

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: P332804-927

Luminaire Tested: **S124DIW-S795D1560U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332804-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIW-S795D1560U927-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6988.2 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

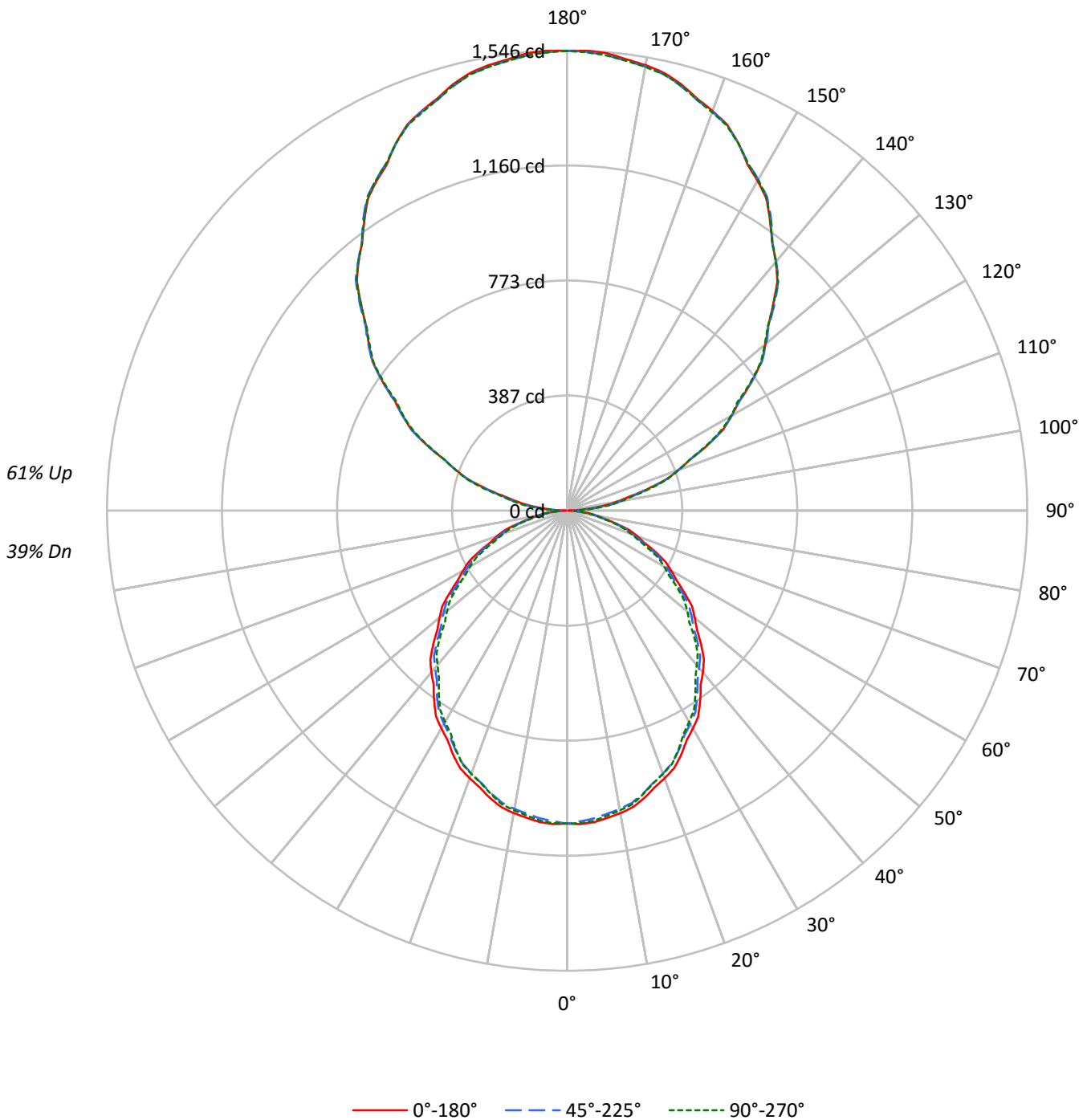
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	84	86	83	79	77	67	65	63	53	52	50	40	39	38	32
2	87	79	73	68	78	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	71	64	57	52	52	48	44	41	38	36	31	29	28	23
4	72	62	54	48	65	56	50	44	46	41	37	37	33	30	28	26	24	20
5	66	55	47	41	60	50	43	38	41	36	32	33	29	26	25	23	21	17
6	61	49	41	35	55	45	38	33	37	32	28	30	26	23	23	20	18	15
7	56	44	36	31	51	41	34	29	34	28	25	27	23	20	21	18	16	13
8	52	40	33	27	47	37	30	25	31	25	22	25	21	18	19	16	14	12
9	49	37	29	24	44	34	27	23	28	23	19	23	19	16	18	15	13	11
10	45	33	26	22	41	31	24	20	26	21	17	21	17	15	16	14	12	10

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

	0°	45°	90°
0°	8490	8490	8490
5°	8515	8413	8474
10°	8461	8344	8385
15°	8359	8226	8247
20°	8223	8079	8086
25°	8068	7911	7888
30°	7879	7713	7643
35°	7681	7508	7407
40°	7477	7273	7140
45°	7263	7042	6907
50°	7027	6836	6625
55°	6773	6570	6356
60°	6516	6273	6082
65°	6229	5989	5746
70°	5908	5611	5391
75°	5415	5153	5022
80°	4816	4621	4505
85°	4215	4057	3974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.0	1.4
10°-20°	279.0	4.0
20°-30°	410.7	5.9
30°-40°	477.4	6.8
40°-50°	477.5	6.8
50°-60°	417.6	6.0
60°-70°	310.2	4.4
70°-80°	176.2	2.5
80°-90°	55.5	0.8
90°-100°	101.9	1.5
100°-110°	301.8	4.3
110°-120°	512.2	7.3
120°-130°	675.4	9.7
130°-140°	758.5	10.9
140°-150°	745.3	10.7
150°-160°	626.9	9.0
160°-170°	417.1	6.0
170°-180°	146.1	2.1
0°-30°	788.7	11.3
0°-40°	1266.2	18.1
0°-60°	2161.3	30.9
0°-90°	2703.2	38.7
90°-120°	915.8	13.1
90°-150°	3095.0	44.3
90°-180°	4285.0	61.3
0°-180°	6988.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1051	1047	1038	1047	1046	100
