

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: P332798-930

Luminaire Tested: **S124DIW-S795D1340U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332798-930  
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-S795D1340U930-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6574.4 lumens  
Efficiency: N/A  
Efficacy: 107.1 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: General Diffuse

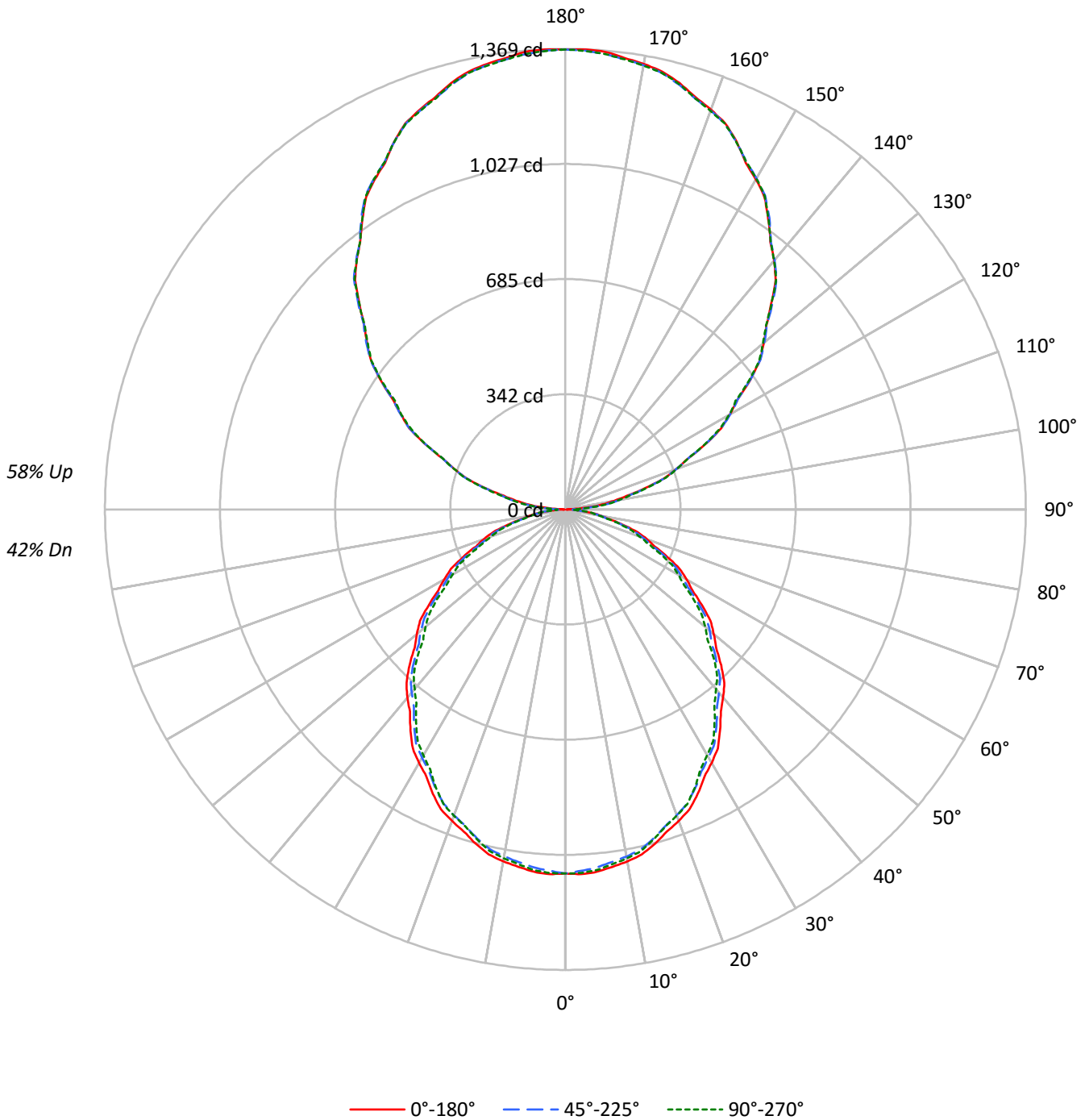
Input Watts (W): 61.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	96	92	88	84	88	84	81	78	69	67	65	56	54	53	43	42	41	36
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30
3	80	70	63	57	72	64	58	53	53	49	45	43	40	37	34	31	30	25
4	73	62	54	48	66	57	50	45	47	42	38	38	35	32	30	28	25	22
5	67	55	47	41	61	51	44	39	42	37	33	35	31	28	27	24	22	19
6	62	50	42	36	56	46	39	33	38	33	29	31	27	24	25	22	20	16
7	57	45	37	31	52	41	34	29	35	29	25	28	24	21	22	20	17	15
8	53	41	33	28	48	37	31	26	31	26	22	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	21	27	21	18	22	18	15	18	15	13	11

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

	0°	45°	90°
0°	8737	8737	8737
5°	8763	8658	8721
10°	8708	8588	8630
15°	8603	8466	8487
20°	8463	8314	8322
25°	8304	8141	8118
30°	8108	7938	7866
35°	7906	7727	7624
40°	7695	7484	7347
45°	7476	7247	7108
50°	7232	7036	6818
55°	6970	6763	6542
60°	6707	6455	6260
65°	6411	6162	5914
70°	6080	5773	5549
75°	5571	5303	5168
80°	4956	4756	4635
85°	4335	4177	4094



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.9	1.6
10°-20°	287.2	4.4
20°-30°	422.7	6.4
30°-40°	491.4	7.5
40°-50°	491.4	7.5
50°-60°	429.8	6.5
60°-70°	319.2	4.9
70°-80°	181.4	2.8
80°-90°	56.4	0.9
90°-100°	90.2	1.4
100°-110°	267.1	4.1
110°-120°	453.4	6.9
120°-130°	597.8	9.1
130°-140°	671.4	10.2
140°-150°	659.8	10.0
150°-160°	554.9	8.4
160°-170°	369.2	5.6
170°-180°	129.3	2.0
0°-30°	811.8	12.3
0°-40°	1303.1	19.8
0°-60°	2224.4	33.8
0°-90°	2781.4	42.3
90°-120°	810.7	12.3
90°-150°	2739.7	41.7
90°-180°	3793.0	57.7
