

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: P331819-927

Luminaire Tested: **S122RDIW-S675D1240U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331819-927
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: S122RDIW-S675D1240U927-4F0-1E-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: 5765.9 lumens
Efficiency: N/A
Efficacy: 93.9 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

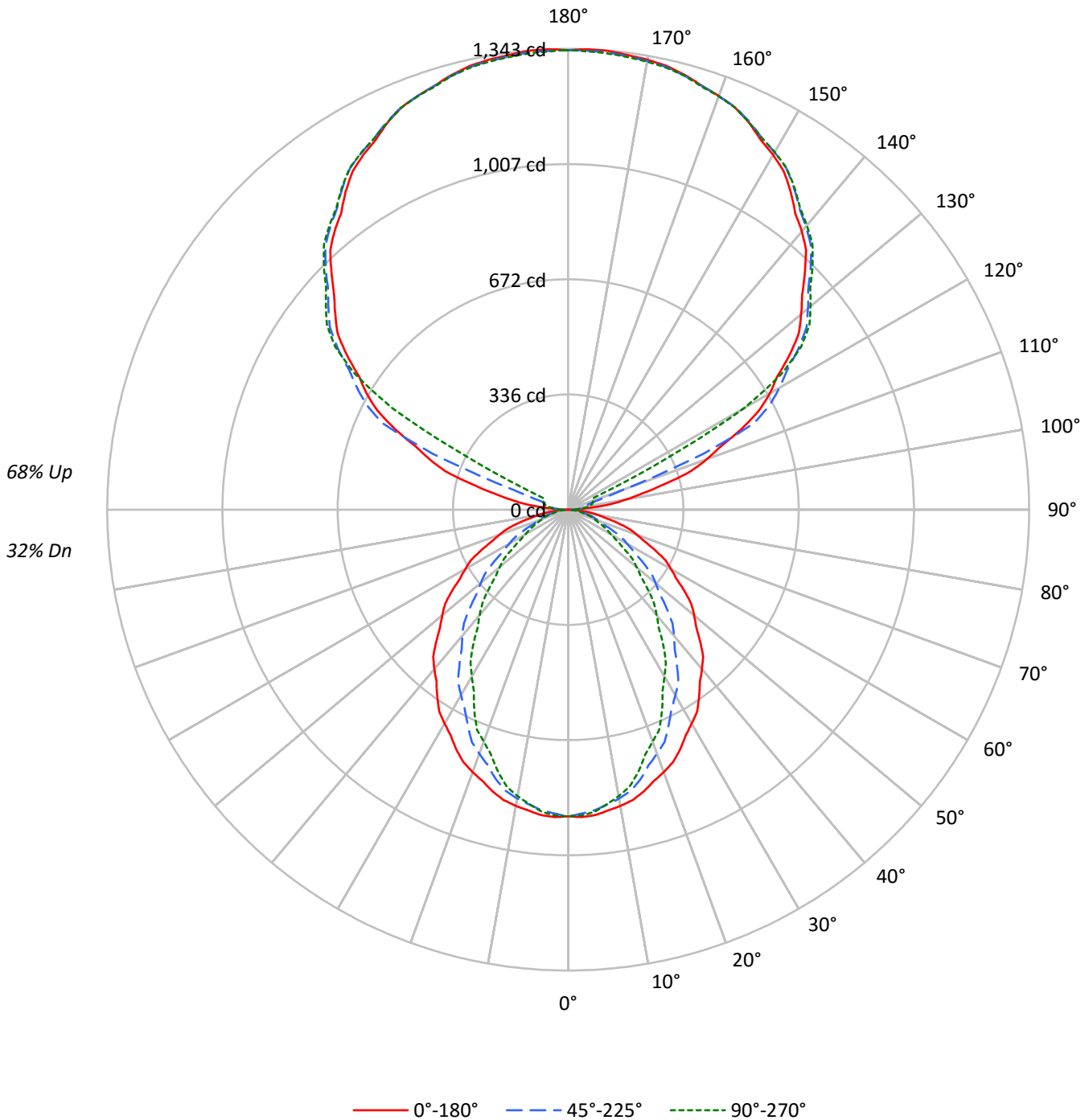
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	14428	14428	14428
5°	14483	14248	14326
10°	14372	14014	13895
15°	14206	13600	13207
20°	13979	13005	12352
25°	13744	12332	11526
30°	13420	11639	10465
35°	13102	10886	9532
40°	12783	10108	8454
45°	12408	9232	7478
50°	12024	8349	6521
55°	11634	7398	5599
60°	11176	6397	4647
65°	10659	5375	4233
70°	10041	4428	3895
75°	9283	4036	3631
80°	8201	3608	3310
85°	6447	2853	2853



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	1.5
10°-20°	229.7	4.0
20°-30°	322.5	5.6
30°-40°	351.7	6.1
40°-50°	323.4	5.6
50°-60°	254.0	4.4
60°-70°	165.6	2.9
70°-80°	85.4	1.5
80°-90°	25.5	0.4
90°-100°	44.7	0.8
100°-110°	163.8	2.8
110°-120°	437.9	7.6
120°-130°	722.9	12.5
130°-140°	768.8	13.3
140°-150°	714.5	12.4
150°-160°	574.5	10.0
160°-170°	370.2	6.4
170°-180°	127.4	2.2
0°-30°	635.8	11.0
0°-40°	987.5	17.1
0°-60°	1564.8	27.1
0°-90°	1841.3	31.9
90°-120°	646.4	11.2
90°-150°	2852.5	49.5
90°-180°	3925.0	68.1
0°-180°	5765.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	894	889	879	886	884	85
15°	850	840	814	799	790	239
25°	772	744	692	660	647	355
35°	665	622	552	503	484	416
45°	543	488	404	349	328	419
55°	413	349	263	216	199	369
65°	279	213	141	115	111	277
75°	149	94	65	59	58	158
85°	35	19	15	15	15	41
90°	1	12	19	24	26	4
95°	63	33	38	42	42	77
105°	295	307	59	69	74	315
115°	557	574	598	170	80	548
125°	788	801	819	825	828	702
135°	975	990	999	1008	1007	753
145°	1131	1131	1146	1152	1148	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°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	896.8	896.1	895.4	894.7	894.0	892.8	891.2	889.6	888.1	886.5	888.0
5°	893.6	892.7	891.8	890.9	890.0	888.4	886.1	883.8	881.4	879.1	880.7
7.5°	884.4	883.3	882.2	881.1	880.0	878.0	875.3	872.6	869.8	867.1	867.5
10°	876.6	875.4	874.1	872.8	871.6	869.2	865.5	862.0	858.4	854.8	854.3
12.5°	866.9	865.4	863.8	862.3	860.7	857.7	853.1	848.5	843.8	839.2	838.3