15°	1000	996	984	989	987	282
25°	906	900	888	889	886	417
35°	779	773	762	756	752	487
45°	636	630	617	608	605	490
55°	481	478	467	457	452	431
65°	326	322	314	305	301	323
75°	174	169	165	162	161	184
85°	46	45	44	44	43	50
90°	4	17	26	33	36	7
95°	72	82	91	94	94	80
105°	278	280	284	288	291	295
115°	521	521	518	517	516	513
125°	758	758	757	755	752	676
135°	978	985	986	983	980	757
145°	1188	1193	1194	1193	1190	743
155°	1362	1362	1360	1365	1360	626
165°	1482	1479	1476	1483	1479	418
175°	1542	1536	1535	1542	1535	146
180°	1544	1544	1544	1544	1544	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1054.3	1053.8	1053.4	1053.0	1052.5	1051.5	1049.8	1048.1	1046.5	1044.9	1046.3
5°	1050.8	1050.0	1049.2	1048.5	1047.7	1046.3	1044.3	1042.2	1040.1	1038.1	1040.1
7.5°	1041.0	1040.2	1039.5	1038.7	1038.0	1036.5	1034.2	1031.9	1029.6	1027.3	1029.0
10°	1032.2	1031.5	1030.7	1030.0	1029.2	1027.6	1025.2	1022.8	1020.3	1017.9	1019.4
12.5°	1020.7	1020.0	1019.2	1018.5	1017.8	1016.1	1013.5	1010.9	1008.4	1005.8	1007.4
15°	1000.2	999.4	998.7	997.9	997.2	995.5	992.6	989.8	987.0	984.2	985.3
17.5°	975.4	974.5	973.5	972.6	971.7	969.9	967.3	964.6	961.9	959.3	960.0
20°	957.2	956.2	955.4	954.4	953.5	951.6	948.8	945.9	943.2	940.4	941.0
22.5°	937.7	936.4	935.2	934.0	932.7	930.7	927.9	925.1	922.3	919.5	920.5
25°	905.8	904.5	903.2	901.9	900.6	898.6	896.0	893.3	890.7	888.1	888.3
27.5°	869.4	868.1	866.7	865.4	864.0	862.1	859.7	857.3	854.8	852.4	851.9
30°	845.2	843.7	842.2	840.7	839.2	837.2	834.7	832.3	829.9	827.4	826.7
32.5°	819.5	818.2	816.8	815.5	814.1	812.1	809.6	807.0	804.5	801.8	801.0
35°	779.4	778.1	776.8	775.5	774.2	772.2	769.6	767.0	764.4	761.8	760.4
37.5°	737.1	735.9	734.7	733.6	732.3	730.3	727.5	724.7	721.9	719.1	717.6
40°	709.5	708.0	706.5	705.0	703.5	701.3	698.5	695.7	692.9	690.1	688.2
42.5°	679.9	678.9	678.0	677.2	676.2	674.2	671.1	668.0	664.9	661.8	659.7
45°	636.2	634.9	633.6	632.2	631.0	628.8	625.8	622.8	619.8	616.8	614.7
47.5°	590.5	589.6	588.7	587.8	586.9	585.1	582.3	579.6	576.8	574.0	571.6
