

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: P331820-930

Luminaire Tested: **S122RDIW-S675D1240U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331820-930
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-S675D1240U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5399.4 lumens
Efficiency: N/A
Efficacy: 87.9 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

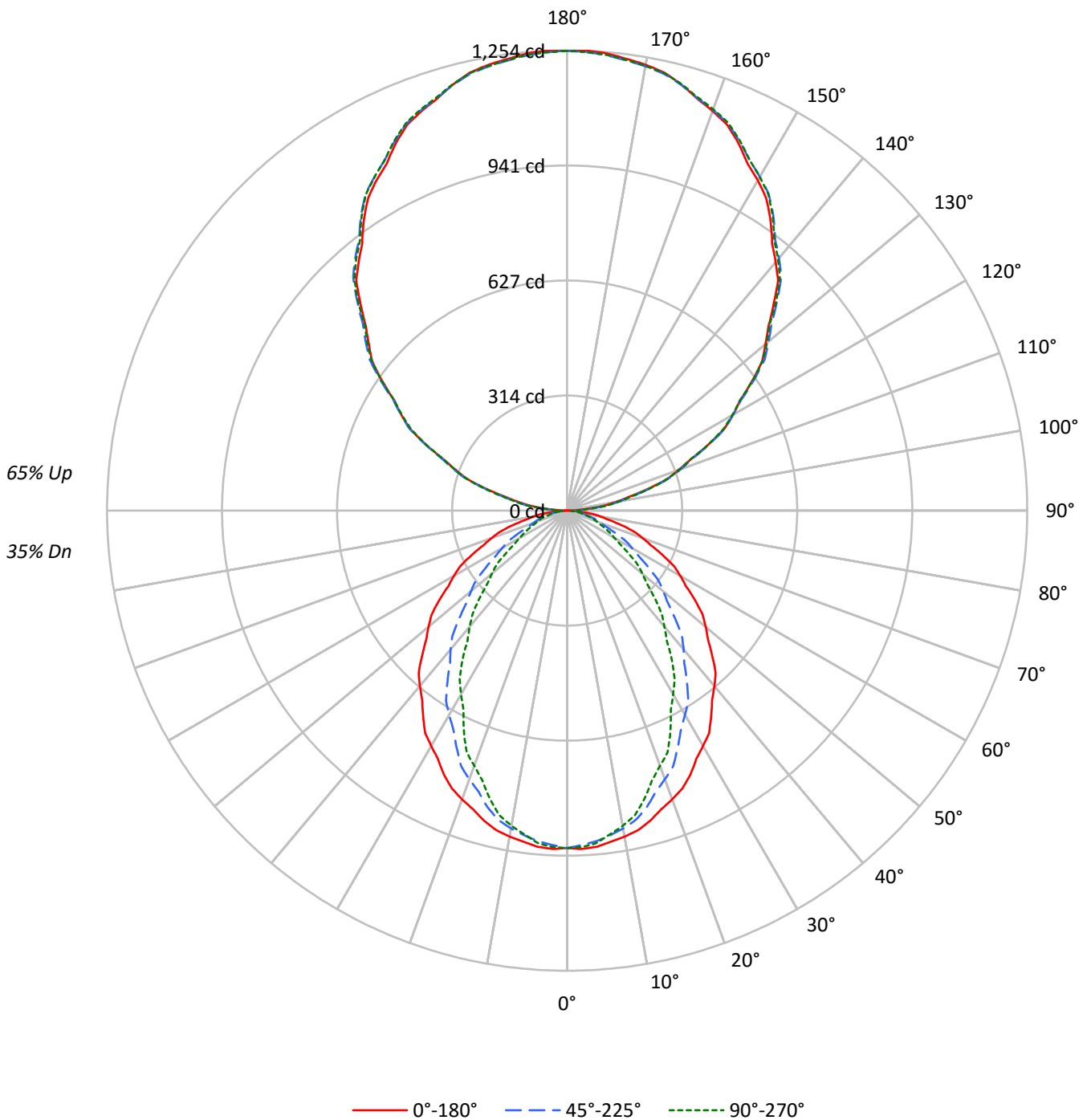
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35				
1	95	91	87	84	86	82	79	76	66	64	62	51	50	49	38	37	36	30				
2	87	80	74	69	78	72	67	63	58	55	52	46	43	41	34	32	31	26				
3	79	70	63	58	71	64	58	53	52	47	44	41	38	35	30	28	27	22				
4	72	62	55	49	65	57	50	45	46	41	38	36	33	30	27	25	23	19				
5	67	56	48	42	60	51	44	39	41	36	33	33	29	27	25	22	21	17				
6	61	50	42	37	55	46	39	34	37	32	29	30	26	23	23	20	18	15				
7	57	45	37	32	51	41	34	30	34	29	25	27	23	21	21	18	16	14				
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12				
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11				
10	46	34	27	23	41	31	25	21	26	21	18	21	18	15	16	14	12	10				

