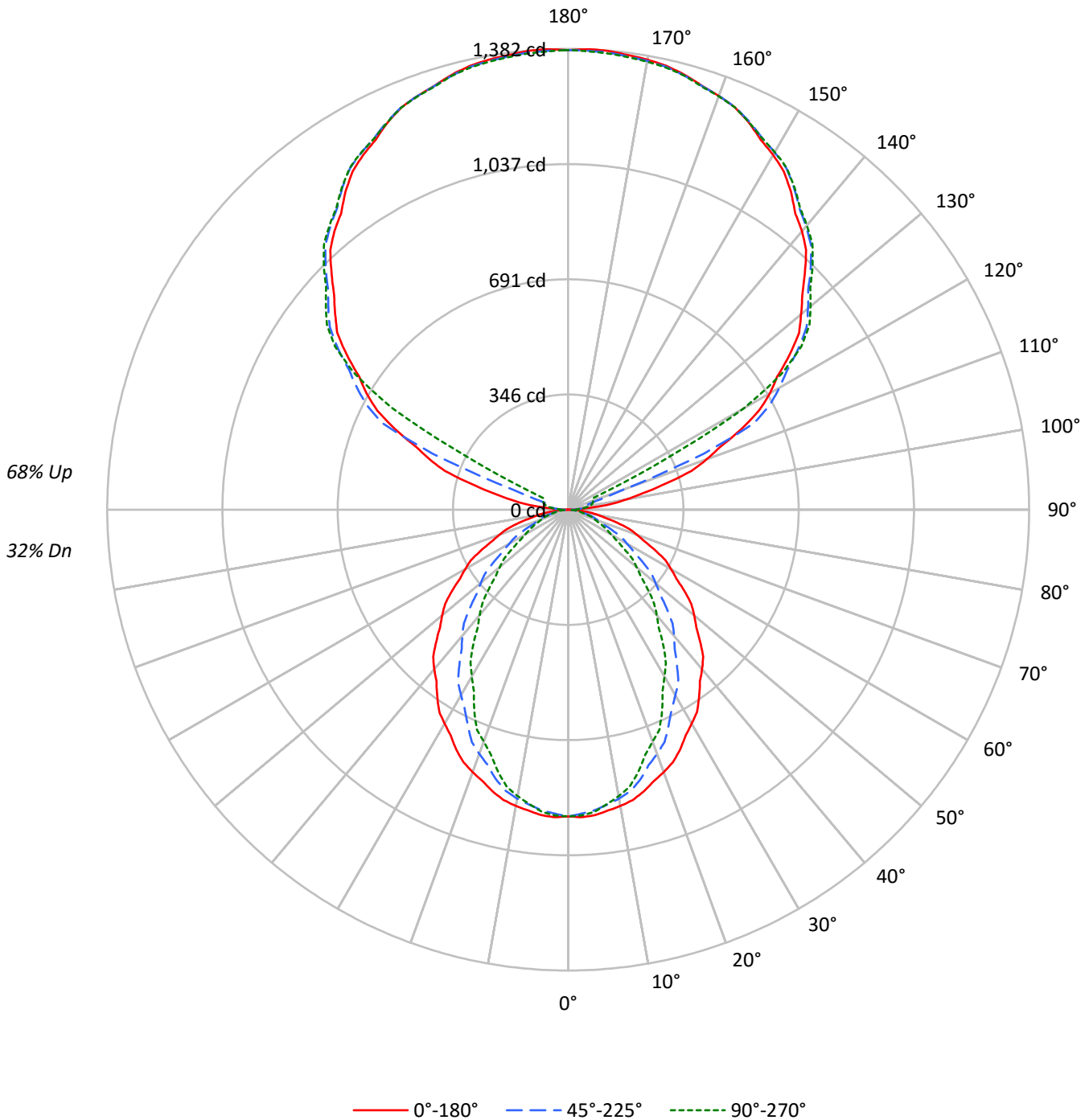
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0	
RCR																						
0	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32				
1	94	90	86	83	84	81	78	75	65	62	61	49	48	47	35	35	34	27				
2	86	79	73	68	77	71	66	62	57	54	51	44	41	40	31	30	29	24				
3	78	70	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	20				
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	18				
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	16				
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	14				
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	12				
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	11				
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	10				
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14849	14849	14849
5°	14906	14663	14744
10°	14791	14423	14300
15°	14621	13996	13593
20°	14387	13385	12713
25°	14145	12691	11863
30°	13811	11979	10769
35°	13484	11203	9810
40°	13156	10404	8701
45°	12771	9501	7695
50°	12376	8593	6712
55°	11972	7614	5762
60°	11502	6584	4782
65°	10968	5532	4359
70°	10334	4556	4008
75°	9551	4155	3737
80°	8433	3710	3403
85°	6632	2927	2927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	1.5
10°-20°	236.4	4.0
20°-30°	331.9	5.6
30°-40°	361.9	6.1
40°-50°	332.8	5.6
50°-60°	261.4	4.4
60°-70°	170.4	2.9
70°-80°	87.9	1.5
80°-90°	26.2	0.4
90°-100°	46.0	0.8
100°-110°	168.6	2.8
110°-120°	450.7	7.6
120°-130°	744.0	12.5
130°-140°	791.2	13.3
140°-150°	735.4	12.4
150°-160°	591.2	10.0
160°-170°	381.0	6.4
170°-180°	131.1	2.2
0°-30°	654.4	11.0
0°-40°	1016.3	17.1
0°-60°	1610.5	27.1
0°-90°	1894.9	31.9
90°-120°	665.3	11.2
90°-150°	2935.8	49.5
90°-180°	4039.0	68.1
0°-180°	5934.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	920	920	920	920	920	
5°	920	915	905	912	910	87
15°	875	864	837	822	813	246
25°	794	766	712	680	666	365
35°	684	640	568	518	498	428
45°	559	502	416	359	337	432
55°	425	359	270	222	205	380
65°	287	219	145	118	114	285
75°	153	96	67	61	60	162
85°	36	19	16	16	16	42
90°	1	12	20	25	27	5
95°	65	34	39	44	43	79
105°	303	316	61	71	76	324
115°	574	591	615	175	82	564
125°	811	824	843	850	853	723
135°	1003	1019	1028	1038	1036	775
145°	1164	1164	1180	1186	1182	728
155°	1282	1274	1285	1290	1282	590
165°	1350	1345	1347	1354	1347	381
175°	1381	1375	1376	1382	1373	131
