

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: P331824-940

Luminaire Tested: **S122RDIW-S675D1440U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331824-940  
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-S675D1440U940-4F0-1E-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: 6529.5 lumens  
Efficiency: N/A  
Efficacy: 95.9 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

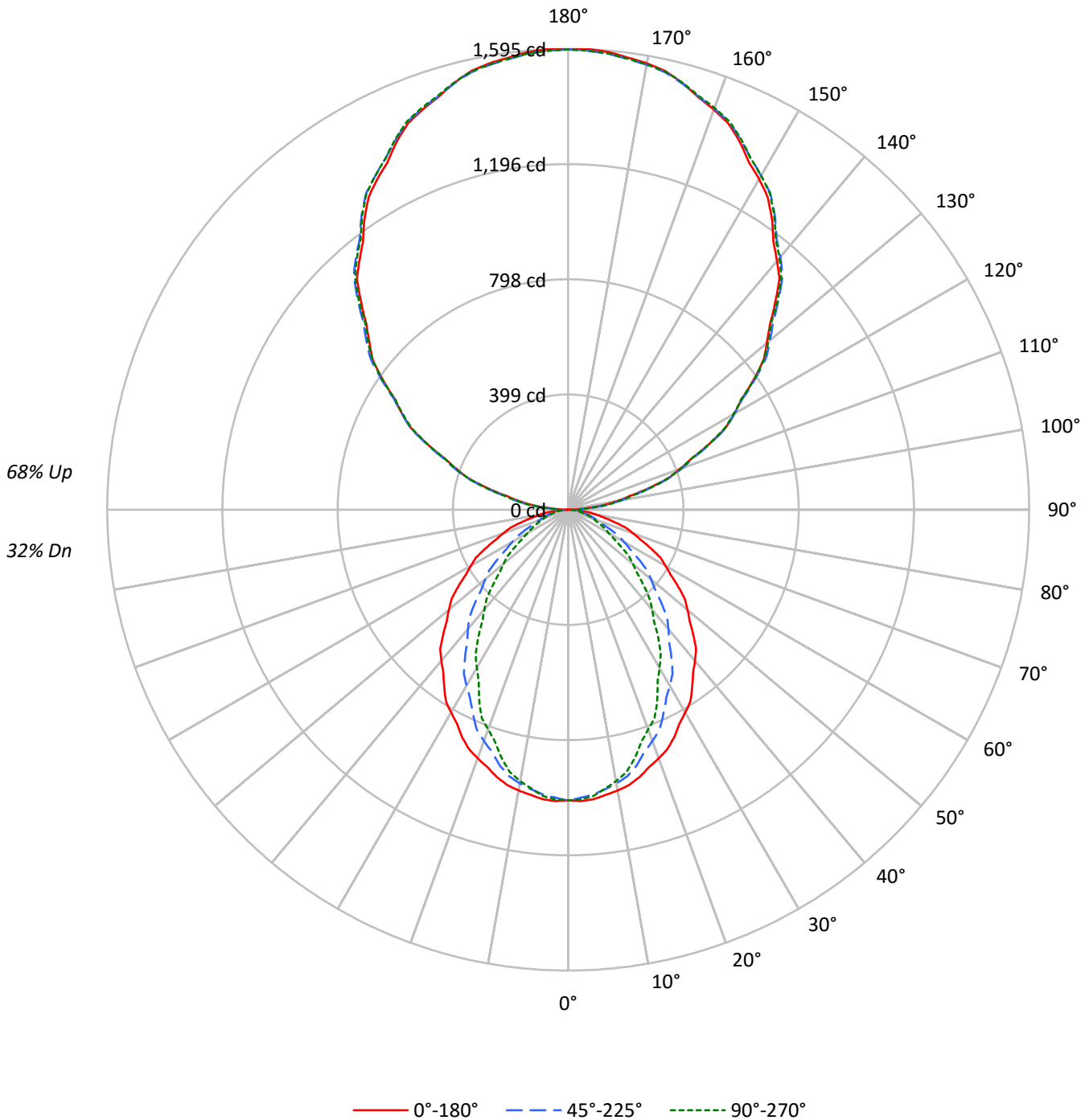
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	92	92	92	92	73	73	73	56	56	56	39	39	39	39	39	39	32
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	34	34	34	34	34	27
2	86	79	73	68	77	71	66	62	57	53	51	44	41	39	31	30	29	29	29	29	23
3	78	69	63	57	70	63	57	52	50	46	43	39	36	34	28	26	25	25	25	25	20
4	72	62	54	48	64	56	49	44	45	40	37	35	32	29	25	23	22	22	22	22	18
5	66	55	47	42	59	50	43	38	40	35	32	31	28	25	23	21	19	19	19	19	15
6	61	49	42	36	55	45	38	33	36	31	28	28	25	22	21	19	17	17	17	17	14
7	56	44	37	32	50	40	34	29	33	28	24	26	22	20	19	17	15	15	15	15	12
8	52	40	33	28	47	37	30	26	30	25	22	24	20	18	18	15	14	14	14	14	11
9	48	37	30	25	44	34	27	23	27	23	19	22	18	16	16	14	12	12	12	12	10
10	45	34	27	22	41	31	25	21	25	21	17	20	17	14	15	13	11	11	11	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	16239	16239	16239
5°	16302	16037	16126
10°	16179	15775	15641
15°	15992	15308	14867
20°	15735	14639	13904
25°	15471	13881	12975
30°	15105	13103	11779
35°	14747	12254	10730
40°	14389	11377	9516
45°	13967	10392	8416
50°	13536	9399	7340
55°	13095	8329	6303
60°	12581	7201	5231
65°	12000	6052	4768
70°	11301	4985	4381
75°	10449	4548	4086
80°	9224	4063	3719
85°	7243	3205	3205



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.2	1.4
10°-20°	258.5	4.0
20°-30°	363.0	5.6
30°-40°	395.9	6.1
40°-50°	364.0	5.6
50°-60°	285.9	4.4
60°-70°	186.4	2.9
70°-80°	96.1	1.5
80°-90°	31.3	0.5
90°-100°	100.9	1.5
100°-110°	313.5	4.8
110°-120°	535.9	8.2
120°-130°	704.7	10.8
130°-140°	791.0	12.1
140°-150°	775.6	11.9
150°-160°	650.5	10.0
160°-170°	431.5	6.6
170°-180°	150.8	2.3
0°-30°	715.7	11.0