15°	849.9	848.0	846.0	844.0	842.0	838.0	831.9	825.8	819.7	813.6	810.2
17.5°	829.1	826.1	823.1	820.0	817.0	811.6	803.7	795.9	788.1	780.2	776.2
20°	813.6	809.9	806.4	802.8	799.2	792.9	783.9	774.9	766.0	756.9	752.4
22.5°	796.7	792.7	788.7	784.7	780.6	773.6	763.4	753.3	743.1	733.0	727.2
25°	771.5	765.7	760.0	754.2	748.5	739.7	727.9	716.0	704.1	692.2	684.8
27.5°	741.1	734.8	728.6	722.3	716.1	706.2	692.9	679.5	666.1	652.8	644.2
30°	719.8	712.9	706.1	699.3	692.4	681.8	667.4	653.1	638.7	624.3	615.1
32.5°	699.0	691.0	683.1	675.1	667.1	655.8	641.1	626.5	611.8	597.1	586.7
35°	664.7	655.6	646.4	637.2	628.1	615.6	599.8	584.0	568.2	552.3	541.0
37.5°	630.5	620.4	610.3	600.2	590.2	576.7	559.9	543.0	526.2	509.3	496.9
40°	606.5	595.7	584.9	574.2	563.4	549.3	531.9	514.4	497.0	479.6	466.8
42.5°	581.9	570.6	559.2	547.9	536.5	521.8	503.8	485.8	467.8	449.8	436.6
45°	543.4	531.4	519.4	507.3	495.3	479.8	461.0	442.1	423.2	404.3	391.6
47.5°	505.9	493.1	480.4	467.6	454.9	438.8	419.3	399.8	380.3	360.8	348.2
50°	478.7	466.0	453.2	440.5	427.7	411.5	391.7	371.9	352.1	332.4	320.0
52.5°	452.3	438.9	425.6	412.3	398.9	382.5	363.2	343.9	324.6	305.2	293.3
55°	413.3	399.3	385.2	371.2	357.2	340.5	321.1	301.7	282.3	262.8	252.1
57.5°	373.3	358.9	344.5	330.2	315.8	299.3	280.6	262.0	243.3	224.7	214.8
60°	346.1	331.8	317.3	303.0	288.6	272.2	253.7	235.1	216.7	198.1	188.9
62.5°	319.6	305.2	290.8	276.5	262.1	246.1	228.5	210.8	193.1	175.5	166.8
65°	279.0	264.4	249.9	235.4	220.8	205.4	189.3	173.1	156.9	140.7	134.6
67.5°	239.9	225.4	211.0	196.5	182.0	167.5	153.0	138.5	123.9	109.3	106.5
70°	212.7	198.7	184.7	170.6	156.6	143.4	131.0	118.6	106.2	93.8	92.0
72.5°	186.8	173.3	159.9	146.5	133.0	121.4	111.4	101.4	91.5	81.5	80.0
75°	148.8	136.3	123.7	111.1	98.5	89.1	83.0	76.9	70.8	64.7	63.5
77.5°	111.5	100.4	89.4	78.3	67.3	60.3	57.4	54.4	51.5	48.6	47.8
80°	88.2	79.0	69.8	60.7	51.5	46.0	44.2	42.4	40.6	38.8	38.1
82.5°	66.8	59.7	52.5	45.3	38.2	34.0	32.8	31.5	30.3	29.2	28.7
85°	34.8	31.0	27.3	23.4	19.6	17.5	17.0	16.5	15.9	15.4	15.4
87.5°	10.5	9.9	9.2	8.6	7.8	7.7	8.0	8.4	8.7	9.0	9.1
90°	1.0	3.3	5.7	8.1	10.5	12.5	14.2	15.9	17.7	19.4	20.4
92.5°	19.6	19.3	19.2	18.9	18.7	19.0	19.9	20.8	21.6	22.5	23.1
95°	63.0	55.8	48.8	41.7	34.5	31.8	33.3	34.8	36.3	37.8	38.9
97.5°	125.0	105.0	84.9	65.0	44.9	36.6	40.1	43.6	47.1	50.6	51.4
100°	171.5	142.0	112.5	83.0	53.6	40.6	44.3	47.9	51.6	55.2	57.0
102.5°	222.7	216.4	210.2	204.0	197.7	179.3	148.6	118.0	87.4	56.8	59.0