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	1.6
10°-20°	236.4	4.4
20°-30°	331.9	6.1
30°-40°	361.9	6.7
40°-50°	332.8	6.2
50°-60°	261.4	4.8
60°-70°	170.4	3.2
70°-80°	87.9	1.6
80°-90°	27.8	0.5
90°-100°	79.4	1.5
100°-110°	246.5	4.6
110°-120°	421.4	7.8
120°-130°	554.2	10.3
130°-140°	622.0	11.5
140°-150°	609.9	11.3
150°-160°	511.5	9.5
160°-170°	339.3	6.3
170°-180°	118.6	2.2
0°-30°	654.4	12.1
0°-40°	1016.3	18.8
0°-60°	1610.5	29.8
0°-90°	1896.5	35.1
90°-120°	747.3	13.8
90°-150°	2533.4	46.9
90°-180°	3503.0	64.9
0°-180°	5399.4	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	14	37	35	36	4
95°	55	65	68	68	66	63
105°	227	230	233	235	235	240
115°	423	429	427	426	423	418
125°	615	624	622	619	617	550
135°	796	807	810	809	806	615
145°	966	974	980	981	977	603
155°	1105	1108	1111	1116	1113	508
165°	1202	1201	1201	1208	1203	339
175°	1251	1248	1245	1252	1246	119
180°	1253	1253	1253	1253	1253	



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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	10.3	9.6	9.0	8.4	8.6	9.6	10.7	11.7	12.7	12.5
90°	1.1	3.9	6.7	9.5	12.3	16.3	21.5	26.7	31.8	37.0	36.5
92.5°	18.8	20.9	23.0	25.0	27.1	28.7	29.9	31.1	32.4	33.6	33.7
95°	55.0	57.3	59.7	62.0	64.4	65.8	66.3	66.7	67.2	67.7	67.7
97.5°	100.4	102.5	104.6	106.6	108.7	110.1	111.0	111.9	112.8	113.7	113.7
100°	134.3	136.2	138.0	139.9	141.8	143.1	143.7	144.5	145.2	145.9	145.9
102.5°	169.7	171.3	172.8	174.3	175.8	177.0	177.9	178.8	179.7	180.6	180.8
105°	227.3	228.0	228.7	229.4	230.1	230.7	231.1	231.6	232.1	232.6	233.0
107.5°	285.2	286.3	287.3	288.3	289.3	289.8	289.8	289.8	289.8	289.8	290.1
110°	322.5	323.8	325.2	326.7	328.1	328.8	328.8	328.8	328.8	328.8	328.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.1	364.4	365.8	367.3	368.7	369.2	369.1	368.9	368.7	368.5	367.9
115°	422.9	424.3	425.7	427.1	428.5	428.9	428.5	428.0	427.5	427.1	426.9
117.5°	482.5	484.4	486.2	488.1	490.0	490.3	488.9	487.6	486.3	485.0	484.5
120°	522.2	524.1	526.0	527.9	529.8	529.8	527.9	526.0	524.1	522.2	522.2
122.5°	558.6	560.8	563.1	565.3	567.6	568.1	566.8	565.5	564.1	562.8	562.2
125°	615.2	617.3	619.5	621.6	623.7	624.4	623.7	623.1	622.3	621.6	620.9
127.5°	670.4	673.1	675.8	678.5	681.2	682.1	681.3	680.4	679.6	678.7	677.8
130°	705.2	708.2	711.3	714.3	717.3	718.6	718.2	717.7	717.2	716.7	716.2
132.5°	744.0	746.5	749.0	751.5	754.0	755.3	755.4	755.5	755.5	755.6	754.6
135°	796.1	798.6	801.2	803.8	806.4	807.9	808.4	808.9	809.3	809.8	809.5
137.5°	850.8	852.9	855.0	857.1	859.2	860.6	861.2	861.9	862.4	863.1	862.9
140°	883.8	885.9	888.0	890.1	892.3	893.9	895.0	896.3	897.4	898.5	898.5
142.5°	917.6	919.7	921.9	924.0	926.1	927.5	928.3	929.1	929.9	930.7	930.9
145°	966.2	967.9	969.6	971.2	972.8	974.4	975.8	977.1	978.6	980.0	980.2
147.5°	1009.6	1011.5	1013.5	1015.5	1017.5	1019.0	1019.9	1020.8	1021.7	1022.7	1023.2
150°	1039.2	1040.6	1042.0	1043.4	1044.8	1046.0	1046.9	1047.9	1048.8	1049.8	1050.4
152.5°	1065.4	1066.8	1068.2	1069.6	1071.1	1072.3	1073.4	1074.6	1075.7	1076.8	1077.7
155°	1104.7	1105.5	1106.1	1106.9	1107.6	1108.2	1109.0	1109.6	1110.4	1111.1	1112.2
157.5°	1138.3	1138.8	1139.3	1139.8	1140.2	1140.7	1141.1	1141.5	1141.9	1142.4	1143.9
160°	1158.6	1159.1	1159.6	1160.1	1160.5	1160.9	1161.1	1161.3	1161.6	1161.8	1163.2
162.5°	1177.2	1177.4	1177.5	1177.5	1177.6	1177.8	1178.0	1178.3	1178.5	1178.8	1180.3
165°	1202.0	1201.8	1201.5	1201.3	1201.0	1200.9	1200.9	1200.9	1200.9	1200.9	1202.6
167.5°	1222.7	1222.0	1221.3	1220.6	1219.9	1219.5	1219.4	1219.4	1219.4	1219.3	1221.0
170°	1233.7	1233.0	1232.3	1231.6	1230.9	1230.4	1230.2	1230.0	1229.7	1229.5	1231.1
172.5°	1241.3	1240.6	1239.9	1239.2	1238.5	1238.0	1237.8	1237.5	1237.3	1237.1	1238.8
175°	1250.6	1249.9	1249.2	1248.5	1247.8	1247.2	1246.8	1246.3	1245.8	1245.3	1247.0
177.5°	1254.4	1253.8	1253.3	1252.7	1252.1	1251.7	1251.3	1250.9	1250.6	1250.2	1251.3
180°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7