50°	559.5	558.7	558.0	557.2	556.5	554.8	552.2	549.6	546.9	544.3	541.7
52.5°	529.2	528.3	527.4	526.5	525.5	523.7	520.9	518.2	515.4	512.6	510.3
55°	481.2	480.5	480.0	479.4	478.9	477.3	474.7	472.1	469.4	466.8	464.5
57.5°	435.3	434.7	434.0	433.4	432.8	431.1	428.6	426.0	423.4	420.8	418.7
60°	403.6	402.7	401.7	400.8	399.9	398.2	395.8	393.3	390.9	388.5	386.7
62.5°	372.6	371.9	371.1	370.3	369.5	367.8	365.2	362.6	360.0	357.4	355.9
65°	326.1	325.2	324.2	323.3	322.3	320.9	319.1	317.2	315.3	313.5	311.6
67.5°	279.2	278.4	277.5	276.6	275.8	274.5	272.7	270.8	269.1	267.3	265.5
70°	250.3	249.0	247.6	246.3	245.0	243.6	242.1	240.6	239.1	237.7	236.1
72.5°	219.3	217.9	216.7	215.3	214.0	212.8	211.6	210.3	209.1	207.9	206.8
75°	173.6	172.6	171.7	170.8	169.8	168.9	167.9	167.0	166.1	165.2	164.4
77.5°	129.9	129.5	129.1	128.7	128.3	127.7	126.8	126.0	125.2	124.4	124.1
80°	103.6	103.1	102.5	102.0	101.4	100.9	100.5	100.2	99.8	99.4	99.0
82.5°	78.0	77.8	77.5	77.2	77.0	76.8	76.8	76.7	76.6	76.5	76.3
85°	45.5	45.5	45.5	45.5	45.5	45.3	44.9	44.6	44.2	43.8	43.8
87.5°	18.2	18.7	19.1	19.6	20.0	20.4	20.6	20.9	21.2	21.5	21.8
90°	3.6	6.5	9.4	12.4	15.3	17.8	19.9	22.0	24.2	26.3	27.9
92.5°	25.6	28.9	32.2	35.6	39.0	41.4	42.9	44.4	45.8	47.3	48.2
95°	71.7	74.1	76.4	78.8	81.2	83.3	85.2	87.1	89.0	90.8	91.6
97.5°	125.2	127.1	129.0	130.9	132.8	134.9	137.0	139.2	141.4	143.5	144.5
100°	167.2	168.3	169.4	170.4	171.5	173.2	175.6	178.0	180.4	182.8	183.3
102.5°	211.2	211.6	212.1	212.5	212.9	214.2	216.3	218.6	220.7	222.9	223.6
105°	278.3	278.6	278.8	279.1	279.4	280.0	281.1	282.2	283.2	284.3	285.1
107.5°	348.8	349.1	349.4	349.7	350.1	350.3	350.5	350.6	350.8	350.9	351.6
110°	396.6	397.1	397.6	398.2	398.7	398.9	398.5	398.3	398.0	397.8	397.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	446.2	446.4	446.5	446.6	446.7	446.5	446.0	445.5	445.0	444.6	444.5
115°	520.8	520.8	520.8	520.8	520.8	520.5	520.0	519.4	519.0	518.4	518.2
117.5°	591.0	591.2	591.4	591.7	591.9	591.8	591.4	591.0	590.7	590.3	589.4
120°	637.9	638.9	640.0	641.0	642.1	642.2	641.4	640.6	639.8	639.1	637.7
