

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: P331824-930

Luminaire Tested: **S122RDIW-S675D1440U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331824-930
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: S122RDIW-S675D1440U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5970.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

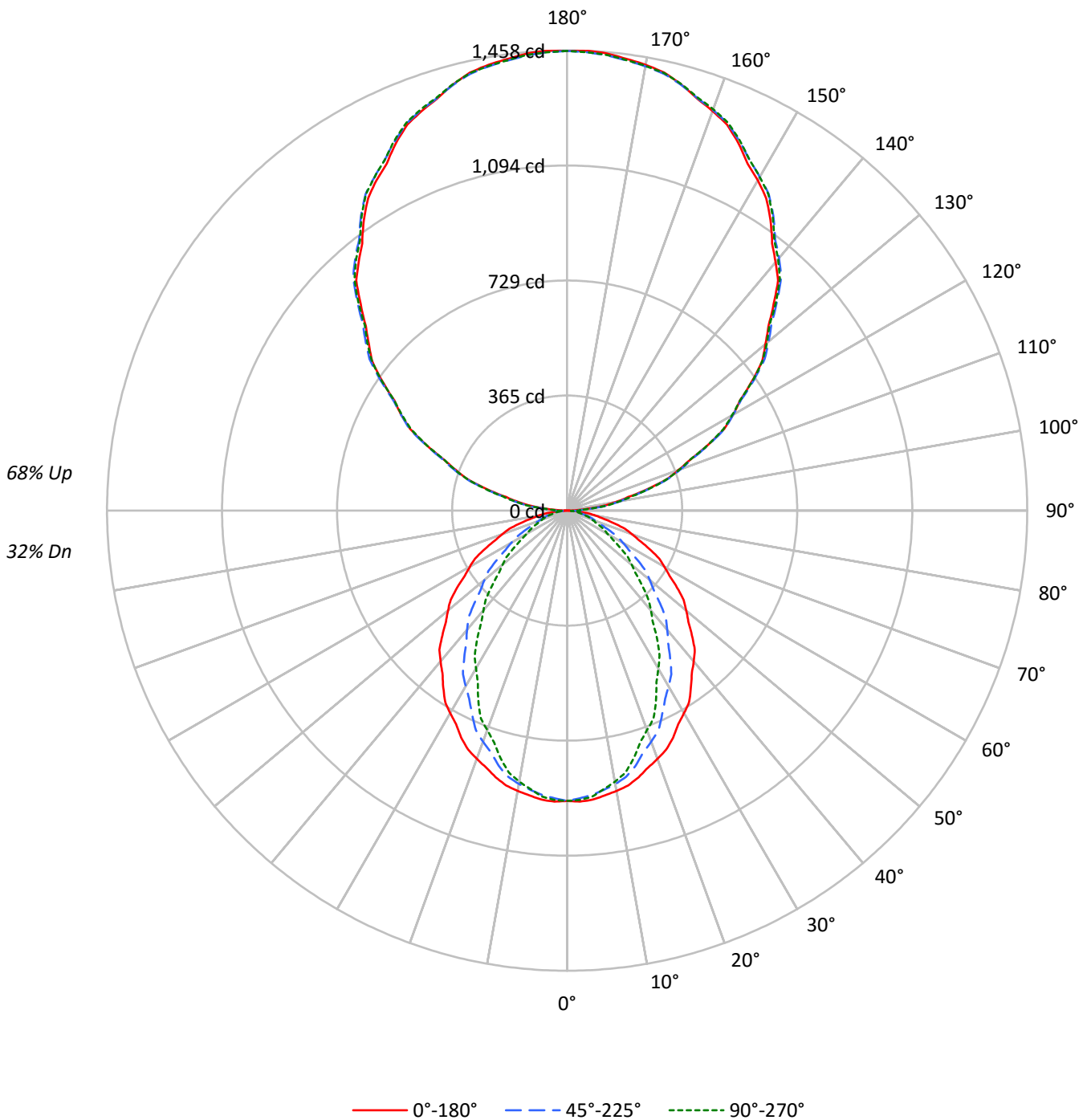
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	92	92	92	92	73	73	73	56	56	56	39	39	39	32																				
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	34	34	27																				
2	86	79	73	68	77	71	66	62	57	53	51	44	41	39	31	30	29	23																				
3	78	69	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	15																				
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	1.4
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°	28.6	0.5
90°-100°	92.3	1.5
100°-110°	286.6	4.8
110°-120°	490.0	8.2
120°-130°	644.3	10.8
130°-140°	723.2	12.1
140°-150°	709.1	11.9
150°-160°	594.8	10.0
160°-170°	394.5	6.6
170°-180°	137.9	2.3
0°-30°	654.4	11.0
0°-40°	1016.3	17.0
0°-60°	1610.5	27.0
0°-90°	1897.4	31.8
90°-120°	868.9	14.6
90°-150°	2945.5	49.3
90°-180°	4073.0	68.2
0°-180°	5970.0	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	17	43	41	42	5
95°	64	76	79	79	76	73
105°	264	268	270	273	273	279
115°	492	498	497	495	492	486
125°	715	726	723	719	718	639
135°	926	938	942	940	937	715
145°	1123	1132	1139	1140	1136	702
155°	1284	1288	1292	1297	1294	591
165°	1398	1396	1396	1404	1399	394
175°	1454	1450	1448	1456	1449	138
180°	1456	1456	1456	1456	1456	



