

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: P331816-927

Luminaire Tested: **S122RDIW-S675D970U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331816-927  
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-S675D970U927-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4500.4 lumens  
Efficiency: N/A  
Efficacy: 85.6 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: General Diffuse

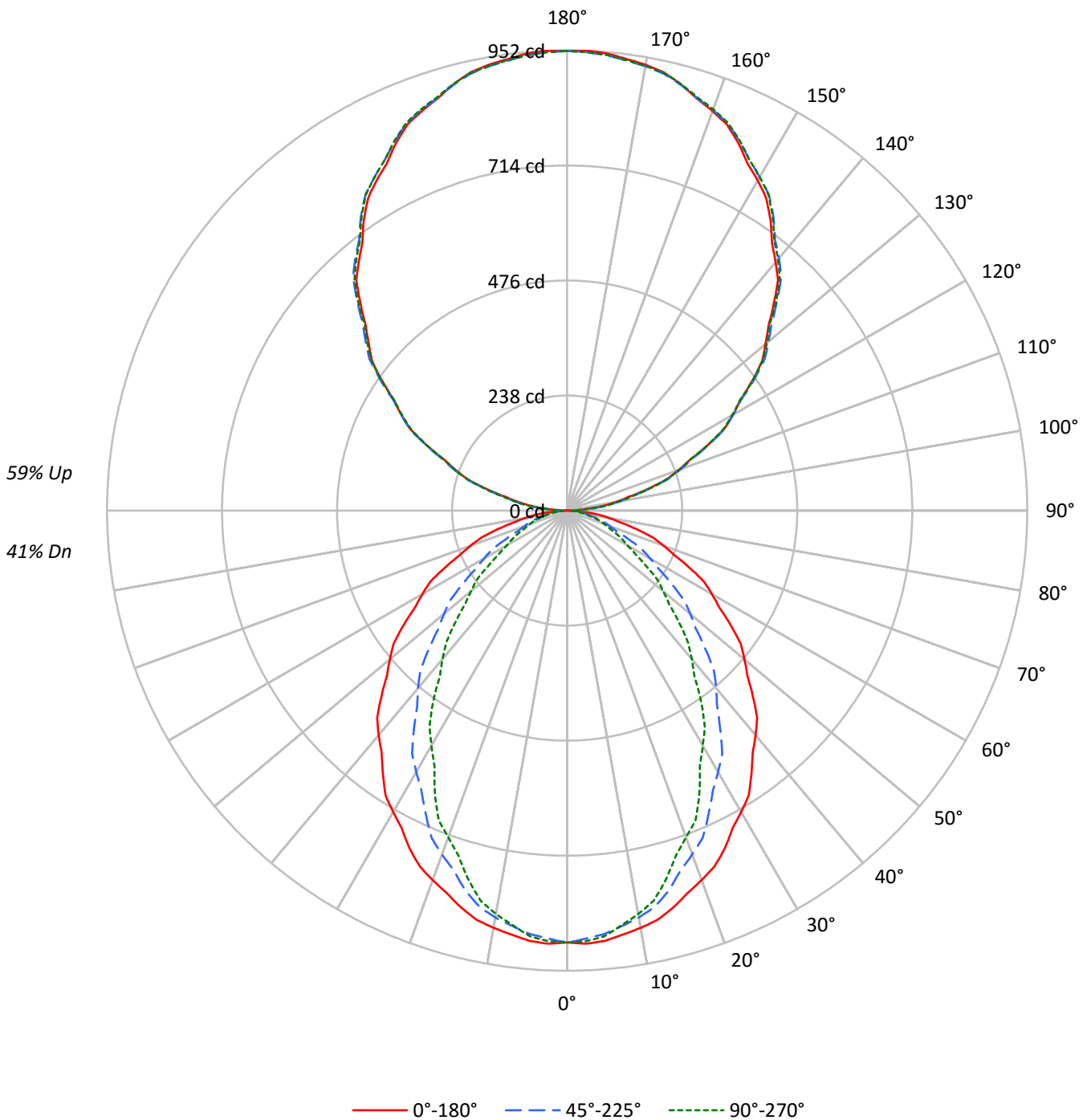
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331816-927

CATALOG NUMBER: S122RDIW-S675D970U927-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331816-927

CATALOG NUMBER: S122RDIW-S675D970U927-4F0-1E-UDD-F1

**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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	48	48	48	41
1	96	92	88	85	87	84	81	78	69	67	65	55	54	53	43	42	41	35
2	88	81	75	70	80	74	69	65	61	57	54	49	47	45	38	37	35	30
3	80	71	64	59	73	65	59	54	54	50	46	44	41	38	34	32	30	26
4	74	63	56	50	67	58	52	46	48	43	40	39	36	33	31	28	26	23
5	68	57	49	43	62	52	45	40	43	38	34	35	32	29	28	25	23	20
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	25	23	21	18
7	58	46	38	33	53	42	36	31	36	30	27	29	25	23	23	21	19	16
8	54	42	34	29	49	39	32	27	33	27	24	27	23	20	21	19	17	14
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	18	16	14	12