122.5°	686.6	687.0	687.5	687.9	688.2	688.3	687.9	687.5	687.2	686.8	686.0
125°	758.5	758.5	758.5	758.5	758.5	758.4	758.1	757.8	757.6	757.3	756.8
127.5°	823.7	824.5	825.3	826.1	826.9	827.1	826.6	826.2	825.9	825.4	824.8
130°	869.6	870.4	871.2	872.0	872.7	873.1	873.1	873.1	873.1	873.1	872.7
132.5°	916.4	917.0	917.6	918.1	918.8	918.9	918.7	918.5	918.3	918.1	917.6
135°	978.3	979.9	981.4	983.1	984.7	985.5	985.5	985.5	985.5	985.5	984.9
137.5°	1045.7	1046.4	1047.1	1047.9	1048.6	1049.2	1049.6	1050.0	1050.5	1050.9	1050.2
140°	1090.6	1091.1	1091.6	1092.2	1092.7	1093.0	1093.0	1093.0	1093.0	1093.0	1092.7
142.5°	1131.6	1132.2	1132.7	1133.2	1133.8	1133.9	1133.7	1133.5	1133.3	1133.1	1133.1
145°	1188.5	1189.5	1190.6	1191.7	1192.8	1193.4	1193.7	1194.0	1194.2	1194.5	1194.2
147.5°	1244.9	1246.2	1247.4	1248.7	1250.0	1250.5	1250.3	1250.1	1249.9	1249.7	1249.4
150°	1279.3	1280.3	1281.4	1282.5	1283.6	1284.0	1284.0	1284.0	1284.0	1284.0	1284.0
152.5°	1311.8	1312.4	1313.0	1313.7	1314.3	1314.8	1314.9	1315.2	1315.4	1315.6	1316.2
155°	1361.7	1361.7	1361.7	1361.7	1361.7	1361.6	1361.3	1361.0	1360.8	1360.5	1361.6
157.5°	1403.7	1403.3	1402.8	1402.3	1401.8	1401.6	1401.5	1401.4	1401.4	1401.4	1402.2
160°	1428.6	1428.3	1428.1	1427.8	1427.5	1427.3	1427.0	1426.7	1426.5	1426.2	1427.0
162.5°	1451.5	1450.9	1450.2	1449.5	1448.7	1448.3	1448.0	1447.8	1447.5	1447.2	1448.7
165°	1482.3	1481.5	1480.7	1480.0	1479.2	1478.5	1478.0	1477.4	1476.9	1476.4	1478.0
167.5°	1506.0	1504.9	1503.8	1502.7	1501.6	1501.0	1501.1	1501.1	1501.2	1501.3	1502.8
170°	1519.4	1518.1	1516.7	1515.4	1514.1	1513.5	1513.8	1514.1	1514.3	1514.6	1516.2
172.5°	1528.9	1527.8	1526.7	1525.6	1524.5	1523.9	1524.0	1524.1	1524.1	1524.2	1526.0
175°	1542.1	1540.7	1539.4	1538.1	1536.8	1536.0	1535.7	1535.4	1535.2	1534.9	1536.8
177.5°	1546.3	1545.3	1544.3	1543.2	1542.1	1541.6	1541.6	1541.6	1541.6	1541.6	1543.1
180°	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6	1051.6
2.5°	1047.8	1049.3	1050.8	1051.5	1051.4	1051.2	1051.1	1050.9