180°	1378	1378	1378	1378	1378	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	923.0	922.3	921.5	920.8	920.1	918.8	917.2	915.6	914.0	912.4	913.9
5°	919.7	918.8	917.9	916.9	916.0	914.4	911.9	909.5	907.1	904.7	906.4
7.5°	910.2	909.1	907.9	906.8	905.6	903.6	900.8	898.1	895.2	892.4	892.8
10°	902.2	900.9	899.6	898.3	897.0	894.5	890.8	887.1	883.5	879.7	879.2
12.5°	892.2	890.6	889.0	887.5	885.8	882.7	878.0	873.3	868.5	863.7	862.7
15°	874.7	872.7	870.7	868.6	866.6	862.4	856.1	849.9	843.6	837.3	833.8
17.5°	853.3	850.2	847.1	843.9	840.8	835.3	827.2	819.1	811.1	803.0	798.8
20°	837.3	833.6	829.9	826.2	822.5	816.0	806.7	797.5	788.3	779.0	774.4
22.5°	819.9	815.9	811.7	807.6	803.4	796.1	785.7	775.3	764.8	754.4	748.4
25°	794.0	788.1	782.2	776.2	770.4	761.2	749.1	736.9	724.6	712.4	704.8
27.5°	762.7	756.3	749.8	743.4	736.9	726.8	713.1	699.4	685.6	671.8	663.0
30°	740.8	733.7	726.7	719.7	712.7	701.7	686.9	672.1	657.3	642.5	633.1
32.5°	719.4	711.2	703.0	694.8	686.6	674.9	659.8	644.7	629.7	614.6	603.8
35°	684.1	674.7	665.3	655.8	646.5	633.6	617.3	601.0	584.7	568.4	556.8
37.5°	648.9	638.5	628.1	617.8	607.4	593.5	576.3	558.9	541.5	524.2	511.4
40°	624.2	613.1	602.0	590.9	579.8	565.3	547.4	529.5	511.5	493.6	480.5
42.5°	598.9	587.3	575.5	563.9	552.2	537.0	518.5	500.0	481.4	462.9	449.3
45°	559.3	546.9	534.5	522.1	509.7	493.8	474.4	455.0	435.5	416.1	403.0
47.5°	520.7	507.5	494.4	481.3	468.1	451.6	431.5	411.5	391.4	371.4	358.3
50°	492.7	479.6	466.4	453.3	440.2	423.5	403.1	382.8	362.4	342.1	329.3
52.5°	465.5	451.7	438.0	424.3	410.5	393.7	373.8	353.9	334.0	314.1	301.8
55°	425.3	410.9	396.5	382.0	367.6	350.4	330.4	310.5	290.5	270.5	259.4
57.5°	384.2	369.4	354.6	339.8	325.0	308.0	288.8	269.6	250.4	231.2	221.0
60°	356.2	341.4	326.6	311.9	297.0	280.1	261.1	242.0	223.0	203.9	194.4
62.5°	328.9	314.1	299.3	284.5	269.7	253.2	235.1	217.0	198.8	180.6	171.6
65°	287.1	272.1	257.1	242.2	227.2	211.4	194.8	178.1	161.4	144.8	138.5
67.5°	246.9	232.0	217.1	202.3	187.4	172.4	157.4	142.5	127.5	112.5	109.7
70°	218.9	204.5	190.0	175.6	161.2	147.6	134.9	122.1	109.3	96.5	94.7
72.5°	192.2	178.4	164.6	150.7	136.9	124.9	114.6	104.4	94.2	83.9	82.3
75°	153.1	140.2	127.3	114.3	101.3	91.7	85.4	79.2	72.9	66.6	65.3
77.5°	114.7	103.3	92.0	80.6	69.3	62.0	59.0	56.0	53.0	50.0	49.2
80°	90.7	81.3	71.8	62.5	53.0	47.4	45.5	43.6	41.8	39.9	39.2
82.5°	68.7	61.4	54.1	46.6	39.3	35.0	33.8	32.4	31.2	30.0	29.5