0°-40°	1111.6	17.0
0°-60°	1761.4	27.0
0°-90°	2075.2	31.8
90°-120°	950.3	14.6
90°-150°	3221.6	49.3
90°-180°	4454.0	68.2
0°-180°	6529.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	1006	1001	990	997	995	95
15°	957	946	916	899	889	269
25°	868	838	779	743	728	399
35°	748	700	622	566	544	468
45°	612	549	455	393	369	472
55°	465	393	296	243	224	416
65°	314	240	158	129	125	311
75°	168	106	73	67	66	177
85°	39	21	17	17	17	46
90°	1	18	47	45	46	5
95°	70	83	86	86	83	80
105°	289	293	296	298	298	305
115°	538	545	543	542	538	532
125°	782	794	790	787	785	699
135°	1012	1026	1030	1028	1024	782
145°	1229	1238	1246	1247	1242	767
155°	1405	1409	1413	1419	1416	646
165°	1528	1527	1527	1536	1530	431
175°	1590	1586	1584	1592	1585	151
180°	1593	1593	1593	1593	1593	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8
2.5°	1009.5	1008.7	1007.9	1007.1	1006.3	1005.0	1003.2	1001.4	999.7	997.9	999.5
5°	1005.8	1004.9	1003.9	1002.8	1001.8	1000.1	997.4	994.8	992.1	989.5	991.3
7.5°	995.5	994.3	993.0	991.8	990.5	988.3	985.3	982.2	979.1	976.1	976.5
10°	986.8	985.3	983.9	982.5	981.1	978.4	974.3	970.3	966.3	962.2	961.6
12.5°	975.8	974.1	972.3	970.6	968.8	965.5	960.3	955.1	949.9	944.7	943.6
15°	956.7	954.5	952.3	950.0	947.8	943.3	936.4	929.5	922.7	915.8	912.0
17.5°	933.3	929.9	926.5	923.0	919.6	913.6	904.7	895.9	887.1	878.2	873.7
20°	915.8	911.7	907.7	903.7	899.6	892.5	882.3	872.3	862.2	852.0	846.9
22.5°	896.8	892.3	887.8	883.2	878.7	870.8	859.3	847.9	836.5	825.1	818.6
25°	868.4	861.9	855.5	849.0	842.6	832.6	819.3	805.9	792.6	779.2	770.9
27.5°	834.2	827.2	820.1	813.1	806.0	795.0	780.0	764.9	749.8	734.8	725.1
30°	810.2	802.5	794.8	787.1	779.4	767.5	751.3	735.1	718.9	702.8	692.4
32.5°	786.8	777.8	768.9	759.9	750.9	738.2	721.7	705.2	688.7	672.2	660.4
35°	748.2	738.0	727.6	717.3	707.0	692.9	675.1	657.4	639.5	621.7	608.9
37.5°	709.7	698.3	687.0	675.6	664.3	649.2	630.3	611.3	592.3	573.3	559.3
40°	682.7	670.6	658.4	646.3	634.2	618.3	598.7	579.1	559.5	539.8	525.5
42.5°	655.1	642.3	629.5	616.7	604.0	587.4	567.1	546.9	526.6	506.3	491.4