**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



TEST NUMBER: P331816-927

CATALOG NUMBER: S122RDIW-S675D970U927-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.6	1.9
10°-20°	229.7	5.1
20°-30°	322.5	7.2
30°-40°	351.7	7.8
40°-50°	323.4	7.2
50°-60°	254.0	5.6
60°-70°	165.6	3.7
70°-80°	85.4	1.9
80°-90°	25.9	0.6
90°-100°	60.2	1.3
100°-110°	187.1	4.2
110°-120°	319.9	7.1
120°-130°	420.6	9.3
130°-140°	472.1	10.5
140°-150°	462.9	10.3
150°-160°	388.3	8.6
160°-170°	257.5	5.7
170°-180°	90.0	2.0
0°-30°	635.8	14.1
0°-40°	987.5	21.9
0°-60°	1564.8	34.8
0°-90°	1841.7	40.9
90°-120°	567.2	12.6
90°-150°	1922.8	42.7
90°-180°	2659.0	59.1
0°-180°	4500.4	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	11	28	27	27	4
95°	42	49	51	51	50	48
105°	172	175	176	178	178	182
115°	321	325	324	323	321	317
125°	467	474	472	470	469	417
135°	604	613	615	614	611	467
145°	733	739	744	744	741	458
155°	838	841	843	847	845	386
165°	912	912	912	917	913	257
175°	949	947	945	950	946	90
180°	951	951	951	951	951	



TEST NUMBER: P331816-927

CATALOG NUMBER: S122RDIW-S675D970U927-4F0-1E-UDD-F1

**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	9.8	9.0	8.3	7.6	7.7	8.5	9.2	10.0	10.8	10.6
90°	0.8	2.9	5.1	7.2	9.3	12.4	16.3	20.2	24.2	28.0	27.7
92.5°	14.3	15.8	17.4	19.0	20.6	21.8	22.7	23.7	24.6	25.5	25.6
95°	41.7	43.5	45.3	47.1	48.9	49.9	50.3	50.6	51.0	51.3	51.3
97.5°	76.2	77.8	79.4	81.0	82.5	83.7	84.3	85.0	85.6	86.3	86.3
100°	101.9	103.3	104.7	106.2	107.6	108.6	109.1	109.6	110.2	110.7	110.7
102.5°	128.9	130.0	131.1	132.3	133.4	134.4	135.0	135.7	136.3	137.0	137.2
105°	172.5	173.0	173.6	174.1	174.7	175.1	175.5	175.8	176.2	176.5	176.9
107.5°	216.5	217.3	218.0	218.8	219.6	220.0	220.0	220.0	220.0	220.0	220.1
110°	244.7	245.8	246.8	248.0	249.0	249.5	249.5	249.5	249.5	249.5	249.5



TEST NUMBER: P331816-927

CATALOG NUMBER: S122RDIW-S675D970U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	275.5	276.6	277.7	278.8	279.8	280.3	280.1	280.0	279.9	279.7	279.2
115°	320.9	322.0	323.1	324.2	325.2	325.6	325.2	324.9	324.5	324.2	324.0
117.5°	366.2	367.7	369.1	370.5	371.9	372.1	371.1	370.1	369.2	368.1	367.7
120°	396.4	397.8	399.3	400.7	402.1	402.1	400.7	399.3	397.8	396.4	396.4
122.5°	424.0	425.7	427.4	429.1	430.8	431.2	430.2	429.2	428.2	427.1	426.7
125°	467.0	468.6	470.2	471.8	473.4	474.0	473.4	472.9	472.3	471.8	471.3
127.5°	508.9	510.9	512.9	515.0	517.0	517.7	517.1	516.4	515.8	515.2	514.4
130°	535.2	537.5	539.8	542.2	544.5	545.4	545.1	544.7	544.4	544.0	543.7
132.5°	564.7	566.6	568.5	570.4	572.3	573.2	573.3	573.4	573.5	573.5	572.7
135°	604.2	606.2	608.1	610.1	612.0	613.1	613.5	613.9	614.3	614.6	614.4
137.5°	645.7	647.4	649.0	650.5	652.1	653.2	653.6	654.1	654.6	655.1	654.9
140°	670.7	672.4	674.0	675.6	677.2	678.4	679.4	680.2	681.1	682.0	682.0
142.5°	696.5	698.1	699.7	701.2	702.9	704.0	704.6	705.2	705.8	706.4	706.5
145°	733.3	734.6	735.9	737.1	738.4	739.5	740.6	741.6	742.8	743.8	743.9
147.5°	766.3	767.8	769.3	770.7	772.2	773.3	774.0	774.8	775.5	776.2	776.6
150°	788.7	789.8	790.8	791.9	793.0	793.9	794.6	795.4	796.1	796.8	797.3
152.5°	808.7	809.7	810.8	811.8	812.9	813.9	814.8	815.6	816.4	817.3	817.9
155°	838.4	839.0	839.6	840.1	840.6	841.1	841.7	842.2	842.7	843.3	844.1
157.5°	864.0	864.4	864.7	865.1	865.4	865.8	866.1	866.4	866.7	867.0	868.2
160°	879.4	879.7	880.1	880.4	880.8	881.1	881.3	881.5	881.6	881.8	882.9
162.5°	893.5	893.6	893.7	893.7	893.8	893.9	894.1	894.3	894.5	894.6	895.9
165°	912.3	912.1	912.0	911.7	911.6	911.5	911.5	911.5	911.5	911.5	912.8
167.5°	928.0	927.5	926.9	926.4	925.9	925.6	925.6	925.5	925.5	925.4	926.7
170°	936.4	935.8	935.3	934.8	934.2	933.9	933.7	933.5	933.3	933.2	934.4
172.5°	942.1	941.6	941.0	940.6	940.0	939.6	939.4	939.3	939.1	938.9	940.2
175°	949.2	948.6	948.2	947.6	947.1	946.6	946.3	945.9	945.5	945.2	946.4
177.5°	952.1	951.6	951.3	950.8	950.4	950.0	949.7	949.4	949.2	948.9	949.7
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8