5°	1042.2	1044.3	1046.3	1047.2	1046.8	1046.5	1046.1	1045.7
7.5°	1030.6	1032.3	1033.9	1034.6	1034.4	1034.2	1034.0	1033.7
10°	1020.9	1022.4	1023.9	1024.5	1024.1	1023.7	1023.3	1022.9
12.5°	1009.1	1010.7	1012.3	1012.9	1012.4	1011.9	1011.3	1010.8
15°	986.4	987.5	988.6	989.0	988.4	987.9	987.3	986.7
17.5°	960.7	961.4	962.1	962.3	961.9	961.5	961.2	960.8
20°	941.5	942.1	942.6	942.7	942.3	942.0	941.6	941.2
22.5°	921.5	922.5	923.5	923.7	923.0	922.3	921.6	921.0
25°	888.5	888.7	888.9	888.6	887.9	887.1	886.4	885.6
27.5°	851.5	851.0	850.6	849.9	849.0	848.0	847.1	846.1
30°	825.9	825.2	824.4	823.6	822.7	821.7	820.8	819.9
32.5°	800.0	799.2	798.3	797.3	796.4	795.4	794.5	793.6
35°	759.1	757.8	756.5	755.3	754.4	753.5	752.6	751.6
37.5°	716.2	714.8	713.4	712.1	710.8	709.6	708.4	707.1
40°	686.3	684.5	682.6	681.2	680.2	679.4	678.4	677.5
42.5°	657.4	655.3	653.1	651.7	651.1	650.5	649.8	649.2
45°	612.7	610.6	608.6	607.3	606.7	606.1	605.5	605.0
47.5°	569.3	567.0	564.7	562.8	561.4	560.0	558.6	557.1
50°	539.1	536.5	533.9	532.0	530.8	529.7	528.6	527.5
52.5°	508.0	505.6	503.4	501.5	500.1	498.7	497.3	495.8
55°	462.3	460.1	457.8	456.1	455.0	453.9	452.7	451.6
57.5°	416.5	414.4	412.3	410.7	409.6	408.4	407.4	406.3
60°	385.1	383.4	381.7	380.4	379.5	378.5	377.6	376.7
62.5°	354.3	352.8	351.3	350.1	349.1	348.2	347.3	346.3
65°	309.7	307.8	305.9	304.6	303.6	302.7	301.7	300.8
67.5°	263.7	261.9	260.1	259.0	258.8	258.6	258.3	258.0
70°	234.6	233.1	231.6	230.6	230.0	229.5	228.9	228.4
72.5°	205.6	204.4	203.2	202.3	201.7	201.1	200.6	200.0
75°	163.7	162.9	162.2	161.7	161.5	161.3	161.1	161.0
77.5°	123.9	123.7	123.5	123.1	122.6	122.2	121.7	121.2
80°	98.7	98.3	97.9	97.7	97.4	97.3	97.1	96.9
82.5°	76.0	75.8	75.6	75.4	75.3	75.0	74.9	74.6
85°	43.8	43.8	43.8	43.7	43.6	43.3	43.2	42.9
87.5°	22.1	22.4	22.7	22.9	23.1	23.1	23.2	23.4
90°	29.5	31.1	32.6	33.7	34.2	34.8	35.3	35.8
92.5°	49.2	50.1	51.1	51.7	52.0	52.4	52.7	53.0
95°	92.4	93.2	94.0	94.3	94.3	94.3	94.3	94.3
97.5°	145.5	146.5	147.4	147.9	147.9	147.9	147.9	147.9
100°	183.8	184.3	184.9	185.1	185.1	185.1	185.1	185.1