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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°	10.9	10.4	9.9	9.3	8.8	9.1	10.4	11.5	12.7	13.9	13.7
90°	1.2	4.5	7.7	11.1	14.3	19.0	25.0	31.0	37.0	43.0	42.5
92.5°	21.9	24.3	26.7	29.1	31.5	33.4	34.8	36.3	37.7	39.1	39.2
95°	63.9	66.6	69.4	72.1	74.8	76.5	77.0	77.5	78.1	78.7	78.7
97.5°	116.8	119.2	121.6	124.0	126.4	128.1	129.1	130.2	131.2	132.2	132.2
100°	156.1	158.2	160.5	162.7	164.9	166.3	167.1	168.0	168.8	169.6	169.6
102.5°	197.4	199.2	200.9	202.6	204.4	205.8	206.8	207.8	208.9	209.9	210.2
105°	264.2	265.1	265.9	266.7	267.5	268.2	268.8	269.3	269.9	270.4	270.9
107.5°	331.6	332.8	334.0	335.3	336.4	337.0	337.0	337.0	337.0	337.0	337.2
110°	374.9	376.5	378.1	379.8	381.4	382.3	382.3	382.3	382.3	382.3	382.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	422.1	423.7	425.3	427.0	428.6	429.3	429.1	428.9	428.7	428.4	427.8
115°	491.6	493.3	494.9	496.6	498.2	498.7	498.2	497.7	497.1	496.6	496.3
117.5°	561.0	563.1	565.3	567.5	569.7	570.1	568.5	567.0	565.4	563.9	563.3
120°	607.2	609.4	611.6	613.8	616.0	616.0	613.8	611.6	609.4	607.2	607.2
122.5°	649.5	652.1	654.7	657.3	660.0	660.5	659.0	657.5	655.9	654.4	653.7
125°	715.3	717.8	720.2	722.7	725.2	726.0	725.2	724.4	723.6	722.7	721.9
127.5°	779.5	782.6	785.7	788.9	792.0	793.0	792.1	791.1	790.1	789.1	788.1
130°	819.8	823.4	827.0	830.5	834.1	835.5	834.9	834.5	833.9	833.3	832.8
132.5°	865.0	868.0	870.8	873.8	876.6	878.2	878.2	878.3	878.5	878.6	877.3
135°	925.5	928.5	931.6	934.5	937.5	939.3	939.9	940.4	940.9	941.5	941.3
137.5°	989.2	991.6	994.1	996.5	999.0	1000.6	1001.4	1002.0	1002.7	1003.5	1003.2
140°	1027.5	1030.0	1032.5	1034.9	1037.4	1039.3	1040.6	1042.0	1043.4	1044.7	1044.7
142.5°	1066.9	1069.3	1071.8	1074.2	1076.7	1078.4	1079.3	1080.3	1081.2	1082.1	1082.3
145°	1123.4	1125.4	1127.2	1129.1	1131.1	1132.9	1134.5	1136.1	1137.8	1139.4	1139.6
147.5°	1173.8	1176.1	1178.4	1180.7	1183.0	1184.7	1185.8	1186.8	1188.0	1189.0	1189.7
150°	1208.2	1209.8	1211.5	1213.2	1214.8	1216.1	1217.2	1218.3	1219.4	1220.5	1221.3
152.5°	1238.7	1240.3	1241.9	1243.6	1245.3	1246.8	1248.1	1249.4	1250.7	1252.0	1253.0
155°	1284.4	1285.2	1286.1	1286.9	1287.7	1288.5	1289.3	1290.1	1290.9	1291.8	1293.1
157.5°	1323.5	1324.0	1324.6	1325.2	1325.7	1326.2	1326.7	1327.2	1327.7	1328.2	1330.0
160°	1347.1	1347.7	1348.2	1348.7	1349.3	1349.7	1350.0	1350.2	1350.5	1350.8	1352.4
162.5°	1368.7	1368.9	1369.0	1369.1	1369.2	1369.4	1369.6	1369.9	1370.2	1370.4	1372.3
165°	1397.5	1397.3	1396.9	1396.7	1396.4	1396.3	1396.3	1396.3	1396.3	1396.3	1398.2
167.5°	1421.6	1420.7	1419.9	1419.1	1418.3	1417.9	1417.8	1417.8	1417.7	1417.6	1419.6
170°	1434.4	1433.5	1432.7	1431.9	1431.1	1430.5	1430.3	1430.0	1429.7	1429.5	1431.3
172.5°	1443.2	1442.4	1441.6	1440.8	1440.0	1439.4	1439.2	1438.8	1438.6	1438.3	1440.2
175°	1454.0	1453.2	1452.4	1451.6	1450.7	1450.1	1449.5	1448.9	1448.5	1447.9	1449.8
177.5°	1458.5	1457.8	1457.2	1456.5	1455.9	1455.3	1454.8	1454.4	1454.0	1453.5	1454.8
180°	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5