45°	611.7	598.2	584.6	571.1	557.5	540.1	518.9	497.7	476.4	455.1	440.8
47.5°	569.4	555.1	540.7	526.4	512.0	493.9	472.0	450.0	428.1	406.2	391.9
50°	538.9	524.5	510.1	495.8	481.4	463.2	440.9	418.7	396.4	374.2	360.2
52.5°	509.1	494.0	479.0	464.0	449.0	430.6	408.8	387.1	365.3	343.6	330.1
55°	465.2	449.4	433.6	417.9	402.1	383.3	361.4	339.6	317.7	295.9	283.7
57.5°	420.2	404.0	387.8	371.7	355.4	336.9	315.8	294.9	273.8	252.9	241.7
60°	389.6	373.4	357.2	341.1	324.9	306.4	285.5	264.7	243.9	223.0	212.7
62.5°	359.7	343.6	327.3	311.2	295.0	277.0	257.2	237.3	217.4	197.5	187.7
65°	314.1	297.7	281.2	264.9	248.5	231.2	213.0	194.8	176.6	158.4	151.5
67.5°	270.0	253.7	237.5	221.2	204.9	188.6	172.2	155.9	139.5	123.1	119.9
70°	239.4	223.6	207.9	192.1	176.3	161.4	147.5	133.5	119.6	105.6	103.5
72.5°	210.3	195.1	180.0	164.9	149.7	136.6	125.4	114.1	103.0	91.8	90.1
75°	167.5	153.4	139.2	125.0	110.8	100.3	93.5	86.6	79.7	72.9	71.4
77.5°	125.5	113.0	100.6	88.2	75.8	67.9	64.6	61.3	58.0	54.7	53.8
80°	99.2	88.9	78.6	68.3	58.0	51.8	49.8	47.7	45.7	43.7	42.9
82.5°	75.2	67.1	59.1	51.0	43.0	38.3	36.9	35.5	34.2	32.8	32.3
85°	39.1	34.9	30.7	26.4	22.1	19.7	19.1	18.5	17.9	17.3	17.3
87.5°	11.9	11.3	10.8	10.2	9.6	10.0	11.3	12.6	13.9	15.2	15.0
90°	1.3	4.9	8.5	12.1	15.7	20.8	27.4	33.9	40.5	47.1	46.5
92.5°	23.9	26.6	29.2	31.8	34.4	36.6	38.1	39.7	41.2	42.7	42.9
95°	69.9	72.9	75.9	78.8	81.9	83.6	84.3	84.8	85.4	86.1	86.1
97.5°	127.7	130.4	133.0	135.6	138.2	140.1	141.2	142.4	143.5	144.6	144.6
100°	170.8	173.1	175.5	177.9	180.3	181.9	182.8	183.7	184.6	185.5	185.5
102.5°	215.9	217.8	219.7	221.6	223.6	225.1	226.2	227.3	228.5	229.6	229.9
105°	289.0	289.9	290.8	291.7	292.6	293.4	294.0	294.5	295.2	295.8	296.3
107.5°	362.7	364.0	365.3	366.7	367.9	368.6	368.6	368.6	368.6	368.6	368.8
110°	410.0	411.8	413.6	415.4	417.1	418.1	418.1	418.1	418.1	418.1	418.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	461.6	463.4	465.2	467.0	468.8	469.6	469.3	469.1	468.9	468.6	467.9
115°	537.7	539.5	541.3	543.1	544.9	545.5	544.9	544.3	543.7	543.1	542.8