0°-180°	6574.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1081	1078	1068	1077	1076	103
15°	1029	1025	1013	1018	1016	290
25°	932	926	914	915	911	429
35°	802	796	784	778	774	501
45°	655	648	635	626	623	505
55°	495	492	480	470	465	443
65°	336	331	323	314	310	332
75°	179	174	170	167	166	190
85°	47	47	45	45	44	52
90°	3	15	23	29	32	7
95°	63	73	80	83	84	71
105°	246	248	252	255	258	261
115°	461	461	459	458	457	454
125°	671	671	670	668	666	598
135°	866	872	872	870	867	670
145°	1052	1056	1057	1056	1053	658
155°	1205	1205	1204	1208	1204	554
165°	1312	1309	1307	1313	1309	370
175°	1365	1360	1359	1365	1359	130
180°	1367	1367	1367	1367	1367	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1085.1	1084.6	1084.1	1083.7	1083.2	1082.1	1080.4	1078.7	1077.0	1075.4	1076.8
5°	1081.4	1080.7	1079.9	1079.1	1078.3	1076.8	1074.7	1072.6	1070.5	1068.4	1070.5
7.5°	1071.4	1070.6	1069.8	1069.0	1068.3	1066.7	1064.4	1062.0	1059.6	1057.3	1059.0
10°	1062.3	1061.6	1060.8	1060.1	1059.2	1057.6	1055.1	1052.6	1050.1	1047.6	1049.1
12.5°	1050.5	1049.8	1049.0	1048.2	1047.5	1045.7	1043.1	1040.4	1037.8	1035.1	1036.8
15°	1029.4	1028.6	1027.8	1027.0	1026.3	1024.5	1021.6	1018.7	1015.8	1012.9	1014.1
17.5°	1003.9	1002.9	1001.9	1001.0	1000.0	998.2	995.5	992.7	989.9	987.2	988.0
20°	985.1	984.1	983.3	982.3	981.3	979.3	976.5	973.5	970.7	967.8	968.4
22.5°	965.1	963.8	962.5	961.2	959.9	957.9	955.0	952.1	949.2	946.3	947.4
25°	932.2	930.9	929.5	928.2	926.8	924.8	922.1	919.4	916.7	914.0	914.2
27.5°	894.8	893.4	892.0	890.6	889.2	887.3	884.8	882.3	879.8	877.3	876.8
30°	869.8	868.3	866.7	865.2	863.6	861.6	859.1	856.6	854.1	851.6	850.8
32.5°	843.4	842.0	840.7	839.3	837.9	835.8	833.2	830.5	827.9	825.2	824.3
35°	802.2	800.8	799.5	798.1	796.8	794.8	792.1	789.4	786.7	784.0	782.6
37.5°	758.6	757.4	756.2	755.0	753.7	751.6	748.8	745.8	743.0	740.0	738.6
40°	730.2	728.6	727.1	725.5	724.0	721.8	718.9	716.0	713.1	710.2	708.3
42.5°	699.7	698.7	697.8	696.9	695.9	693.9	690.7	687.5	684.3	681.1	678.9
45°	654.8	653.4	652.1	650.7	649.4	647.1	644.1	641.0	637.9	634.8	632.7