105°	294.6	301.0	307.5	313.9	320.4	294.3	235.5	176.7	117.9	59.1	61.5
107.5°	376.6	381.8	387.0	392.2	397.4	364.8	294.3	223.8	153.3	82.8	80.3
110°	429.3	433.8	438.3	442.8	447.3	418.5	356.3	294.1	231.8	169.6	148.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	478.9	482.9	486.9	490.9	495.0	489.3	473.9	458.5	443.1	427.7	349.2
115°	557.2	560.9	564.5	568.2	571.9	576.4	581.8	587.2	592.6	597.9	498.2
117.5°	627.2	631.3	635.3	639.4	643.6	647.5	651.1	654.8	658.5	662.3	638.1
120°	678.3	681.6	684.8	688.0	691.3	694.8	698.7	702.6	706.5	710.3	712.9
122.5°	721.8	725.2	728.6	732.0	735.4	739.2	743.4	747.6	751.9	756.1	757.6
125°	787.8	790.6	793.4	796.2	799.0	802.5	806.6	810.6	814.8	818.9	820.4
127.5°	847.7	850.8	853.9	857.1	860.2	863.2	866.3	869.3	872.4	875.4	877.7
130°	885.7	889.1	892.6	896.0	899.5	902.4	904.8	907.1	909.5	911.9	914.3
132.5°	924.5	927.4	930.3	933.3	936.2	938.8	941.2	943.6	945.9	948.3	950.3
135°	974.9	978.3	981.8	985.2	988.6	991.3	993.2	995.2	997.1	999.1	1001.2
137.5°	1025.8	1028.3	1030.6	1033.1	1035.5	1037.8	1040.0	1042.2	1044.3	1046.6	1048.7
140°	1059.1	1060.9	1062.6	1064.3	1066.0	1068.1	1070.5	1072.9	1075.2	1077.6	1079.5
142.5°	1087.1	1088.6	1090.2	1091.7	1093.3	1095.4	1098.1	1100.8	1103.5	1106.3	1108.0
145°	1130.8	1130.7	1130.4	1130.2	1130.0	1131.7	1135.4	1139.1	1142.7	1146.4	1147.9
147.5°	1169.0	1168.2	1167.4	1166.6	1165.8	1167.2	1170.8	1174.4	1178.1	1181.6	1182.8
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°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	889.4	890.8	892.2	892.8	892.6	892.2	892.0	891.7
5°	882.3	883.9	885.5	886.1	885.5	884.9	884.5	883.9
7.5°	868.0	868.5	868.9	868.7	867.8	866.9	865.9	865.0
10°	853.7	853.2	852.6	851.8	850.7	849.7	848.6	847.5
12.5°	837.3	836.4	835.4	834.0	832.2	830.4	828.6	826.8
15°	806.8	803.3	799.9	797.3	795.5	793.7	791.9	790.1
17.5°	772.1	768.0	764.0	760.4	757.3	754.2	751.1	748.1
20°	748.0	743.5	738.9	734.7	730.8	726.8	722.9	718.9
22.5°	721.4	715.7	709.9	705.5	702.5	699.6	696.6	693.7
25°	677.5	670.1	662.7	657.7	655.1	652.4	649.7	647.0
27.5°	635.6	627.0	618.5	612.0	607.7	603.4	599.1	594.8
30°	606.0	596.8	587.6	580.7	575.8	570.9	566.1	561.3
32.5°	576.2	565.8	555.3	547.8	543.2	538.7	534.1	529.6
35°	529.7	518.4	507.1	499.4	495.4	491.5	487.6	483.6
37.5°	484.3	471.9	459.5	450.9	446.4	441.9	437.4	432.8
40°	454.0	441.2	428.5	419.8	415.1	410.4	405.8	401.1