117.5°	613.6	615.9	618.3	620.7	623.1	623.5	621.8	620.1	618.4	616.8	616.1
120°	664.1	666.5	668.9	671.3	673.7	673.7	671.3	668.9	666.5	664.1	664.1
122.5°	710.3	713.2	716.0	718.9	721.8	722.4	720.8	719.1	717.4	715.7	715.0
125°	782.4	785.1	787.7	790.4	793.2	794.1	793.2	792.3	791.4	790.4	789.5
127.5°	852.6	856.0	859.3	862.8	866.2	867.4	866.3	865.2	864.2	863.1	861.9
130°	896.6	900.5	904.5	908.3	912.2	913.8	913.2	912.7	912.0	911.4	910.9
132.5°	946.1	949.3	952.4	955.6	958.8	960.5	960.6	960.6	960.8	960.9	959.6
135°	1012.3	1015.6	1018.9	1022.1	1025.4	1027.3	1028.0	1028.6	1029.1	1029.7	1029.5
137.5°	1081.9	1084.6	1087.3	1089.9	1092.6	1094.4	1095.2	1095.9	1096.7	1097.5	1097.3
140°	1123.8	1126.5	1129.3	1131.9	1134.6	1136.7	1138.2	1139.7	1141.2	1142.6	1142.6
142.5°	1166.9	1169.6	1172.2	1174.9	1177.6	1179.5	1180.4	1181.5	1182.5	1183.6	1183.7
145°	1228.7	1230.8	1232.9	1234.9	1237.1	1239.0	1240.8	1242.6	1244.4	1246.2	1246.4
147.5°	1283.8	1286.3	1288.8	1291.4	1293.9	1295.7	1296.9	1298.1	1299.3	1300.5	1301.2
150°	1321.4	1323.2	1325.1	1326.9	1328.6	1330.1	1331.3	1332.5	1333.7	1334.9	1335.8
152.5°	1354.8	1356.6	1358.3	1360.1	1362.0	1363.6	1365.0	1366.5	1367.9	1369.3	1370.5
155°	1404.8	1405.7	1406.6	1407.5	1408.4	1409.3	1410.2	1411.0	1411.9	1412.8	1414.3
157.5°	1447.5	1448.1	1448.8	1449.4	1449.9	1450.5	1451.1	1451.6	1452.2	1452.7	1454.6
160°	1473.4	1474.0	1474.5	1475.2	1475.8	1476.2	1476.5	1476.8	1477.1	1477.4	1479.2
162.5°	1497.0	1497.2	1497.3	1497.4	1497.5	1497.7	1498.0	1498.3	1498.6	1498.9	1500.9
165°	1528.5	1528.2	1527.9	1527.6	1527.3	1527.1	1527.1	1527.1	1527.1	1527.1	1529.2
167.5°	1554.8	1553.9	1553.0	1552.1	1551.2	1550.8	1550.7	1550.7	1550.6	1550.5	1552.6
170°	1568.8	1567.9	1567.0	1566.1	1565.2	1564.6	1564.3	1564.1	1563.7	1563.4	1565.5
172.5°	1578.5	1577.6	1576.7	1575.8	1574.9	1574.3	1574.0	1573.7	1573.4	1573.1	1575.2
175°	1590.3	1589.4	1588.5	1587.6	1586.7	1586.0	1585.4	1584.7	1584.2	1583.6	1585.7
177.5°	1595.2	1594.5	1593.8	1593.0	1592.3	1591.7	1591.2	1590.7	1590.3	1589.7	1591.2
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8	1005.8