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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°	13.5	13.1	12.9	12.8	12.9	12.9	13.0	13.0
90°	41.9	41.4	40.8	40.7	41.0	41.3	41.5	41.8
92.5°	39.3	39.4	39.5	39.6	39.6	39.7	39.8	39.8
95°	78.7	78.7	78.7	78.4	77.9	77.3	76.7	76.2
97.5°	132.2	132.2	132.2	132.2	132.2	132.1	132.1	132.0
100°	169.6	169.6	169.6	169.5	169.2	168.9	168.7	168.4
102.5°	210.3	210.6	210.8	210.8	210.5	210.3	209.9	209.7
105°	271.5	272.1	272.6	272.9	272.9	272.9	272.9	272.9
107.5°	337.5	337.7	337.9	337.4	336.1	334.8	333.6	332.3
110°	382.3	382.3	382.3	381.8	381.0	380.2	379.4	378.5



TEST NUMBER: P331824-930

CATALOG NUMBER: S122RDIW-S675D1440U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	427.1	426.5	425.8	425.2	424.6	424.0	423.4	422.8
115°	496.0	495.7	495.5	494.9	494.1	493.3	492.4	491.6
117.5°	562.6	562.0	561.3	560.5	559.7	558.9	558.1	557.3
120°	607.2	607.2	607.2	606.7	605.9	605.1	604.3	603.5
122.5°	653.1	652.4	651.8	651.1	650.5	650.0	649.3	648.7
125°	721.1	720.2	719.4	718.9	718.6	718.4	718.1	717.8
127.5°	787.1	786.1	785.1	784.2	783.3	782.4	781.6	780.7
130°	832.3	831.7	831.1	830.3	829.2	828.2	827.0	826.0
132.5°	876.2	875.0	873.8	872.7	871.9	871.0	870.1	869.2
135°	940.9	940.7	940.4	939.9	939.1	938.2	937.4	936.6
137.5°	1003.0	1002.8	1002.6	1001.9	1000.9	999.7	998.7	997.5
140°	1044.7	1044.7	1044.7	1044.2	1043.1	1042.0	1040.9	1039.8
142.5°	1082.6	1082.8	1083.0	1082.6	1081.5	1080.4	1079.3	1078.2
145°	1140.0	1140.2	1140.4	1140.0	1139.0	1137.9	1136.8	1135.7
147.5°	1190.3	1190.8	1191.5	1191.2	1190.2	1189.1	1188.1	1187.1
150°	1222.1	1222.9	1223.8	1223.8	1222.9	1222.1	1221.3	1220.5
152.5°	1254.0	1255.1	1256.1	1256.1	1255.1	1254.0	1253.0	1252.0
155°	1294.5	1295.9	1297.2	1297.5	1296.7	1295.9	1295.1	1294.3
157.5°	1331.9	1333.7	1335.6	1335.9	1334.6	1333.3	1332.0	1330.6
160°	1354.0	1355.7	1357.3	1357.6	1356.5	1355.4	1354.4	1353.2
162.5°	1374.2	1376.1	1377.9	1378.2	1376.9	1375.6	1374.3	1372.9
165°	1400.1	1402.0	1403.9	1404.2	1402.8	1401.5	1400.1	1398.7
167.5°	1421.5	1423.4	1425.3	1425.6	1424.2	1422.7	1421.3	1419.8
170°	1433.3	1435.2	1437.1	1437.2	1435.6	1433.9	1432.3	1430.7
172.5°	1442.1	1444.1	1445.9	1446.1	1444.5	1442.8	1441.2	1439.6
175°	1451.7	1453.6	1455.6	1455.7	1454.0	1452.4	1450.7	1449.1
177.5°	1456.2	1457.5	1458.8	1458.8	1457.5	1456.2	1454.8	1453.5
180°	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5	1456.5

(END OF REPORT)