42.5°	423.4	410.2	397.0	388.2	383.7	379.1	374.6	370.0
45°	378.8	366.1	353.3	344.8	340.5	336.1	331.8	327.5
47.5°	335.5	322.8	310.1	301.8	297.9	294.0	290.0	286.1
50°	307.6	295.2	282.8	274.6	270.9	267.1	263.4	259.6
52.5°	281.3	269.3	257.3	249.6	246.1	242.6	239.2	235.7
55°	241.3	230.4	219.7	212.6	209.2	205.7	202.3	198.9
57.5°	204.9	195.0	185.1	178.7	175.9	173.0	170.1	167.2
60°	179.8	170.6	161.4	155.4	152.6	149.7	146.8	143.9
62.5°	158.0	149.2	140.5	135.3	133.6	131.9	130.2	128.4
65°	128.5	122.4	116.3	113.0	112.4	111.9	111.3	110.8
67.5°	103.7	100.9	98.2	96.4	95.9	95.3	94.7	94.1
70°	90.2	88.4	86.6	85.4	84.6	83.9	83.2	82.5
72.5°	78.5	77.0	75.5	74.5	74.1	73.7	73.2	72.8
75°	62.2	60.9	59.7	58.9	58.8	58.6	58.4	58.2
77.5°	47.1	46.3	45.6	45.2	44.8	44.6	44.3	44.0
80°	37.4	36.7	36.0	35.6	35.6	35.6	35.6	35.6
82.5°	28.3	27.8	27.4	27.2	27.2	27.2	27.2	27.2
85°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
87.5°	9.2	9.3	9.3	9.4	9.5	9.6	9.7	9.7
90°	21.5	22.6	23.7	24.5	24.9	25.3	25.7	26.1
92.5°	23.6	24.2	24.7	25.1	25.3	25.7	25.9	26.1
95°	39.9	41.0	42.1	42.5	42.3	42.1	41.9	41.7
97.5°	52.3	53.2	54.0	54.6	54.8	55.1	55.4	55.6
100°	58.7	60.4	62.1	63.2	63.6	64.1	64.5	65.0
102.5°	61.2	63.5	65.8	67.2	67.7	68.4	69.0	69.6
105°	63.8	66.2	68.6	70.2	71.1	71.9	72.8	73.7
107.5°	78.0	75.5	73.1	72.3	73.2	74.1	74.9	75.8
110°	126.5	105.0	83.4	73.1	74.0	74.9	75.7	76.5



TEST NUMBER: P331819-927

CATALOG NUMBER: S122RDIW-S675D1240U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	270.6	192.1	113.5	74.5	75.3	76.0	76.6	77.3
115°	398.5	298.8	199.1	141.5	126.0	110.5	95.0	79.5
117.5°	614.0	589.9	565.8	528.2	477.3	426.4	375.4	324.4
120°	715.5	718.0	720.6	707.4	678.3	649.3	620.2	591.1
122.5°	759.1	760.7	762.2	760.2	754.6	748.9	743.3	737.6
125°	821.9	823.4	824.9	825.9	826.6	827.3	827.9	828.5
127.5°	879.8	882.0	884.2	885.4	885.5	885.7	885.7	885.9
130°	916.6	919.0	921.3	922.4	922.2	922.0	921.8	921.5
132.5°	952.4	954.3	956.4	957.3	957.1	956.9	956.6	956.5
135°	1003.4	1005.5	1007.7	1008.5	1008.1	1007.7	1007.3	1006.9
137.5°	1050.8	1052.9	1055.0	1055.7	1054.9	1054.2	1053.5	1052.7
140°	1081.5	1083.4	1085.4	1085.8	1084.7	1083.6	1082.5	1081.5
142.5°	1109.8	1111.6	1113.3	1113.6	1112.6	1111.5	1110.4	1109.4
145°	1149.4	1150.9	1152.4	1152.6	1151.5	1150.5	1149.4	1148.3
147.5°	1183.9	1185.0	1186.1	1186.2	1185.3	1184.4	1183.5	1182.6
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)