2.5°	1001.1	1002.7	1004.3	1005.0	1004.7	1004.3	1004.1	1003.7
5°	993.1	995.0	996.8	997.4	996.8	996.1	995.6	995.0
7.5°	977.0	977.6	978.1	977.9	976.8	975.8	974.7	973.7
10°	961.0	960.4	959.7	958.9	957.6	956.4	955.2	954.0
12.5°	942.5	941.5	940.3	938.8	936.7	934.8	932.7	930.7
15°	908.1	904.2	900.4	897.4	895.5	893.4	891.4	889.4
17.5°	869.2	864.5	860.0	856.0	852.5	849.0	845.5	842.0
20°	842.0	836.9	831.8	827.1	822.6	818.1	813.7	809.2
22.5°	812.1	805.6	799.1	794.2	790.8	787.5	784.2	780.9
25°	762.6	754.3	746.0	740.4	737.4	734.3	731.3	728.3
27.5°	715.4	705.8	696.2	688.8	684.0	679.2	674.4	669.6
30°	682.2	671.8	661.5	653.6	648.1	642.7	637.2	631.8
32.5°	648.6	636.9	625.1	616.6	611.4	606.4	601.2	596.1
35°	596.3	583.5	570.8	562.1	557.7	553.2	548.8	544.4
37.5°	545.2	531.2	517.2	507.6	502.5	497.4	492.3	487.2
40°	511.0	496.7	482.3	472.5	467.3	462.0	456.7	451.5
42.5°	476.6	461.7	446.9	436.9	431.9	426.8	421.7	416.5
45°	426.4	412.1	397.7	388.1	383.3	378.4	373.5	368.6
47.5°	377.6	363.4	349.0	339.7	335.3	330.9	326.5	322.1
50°	346.3	332.3	318.3	309.2	305.0	300.7	296.5	292.2
52.5°	316.6	303.1	289.6	281.0	277.1	273.1	269.2	265.3
55°	271.6	259.4	247.3	239.3	235.5	231.6	227.7	223.9
57.5°	230.6	219.5	208.4	201.2	198.0	194.7	191.5	188.2
60°	202.4	192.1	181.7	175.0	171.7	168.5	165.2	162.0
62.5°	177.9	168.0	158.2	152.3	150.3	148.5	146.5	144.5
65°	144.6	137.8	130.9	127.2	126.5	125.9	125.3	124.8
67.5°	116.7	113.6	110.5	108.5	107.9	107.3	106.6	105.9
70°	101.6	99.5	97.5	96.1	95.2	94.4	93.6	92.8
72.5°	88.4	86.7	85.0	83.9	83.4	82.9	82.4	81.9
75°	70.0	68.6	67.1	66.3	66.2	66.0	65.7	65.5
77.5°	53.0	52.2	51.4	50.8	50.5	50.2	49.8	49.5
80°	42.1	41.3	40.5	40.0	40.0	40.0	40.0	40.0
82.5°	31.8	31.3	30.9	30.6	30.6	30.6	30.6	30.6
85°	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3
87.5°	14.7	14.4	14.1	14.0	14.1	14.1	14.2	14.3
90°	45.8	45.3	44.7	44.5	44.9	45.1	45.4	45.7
92.5°	43.0	43.1	43.2	43.3	43.3	43.4	43.5	43.5
95°	86.1	86.1	86.1	85.7	85.2	84.5	83.9	83.4
97.5°	144.6	144.6	144.6	144.6	144.5	144.5	144.5	144.4