47.5°	607.7	606.8	605.9	605.0	604.1	602.2	599.3	596.5	593.6	590.8	588.3
50°	575.8	575.0	574.3	573.5	572.7	571.0	568.3	565.7	562.9	560.2	557.5
52.5°	544.6	543.7	542.7	541.8	540.9	539.0	536.1	533.3	530.4	527.6	525.2
55°	495.2	494.6	494.0	493.4	492.8	491.2	488.5	485.8	483.1	480.5	478.1
57.5°	448.0	447.4	446.7	446.1	445.4	443.7	441.1	438.4	435.8	433.1	430.9
60°	415.4	414.4	413.4	412.5	411.6	409.8	407.3	404.8	402.3	399.8	398.0
62.5°	383.5	382.7	381.9	381.1	380.3	378.5	375.9	373.2	370.6	367.9	366.3
65°	335.6	334.7	333.7	332.7	331.7	330.3	328.4	326.4	324.5	322.6	320.7
67.5°	287.4	286.5	285.6	284.7	283.9	282.5	280.6	278.8	277.0	275.1	273.2
70°	257.6	256.2	254.9	253.5	252.2	250.7	249.2	247.6	246.1	244.6	243.0
72.5°	225.7	224.3	223.0	221.6	220.2	219.0	217.8	216.5	215.2	214.0	212.8
75°	178.6	177.7	176.8	175.8	174.8	173.8	172.8	171.9	171.0	170.0	169.2
77.5°	133.7	133.3	132.9	132.5	132.0	131.4	130.5	129.7	128.8	128.0	127.8
80°	106.6	106.1	105.5	104.9	104.4	103.9	103.5	103.1	102.7	102.3	101.9
82.5°	80.3	80.1	79.7	79.5	79.2	79.1	79.0	78.9	78.8	78.8	78.5
85°	46.8	46.8	46.8	46.8	46.8	46.6	46.2	45.9	45.5	45.1	45.1
87.5°	18.7	19.0	19.4	19.7	20.1	20.4	20.6	20.9	21.1	21.3	21.6
90°	3.2	5.8	8.3	10.9	13.5	15.7	17.6	19.5	21.4	23.2	24.7
92.5°	22.7	25.6	28.5	31.5	34.5	36.6	37.9	39.2	40.5	41.9	42.7
95°	63.4	65.6	67.7	69.8	71.9	73.8	75.4	77.0	78.7	80.4	81.0
97.5°	110.8	112.5	114.2	115.9	117.6	119.4	121.3	123.3	125.1	127.1	127.9
100°	148.1	149.0	149.9	150.8	151.8	153.3	155.4	157.5	159.6	161.8	162.2
102.5°	186.9	187.4	187.7	188.1	188.4	189.6	191.5	193.5	195.3	197.3	198.0
105°	246.4	246.6	246.9	247.0	247.3	247.9	248.8	249.8	250.7	251.7	252.3
107.5°	308.8	309.0	309.3	309.6	309.9	310.1	310.2	310.4	310.5	310.6	311.3
110°	351.1	351.5	352.0	352.5	352.9	353.0	352.8	352.5	352.4	352.1	351.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	395.0	395.1	395.2	395.3	395.4	395.3	394.8	394.4	394.0	393.5	393.5
115°	461.0	461.0	461.0	461.0	461.0	460.8	460.3	459.8	459.3	458.9	458.7
117.5°	523.2	523.3	523.6	523.7	523.9	523.8	523.5	523.2	522.9	522.5	521.7