85°	35.8	31.9	28.0	24.1	20.2	18.0	17.4	17.0	16.4	15.8	15.8
87.5°	10.8	10.2	9.5	8.8	8.1	7.9	8.2	8.6	9.0	9.3	9.4
90°	1.0	3.4	5.9	8.3	10.8	12.9	14.6	16.4	18.2	20.0	21.0
92.5°	20.1	19.9	19.7	19.5	19.2	19.6	20.5	21.4	22.3	23.2	23.7
95°	64.8	57.5	50.2	42.9	35.5	32.7	34.2	35.8	37.3	38.9	40.0
97.5°	128.7	108.0	87.4	66.9	46.2	37.7	41.3	44.8	48.5	52.1	52.9
100°	176.5	146.2	115.8	85.4	55.1	41.7	45.6	49.3	53.1	56.8	58.6
102.5°	229.2	222.7	216.3	209.9	203.5	184.5	153.0	121.5	89.9	58.5	60.7
105°	303.2	309.8	316.5	323.1	329.8	302.9	242.4	181.8	121.3	60.8	63.3
107.5°	387.6	392.9	398.3	403.7	409.0	375.4	302.9	230.3	157.8	85.2	82.7
110°	441.8	446.5	451.1	455.8	460.4	430.7	366.7	302.6	238.6	174.6	152.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	492.8	497.0	501.1	505.2	509.4	503.5	487.7	471.9	456.1	440.2	359.4
115°	573.5	577.2	581.0	584.7	588.6	593.2	598.8	604.3	609.8	615.4	512.7
117.5°	645.5	649.7	653.9	658.1	662.3	666.3	670.1	673.9	677.8	681.6	656.7
120°	698.1	701.5	704.7	708.1	711.4	715.1	719.1	723.1	727.1	731.0	733.7
122.5°	742.8	746.3	749.8	753.3	756.8	760.8	765.1	769.4	773.8	778.1	779.7
125°	810.8	813.7	816.6	819.5	822.3	825.9	830.1	834.3	838.5	842.8	844.3
127.5°	872.5	875.6	878.8	882.1	885.3	888.4	891.5	894.7	897.8	901.0	903.3
130°	911.6	915.1	918.7	922.2	925.8	928.7	931.2	933.6	936.0	938.5	940.9
132.5°	951.5	954.5	957.5	960.5	963.5	966.2	968.7	971.1	973.5	976.0	978.0
135°	1003.3	1006.8	1010.4	1013.9	1017.5	1020.3	1022.2	1024.3	1026.2	1028.3	1030.5
137.5°	1055.7	1058.3	1060.7	1063.2	1065.7	1068.0	1070.3	1072.6	1074.8	1077.1	1079.3
140°	1090.1	1091.8	1093.6	1095.4	1097.1	1099.3	1101.7	1104.2	1106.6	1109.1	1111.0
142.5°	1118.8	1120.4	1122.0	1123.6	1125.2	1127.4	1130.2	1132.9	1135.7	1138.6	1140.4
145°	1163.8	1163.7	1163.4	1163.2	1163.0	1164.7	1168.6	1172.3	1176.1	1179.8	1181.4
147.5°	1203.1	1202.3	1201.5	1200.6	1199.8	1201.3	1204.9	1208.7	1212.4	1216.1	1217.3
150°	1228.7	1227.2	1225.6	1224.0	1222.5	1223.5	1227.0	1230.6	1234.1	1237.7	1239.0
152.5°	1250.3	1248.5	1246.8	1245.0	1243.3	1244.1	1247.5	1250.9	1254.3	1257.6	1259.0
155°	1281.6	1279.5	1277.6	1275.5	1273.6	1273.9	1276.6	1279.2	1281.9	1284.6	1285.9
157.5°	1306.1	1304.4	1302.7	1301.1	1299.3	1299.4	1301.3	1303.2	1305.0	1306.9	1308.4
160°	1320.5	1319.2	1317.8	1316.5	1315.2	1315.2	1316.5	1317.8	1319.2	1320.5	1321.8