100°	185.5	185.5	185.5	185.4	185.0	184.8	184.5	184.1
102.5°	230.1	230.3	230.6	230.5	230.2	230.0	229.6	229.3
105°	296.9	297.6	298.1	298.5	298.5	298.5	298.5	298.5
107.5°	369.1	369.3	369.5	369.0	367.7	366.2	364.9	363.5
110°	418.1	418.1	418.1	417.6	416.7	415.8	414.9	414.0





TEST NUMBER: P331824-940

CATALOG NUMBER: S122RDIW-S675D1440U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	467.2	466.5	465.7	465.0	464.4	463.8	463.1	462.4
115°	542.5	542.2	541.9	541.3	540.4	539.5	538.6	537.7
117.5°	615.4	614.7	613.9	613.1	612.2	611.3	610.4	609.5
120°	664.1	664.1	664.1	663.6	662.7	661.8	660.9	660.0
122.5°	714.3	713.5	712.8	712.1	711.5	710.9	710.2	709.5
125°	788.6	787.7	786.8	786.3	786.0	785.7	785.4	785.1
127.5°	860.9	859.8	858.7	857.7	856.8	855.8	854.9	853.9
130°	910.3	909.6	909.0	908.1	907.0	905.8	904.6	903.4
132.5°	958.3	957.0	955.6	954.5	953.6	952.6	951.6	950.7
135°	1029.1	1028.9	1028.6	1028.0	1027.1	1026.2	1025.3	1024.4
137.5°	1097.0	1096.8	1096.5	1095.8	1094.7	1093.4	1092.3	1091.0
140°	1142.6	1142.6	1142.6	1142.1	1140.9	1139.7	1138.4	1137.3
142.5°	1184.0	1184.3	1184.5	1184.0	1182.9	1181.6	1180.4	1179.2
145°	1246.8	1247.1	1247.3	1246.9	1245.7	1244.6	1243.3	1242.2
147.5°	1301.8	1302.4	1303.1	1302.9	1301.7	1300.6	1299.5	1298.3
150°	1336.7	1337.6	1338.5	1338.5	1337.6	1336.7	1335.8	1334.9
152.5°	1371.5	1372.7	1373.9	1373.9	1372.7	1371.5	1370.5	1369.3
155°	1415.9	1417.4	1418.8	1419.2	1418.3	1417.4	1416.5	1415.6
157.5°	1456.7	1458.7	1460.8	1461.1	1459.6	1458.2	1456.8	1455.4
160°	1481.0	1482.7	1484.5	1484.9	1483.6	1482.5	1481.3	1480.1
162.5°	1503.0	1505.0	1507.0	1507.3	1505.9	1504.5	1503.1	1501.6
165°	1531.3	1533.4	1535.5	1535.8	1534.3	1532.9	1531.3	1529.8
167.5°	1554.7	1556.8	1558.9	1559.2	1557.6	1556.0	1554.5	1552.9
170°	1567.6	1569.7	1571.8	1571.9	1570.1	1568.3	1566.6	1564.8
172.5°	1577.3	1579.4	1581.4	1581.6	1579.8	1578.1	1576.3	1574.5
175°	1587.8	1589.8	1592.0	1592.1	1590.3	1588.5	1586.7	1584.9
177.5°	1592.7	1594.1	1595.5	1595.5	1594.1	1592.7	1591.2	1589.7
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0

(END OF REPORT)