120°	564.6	565.6	566.5	567.4	568.3	568.5	567.8	567.1	566.4	565.7	564.5
122.5°	607.7	608.1	608.5	608.9	609.3	609.3	608.9	608.6	608.3	608.0	607.2
125°	671.4	671.4	671.4	671.4	671.4	671.3	671.1	670.8	670.6	670.3	669.8
127.5°	729.1	729.9	730.6	731.2	732.0	732.1	731.7	731.4	731.0	730.6	730.2
130°	769.7	770.5	771.2	771.8	772.6	772.9	772.9	772.9	772.9	772.9	772.4
132.5°	811.2	811.7	812.2	812.8	813.3	813.4	813.3	813.0	812.9	812.7	812.2
135°	865.9	867.4	868.8	870.2	871.6	872.3	872.3	872.3	872.3	872.3	871.9
137.5°	925.6	926.3	926.9	927.6	928.2	928.8	929.1	929.5	929.8	930.3	929.6
140°	965.4	965.8	966.3	966.8	967.3	967.4	967.4	967.4	967.4	967.4	967.3
142.5°	1001.8	1002.2	1002.7	1003.1	1003.6	1003.7	1003.6	1003.4	1003.2	1003.0	1003.0
145°	1052.1	1053.0	1053.9	1054.9	1055.8	1056.4	1056.6	1056.9	1057.1	1057.4	1057.1
147.5°	1102.0	1103.1	1104.2	1105.4	1106.4	1106.9	1106.8	1106.6	1106.4	1106.2	1106.0
150°	1132.5	1133.3	1134.3	1135.2	1136.2	1136.6	1136.6	1136.6	1136.6	1136.6	1136.6
152.5°	1161.1	1161.7	1162.3	1162.9	1163.4	1163.8	1164.0	1164.2	1164.4	1164.6	1165.1
155°	1205.3	1205.3	1205.3	1205.3	1205.3	1205.3	1205.0	1204.8	1204.5	1204.4	1205.3
157.5°	1242.6	1242.2	1241.8	1241.3	1240.9	1240.6	1240.6	1240.6	1240.6	1240.5	1241.2
160°	1264.6	1264.4	1264.1	1263.9	1263.6	1263.4	1263.1	1263.0	1262.7	1262.5	1263.1
162.5°	1284.9	1284.3	1283.7	1283.0	1282.5	1282.1	1281.8	1281.6	1281.3	1281.1	1282.4
165°	1312.1	1311.5	1310.8	1310.0	1309.4	1308.8	1308.3	1307.8	1307.3	1306.8	1308.3
167.5°	1333.1	1332.1	1331.1	1330.2	1329.2	1328.7	1328.8	1328.8	1328.9	1328.9	1330.3
170°	1344.9	1343.8	1342.6	1341.4	1340.3	1339.8	1340.0	1340.3	1340.5	1340.7	1342.1
172.5°	1353.4	1352.4	1351.4	1350.5	1349.5	1349.0	1349.1	1349.1	1349.2	1349.2	1350.8
175°	1365.1	1363.8	1362.7	1361.5	1360.3	1359.6	1359.4	1359.2	1358.9	1358.7	1360.3
177.5°	1368.8	1367.9	1366.9	1366.0	1365.1	1364.6	1364.6	1364.6	1364.6	1364.6	1366.0
180°	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1078.4	1079.9	1081.5	1082.2	1082.1	1081.9	1081.7	1081.6