162.5°	1333.3	1331.9	1330.6	1329.3	1327.9	1327.8	1328.9	1330.1	1331.3	1332.4	1333.9
165°	1350.4	1349.1	1347.7	1346.4	1345.1	1344.8	1345.4	1346.1	1346.7	1347.4	1348.9
167.5°	1363.2	1361.8	1360.5	1359.2	1357.8	1357.5	1358.1	1358.7	1359.3	1359.9	1361.5
170°	1370.4	1369.0	1367.7	1366.4	1365.0	1364.6	1365.0	1365.5	1365.9	1366.4	1367.9
172.5°	1375.1	1373.8	1372.5	1371.1	1369.8	1369.4	1369.8	1370.2	1370.7	1371.1	1372.6
175°	1381.3	1379.7	1378.2	1376.6	1375.1	1374.5	1375.0	1375.4	1375.9	1376.3	1377.9
177.5°	1382.3	1381.0	1379.8	1378.6	1377.3	1376.8	1377.0	1377.1	1377.3	1377.5	1378.8
180°	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	919.7	919.7	919.7	919.7	919.7	919.7	919.7	919.7
2.5°	915.3	916.8	918.3	918.8	918.6	918.3	918.0	917.7
5°	908.0	909.7	911.3	911.9	911.3	910.8	910.3	909.7
7.5°	893.3	893.8	894.3	894.1	893.1	892.2	891.2	890.2
10°	878.6	878.1	877.5	876.7	875.5	874.5	873.3	872.2
12.5°	861.8	860.8	859.7	858.3	856.5	854.7	852.8	850.9
15°	830.3	826.7	823.2	820.5	818.7	816.8	815.0	813.2
17.5°	794.7	790.4	786.3	782.6	779.4	776.2	773.1	769.9
20°	769.8	765.2	760.5	756.2	752.1	748.0	744.0	739.9
22.5°	742.5	736.5	730.6	726.1	723.0	720.0	717.0	714.0
25°	697.2	689.7	682.1	676.9	674.2	671.4	668.6	665.9
27.5°	654.1	645.3	636.5	629.8	625.4	621.0	616.6	612.2
30°	623.7	614.2	604.8	597.6	592.6	587.6	582.6	577.6
32.5°	593.0	582.3	571.5	563.8	559.1	554.4	549.7	545.0
35°	545.2	533.5	521.9	514.0	509.9	505.8	501.8	497.7
37.5°	498.5	485.7	472.9	464.1	459.4	454.8	450.1	445.5
40°	467.2	454.1	441.0	432.0	427.2	422.4	417.6	412.8
42.5°	435.8	422.2	408.6	399.5	394.8	390.2	385.6	380.8
45°	389.9	376.7	363.6	354.8	350.4	345.9	341.5	337.0
47.5°	345.3	332.2	319.1	310.6	306.6	302.6	298.5	294.5
50°	316.6	303.8	291.1	282.7	278.8	274.9	271.1	267.2
52.5°	289.5	277.1	264.8	256.9	253.3	249.7	246.1	242.6
55°	248.3	237.2	226.1	218.8	215.3	211.7	208.2	204.7
57.5°	210.8	200.7	190.5	183.9	181.0	178.1	175.0	172.1
60°	185.1	175.6	166.2	160.0	157.0	154.1	151.1	148.1
62.5°	162.7	153.6	144.6	139.3	137.5	135.7	134.0	132.2
65°	132.2	126.0	119.7	116.3	115.7	115.1	114.5	114.1
67.5°	106.7	103.9	101.0	99.2	98.7	98.1	97.5	96.9
70°	92.9	91.0	89.1	87.9	87.1	86.3	85.6	84.9
72.5°	80.8	79.2	77.7	76.7	76.2	75.8	75.3	74.9
75°	64.0	62.7	61.4	60.7	60.5	60.3	60.1	59.9
77.5°	48.4	47.7	47.0	46.5	46.1	45.9	45.6	45.2
80°	38.5	37.7	37.0	36.6	36.6	36.6	36.6	36.6