102.5°	224.3	225.1	225.9	226.3	226.6	226.8	227.0	227.2
105°	285.9	286.7	287.5	288.3	289.1	289.9	290.7	291.4
107.5°	352.4	353.2	353.9	354.3	354.2	354.2	354.1	354.0
110°	396.7	396.2	395.6	395.8	396.6	397.4	398.2	398.9





TEST NUMBER: P332804-927

CATALOG NUMBER: S124DIW-S795D1560U927-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	444.3	444.3	444.2	444.2	444.3	444.5	444.7	444.8
115°	517.8	517.6	517.4	517.1	516.8	516.6	516.3	516.0
117.5°	588.5	587.6	586.7	586.0	585.4	584.9	584.4	583.8
120°	636.4	635.1	633.7	633.3	633.9	634.4	634.9	635.5
122.5°	685.0	684.1	683.3	682.3	681.4	680.4	679.5	678.5
125°	756.2	755.7	755.2	754.6	754.1	753.6	753.0	752.5
127.5°	824.3	823.8	823.2	822.8	822.4	822.0	821.5	821.1
130°	872.1	871.6	871.0	870.2	869.2	868.2	867.0	866.0
132.5°	917.0	916.5	915.9	915.4	915.0	914.7	914.2	913.8
135°	984.4	983.9	983.3	982.6	981.8	981.0	980.2	979.5
137.5°	1049.6	1048.8	1048.1	1047.9	1048.1	1048.2	1048.4	1048.5
140°	1092.4	1092.2	1091.9	1091.6	1091.4	1091.1	1090.8	1090.6
142.5°	1133.0	1132.9	1132.9	1132.8	1132.7	1132.7	1132.7	1132.6
145°	1194.0	1193.7	1193.4	1192.9	1192.1	1191.3	1190.5	1189.7
147.5°	1249.3	1249.0	1248.8	1248.6	1248.3	1248.1	1247.8	1247.5
150°	1284.0	1284.0	1284.0	1284.0	1283.7	1283.4	1283.2	1282.9
152.5°	1316.8	1317.5	1318.1	1318.1	1317.4	1316.8	1316.1	1315.3
155°	1362.6	1363.7	1364.8	1364.8	1363.7	1362.6	1361.6	1360.5
157.5°	1403.0	1403.7	1404.5	1404.5	1403.6	1402.7	1401.8	1400.9
160°	1427.8	1428.6	1429.4	1429.1	1427.8	1426.5	1425.1	1423.8
162.5°	1450.1	1451.5	1452.9	1453.0	1451.7	1450.4	1449.1	1447.7
165°	1479.6	1481.1	1482.7	1483.0	1481.9	1480.9	1479.8	1478.8
167.5°	1504.4	1506.0	1507.6	1507.6	1505.9	1504.3	1502.6	1500.9
170°	1517.8	1519.4	1521.0	1520.8	1519.0	1517.1	1515.3	1513.4
172.5°	1527.8	1529.5	1531.4	1531.4	1529.5	1527.6	1525.7	1523.9
175°	1538.7	1540.5	1542.4	1542.4	1540.5	1538.7	1536.8	1534.9
177.5°	1544.6	1546.0	1547.5	1547.4	1545.7	1544.0	1542.4	1540.6
180°	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4	1544.4

(END OF REPORT)