5°	1072.6	1074.7	1076.8	1077.7	1077.3	1077.0	1076.6	1076.2
7.5°	1060.7	1062.4	1064.0	1064.8	1064.6	1064.4	1064.1	1063.9
10°	1050.7	1052.2	1053.8	1054.3	1053.9	1053.5	1053.2	1052.8
12.5°	1038.5	1040.2	1041.9	1042.4	1042.0	1041.4	1040.8	1040.3
15°	1015.2	1016.4	1017.5	1017.8	1017.2	1016.7	1016.1	1015.5
17.5°	988.7	989.4	990.2	990.3	989.9	989.5	989.2	988.8
20°	969.0	969.6	970.1	970.2	969.8	969.5	969.1	968.7
22.5°	948.4	949.4	950.5	950.6	949.9	949.3	948.5	947.9
25°	914.4	914.6	914.8	914.5	913.8	913.0	912.2	911.4
27.5°	876.4	875.9	875.4	874.7	873.8	872.8	871.8	870.8
30°	850.0	849.3	848.5	847.7	846.7	845.7	844.7	843.8
32.5°	823.4	822.5	821.6	820.6	819.6	818.6	817.7	816.8
35°	781.3	779.9	778.5	777.4	776.4	775.5	774.5	773.6
37.5°	737.1	735.6	734.3	732.9	731.6	730.3	729.0	727.7
40°	706.4	704.5	702.5	701.1	700.1	699.2	698.2	697.2
42.5°	676.6	674.4	672.1	670.7	670.1	669.4	668.8	668.1
45°	630.6	628.4	626.3	625.0	624.4	623.8	623.2	622.6
47.5°	586.0	583.6	581.1	579.3	577.8	576.3	574.9	573.4
50°	554.8	552.1	549.4	547.5	546.3	545.2	544.0	542.9
52.5°	522.9	520.4	518.0	516.2	514.7	513.2	511.8	510.3
55°	475.8	473.5	471.2	469.4	468.3	467.2	465.9	464.8
57.5°	428.7	426.5	424.3	422.7	421.5	420.4	419.3	418.2
60°	396.3	394.6	392.8	391.5	390.5	389.6	388.6	387.7
62.5°	364.7	363.1	361.6	360.3	359.3	358.3	357.4	356.4
65°	318.8	316.8	314.9	313.5	312.5	311.5	310.5	309.6
67.5°	271.4	269.5	267.7	266.6	266.4	266.1	265.8	265.5
70°	241.5	239.9	238.4	237.3	236.8	236.2	235.6	235.1
72.5°	211.6	210.3	209.1	208.2	207.6	207.0	206.4	205.9
75°	168.4	167.6	166.9	166.4	166.2	166.0	165.8	165.7
77.5°	127.5	127.3	127.1	126.7	126.2	125.7	125.2	124.7
80°	101.6	101.2	100.8	100.5	100.3	100.1	100.0	99.7
82.5°	78.3	78.0	77.8	77.6	77.5	77.2	77.0	76.8
85°	45.1	45.1	45.1	45.0	44.8	44.6	44.4	44.2
87.5°	21.9	22.2	22.4	22.6	22.7	22.8	22.9	23.0
90°	26.1	27.5	28.9	29.8	30.3	30.8	31.2	31.7
92.5°	43.5	44.4	45.2	45.8	46.1	46.4	46.6	47.0
95°	81.8	82.5	83.2	83.6	83.6	83.6	83.6	83.6
97.5°	128.8	129.6	130.4	130.9	130.9	130.9	130.9	130.9