82.5°	29.1	28.6	28.2	28.0	28.0	28.0	28.0	28.0
85°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
87.5°	9.5	9.5	9.6	9.7	9.8	9.9	9.9	10.0
90°	22.2	23.2	24.4	25.2	25.6	26.0	26.5	26.9
92.5°	24.3	24.9	25.4	25.8	26.1	26.4	26.7	26.9
95°	41.1	42.2	43.3	43.8	43.5	43.3	43.1	42.9
97.5°	53.8	54.7	55.6	56.2	56.4	56.7	57.0	57.2
100°	60.4	62.1	63.9	65.1	65.5	66.0	66.4	66.9
102.5°	63.0	65.4	67.7	69.1	69.7	70.4	71.0	71.6
105°	65.7	68.2	70.6	72.2	73.1	74.0	74.9	75.8
107.5°	80.2	77.7	75.3	74.4	75.3	76.2	77.1	78.0
110°	130.2	108.0	85.9	75.3	76.1	77.0	77.9	78.8



TEST NUMBER: P331819-930

CATALOG NUMBER: S122RDIW-S675D1240U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.5	197.7	116.8	76.7	77.5	78.2	78.8	79.6
115°	410.1	307.5	204.9	145.6	129.6	113.7	97.8	81.8
117.5°	631.9	607.1	582.3	543.6	491.2	438.8	386.4	333.9
120°	736.4	739.0	741.7	728.1	698.1	668.2	638.3	608.4
122.5°	781.3	782.9	784.5	782.4	776.6	770.8	765.0	759.1
125°	845.9	847.4	849.0	850.0	850.7	851.4	852.1	852.7
127.5°	905.5	907.8	910.0	911.3	911.3	911.5	911.6	911.7
130°	943.4	945.8	948.2	949.3	949.1	948.9	948.7	948.4
132.5°	980.2	982.2	984.3	985.2	985.0	984.8	984.6	984.4
135°	1032.7	1034.9	1037.1	1038.0	1037.5	1037.1	1036.7	1036.2
137.5°	1081.4	1083.6	1085.8	1086.5	1085.7	1085.0	1084.3	1083.5
140°	1113.0	1115.0	1117.0	1117.4	1116.3	1115.2	1114.1	1113.0
142.5°	1142.2	1144.0	1145.8	1146.1	1145.1	1143.9	1142.8	1141.7
145°	1182.9	1184.5	1186.0	1186.3	1185.1	1184.1	1182.9	1181.9
147.5°	1218.5	1219.6	1220.7	1220.8	1219.9	1219.0	1218.1	1217.2
150°	1240.3	1241.7	1243.0	1243.1	1242.0	1240.9	1239.7	1238.7
152.5°	1260.3	1261.6	1263.0	1262.9	1261.4	1260.0	1258.5	1257.0
155°	1287.2	1288.6	1289.9	1289.6	1287.8	1286.1	1284.3	1282.5
157.5°	1309.9	1311.4	1313.0	1312.8	1311.1	1309.4	1307.7	1305.9
160°	1323.1	1324.5	1325.8	1325.7	1324.1	1322.6	1321.0	1319.5
162.5°	1335.5	1336.9	1338.5	1338.2	1336.4	1334.4	1332.5	1330.6
165°	1350.5	1352.0	1353.6	1353.6	1352.0	1350.5	1348.9	1347.4
167.5°	1363.0	1364.6	1366.1	1366.0	1363.9	1362.0	1359.9	1358.0
170°	1369.5	1371.0	1372.6	1372.3	1370.4	1368.3	1366.4	1364.3
172.5°	1374.2	1375.7	1377.3	1377.1	1375.1	1373.1	1371.1	1369.1
175°	1379.4	1381.0	1382.5	1382.2	1380.0	1377.8	1375.5	1373.3
177.5°	1380.0	1381.2	1382.5	1382.3	1380.7	1379.1	1377.5	1375.9
180°	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3	1378.3

(END OF REPORT)