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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°	12.2	12.0	11.7	11.7	11.7	11.7	11.8	11.8
90°	36.0	35.6	35.1	35.0	35.2	35.5	35.7	36.0
92.5°	33.8	33.9	34.0	34.1	34.1	34.2	34.2	34.2
95°	67.7	67.7	67.7	67.4	66.9	66.4	66.0	65.6
97.5°	113.7	113.7	113.7	113.7	113.7	113.7	113.6	113.6
100°	145.9	145.9	145.9	145.8	145.5	145.3	145.0	144.8
102.5°	180.9	181.2	181.3	181.3	181.1	180.8	180.6	180.3
105°	233.5	234.0	234.5	234.7	234.7	234.7	234.7	234.7
107.5°	290.2	290.4	290.7	290.2	289.1	288.0	286.9	285.8
110°	328.8	328.8	328.8	328.4	327.8	327.0	326.3	325.6



TEST NUMBER: P331820-930

CATALOG NUMBER: S122RDIW-S675D1240U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	367.4	366.8	366.2	365.7	365.2	364.7	364.2	363.6
115°	426.6	426.4	426.2	425.7	425.0	424.3	423.5	422.9
117.5°	483.9	483.3	482.7	482.2	481.4	480.7	480.0	479.3
120°	522.2	522.2	522.2	521.9	521.1	520.5	519.8	519.1
122.5°	561.7	561.2	560.6	560.0	559.5	559.0	558.5	558.0
125°	620.2	619.5	618.8	618.3	618.1	617.8	617.6	617.3
127.5°	677.0	676.1	675.3	674.5	673.8	673.0	672.3	671.5
130°	715.8	715.3	714.9	714.2	713.2	712.3	711.3	710.4
132.5°	753.6	752.5	751.5	750.6	749.9	749.1	748.4	747.6
135°	809.3	809.1	808.9	808.4	807.6	807.0	806.2	805.5
137.5°	862.7	862.5	862.3	861.8	860.8	859.9	858.9	858.0
140°	898.5	898.5	898.5	898.1	897.2	896.3	895.3	894.4
142.5°	931.1	931.3	931.5	931.1	930.2	929.2	928.3	927.3
145°	980.5	980.7	980.9	980.6	979.7	978.7	977.8	976.8
147.5°	1023.7	1024.3	1024.7	1024.6	1023.7	1022.8	1021.9	1021.0
150°	1051.2	1051.9	1052.6	1052.6	1051.9	1051.2	1050.4	1049.8
152.5°	1078.6	1079.5	1080.4	1080.4	1079.5	1078.6	1077.7	1076.8
155°	1113.5	1114.6	1115.7	1116.0	1115.3	1114.6	1113.9	1113.2
157.5°	1145.6	1147.1	1148.8	1149.0	1147.9	1146.7	1145.6	1144.4
160°	1164.7	1166.0	1167.4	1167.7	1166.8	1165.8	1164.9	1163.9
162.5°	1181.9	1183.5	1185.1	1185.4	1184.2	1183.1	1181.9	1180.9
165°	1204.2	1205.8	1207.5	1207.7	1206.6	1205.4	1204.2	1203.1
167.5°	1222.6	1224.3	1225.9	1226.1	1224.9	1223.7	1222.5	1221.2
170°	1232.7	1234.4	1236.1	1236.2	1234.8	1233.4	1231.9	1230.5
172.5°	1240.4	1242.0	1243.7	1243.7	1242.4	1241.0	1239.6	1238.1
175°	1248.6	1250.3	1251.9	1252.1	1250.6	1249.2	1247.8	1246.3
177.5°	1252.5	1253.6	1254.7	1254.7	1253.6	1252.5	1251.3	1250.2
180°	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7	1252.7

(END OF REPORT)