100°	162.7	163.2	163.6	163.9	163.9	163.9	163.9	163.9
102.5°	198.6	199.3	199.9	200.3	200.6	200.7	200.9	201.1
105°	253.1	253.8	254.5	255.2	255.8	256.6	257.3	258.0
107.5°	311.9	312.6	313.3	313.6	313.6	313.5	313.5	313.4
110°	351.1	350.7	350.3	350.3	351.1	351.7	352.5	353.2





TEST NUMBER: P332798-930

CATALOG NUMBER: S124DIW-S795D1340U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	393.4	393.3	393.1	393.2	393.3	393.5	393.6	393.8
115°	458.4	458.2	458.0	457.7	457.5	457.2	457.0	456.8
117.5°	521.0	520.2	519.3	518.7	518.2	517.8	517.3	516.8
120°	563.4	562.1	561.0	560.6	561.1	561.6	562.1	562.5
122.5°	606.3	605.6	604.8	604.0	603.1	602.3	601.4	600.5
125°	669.4	669.0	668.5	668.0	667.6	667.1	666.6	666.1
127.5°	729.7	729.2	728.7	728.3	728.0	727.6	727.2	726.8
130°	772.0	771.5	771.0	770.4	769.4	768.4	767.5	766.5
132.5°	811.7	811.3	810.8	810.4	810.0	809.6	809.3	808.9
135°	871.4	870.9	870.4	869.8	869.1	868.5	867.7	867.0
137.5°	929.0	928.5	927.8	927.6	927.7	927.9	928.0	928.1
140°	967.0	966.8	966.5	966.3	966.0	965.8	965.6	965.4
142.5°	1002.9	1002.9	1002.8	1002.7	1002.7	1002.7	1002.7	1002.6
145°	1056.9	1056.6	1056.4	1056.0	1055.2	1054.5	1053.9	1053.1
147.5°	1105.8	1105.6	1105.5	1105.2	1105.0	1104.7	1104.6	1104.3
150°	1136.6	1136.6	1136.6	1136.5	1136.3	1136.0	1135.8	1135.6
152.5°	1165.7	1166.3	1166.9	1166.8	1166.2	1165.6	1165.0	1164.3
155°	1206.2	1207.1	1208.1	1208.1	1207.1	1206.2	1205.3	1204.4
157.5°	1241.9	1242.6	1243.3	1243.2	1242.4	1241.6	1240.9	1240.1
160°	1263.9	1264.6	1265.3	1265.0	1263.9	1262.7	1261.5	1260.4
162.5°	1283.6	1284.9	1286.1	1286.2	1285.0	1283.9	1282.7	1281.5
165°	1309.7	1311.1	1312.6	1312.8	1311.8	1310.8	1309.9	1309.0
167.5°	1331.7	1333.1	1334.5	1334.5	1333.0	1331.5	1330.2	1328.7
170°	1343.5	1344.9	1346.4	1346.2	1344.6	1343.0	1341.3	1339.7
172.5°	1352.3	1354.0	1355.6	1355.5	1353.9	1352.3	1350.6	1349.0
175°	1362.0	1363.6	1365.3	1365.3	1363.6	1362.0	1360.3	1358.7
177.5°	1367.3	1368.6	1369.9	1369.8	1368.3	1366.8	1365.3	1363.8
180°	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2

(END OF REPORT)