TEST NUMBER: P331816-927

CATALOG NUMBER: S122RDIW-S675D970U927-4F0-1E-UDD-F1

**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°	10.4	10.1	9.9	9.8	9.9	9.9	10.0	10.0
90°	27.3	27.0	26.6	26.5	26.8	26.9	27.1	27.3
92.5°	25.7	25.7	25.8	25.8	25.9	25.9	26.0	26.0
95°	51.3	51.3	51.3	51.2	50.8	50.5	50.1	49.7
97.5°	86.3	86.3	86.3	86.3	86.3	86.3	86.2	86.2
100°	110.7	110.7	110.7	110.7	110.4	110.3	110.1	110.0
102.5°	137.4	137.4	137.6	137.6	137.4	137.2	137.0	136.9
105°	177.2	177.6	177.9	178.2	178.2	178.2	178.2	178.2
107.5°	220.3	220.5	220.5	220.2	219.4	218.6	217.8	217.0
110°	249.5	249.5	249.5	249.3	248.7	248.2	247.6	247.2





TEST NUMBER: P331816-927

CATALOG NUMBER: S122RDIW-S675D970U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	278.8	278.5	278.0	277.6	277.2	276.8	276.4	276.0
115°	323.8	323.6	323.4	323.1	322.6	322.0	321.5	320.9
117.5°	367.3	366.9	366.4	365.9	365.4	364.9	364.3	363.8
120°	396.4	396.4	396.4	396.1	395.5	395.1	394.5	394.0
122.5°	426.4	425.9	425.5	425.1	424.7	424.3	423.9	423.5
125°	470.7	470.2	469.7	469.3	469.1	469.0	468.7	468.6
127.5°	513.8	513.2	512.5	511.9	511.4	510.8	510.2	509.7
130°	543.3	543.0	542.6	542.0	541.3	540.6	539.9	539.2
132.5°	572.0	571.2	570.4	569.7	569.2	568.5	568.0	567.4
135°	614.3	614.1	613.9	613.5	613.0	612.4	612.0	611.4
137.5°	654.7	654.7	654.5	654.0	653.3	652.6	651.9	651.2
140°	682.0	682.0	682.0	681.7	681.0	680.2	679.5	678.8
142.5°	706.7	706.9	706.9	706.7	706.0	705.3	704.6	703.9
145°	744.2	744.3	744.5	744.3	743.5	742.8	742.1	741.4
147.5°	777.0	777.4	777.8	777.6	777.0	776.3	775.6	774.9
150°	797.8	798.4	798.9	798.9	798.4	797.8	797.3	796.8
152.5°	818.6	819.4	820.0	820.0	819.4	818.6	817.9	817.3
155°	845.1	846.0	846.8	847.0	846.5	846.0	845.4	844.9
157.5°	869.5	870.7	871.9	872.0	871.2	870.4	869.5	868.6
160°	883.9	885.0	886.1	886.3	885.6	884.9	884.2	883.4
162.5°	897.1	898.3	899.5	899.7	898.8	897.9	897.1	896.3
165°	914.0	915.2	916.5	916.6	915.8	914.9	914.0	913.1
167.5°	928.0	929.2	930.4	930.6	929.7	928.8	927.8	926.9
170°	935.6	936.9	938.2	938.3	937.2	936.1	935.0	934.0
172.5°	941.4	942.7	943.9	944.0	942.9	941.9	940.8	939.8
175°	947.7	949.0	950.1	950.3	949.2	948.2	947.1	946.0
177.5°	950.6	951.4	952.3	952.3	951.4	950.6	949.7	948.9
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8

(END OF REPORT)