

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: P332791-940

Luminaire Tested: **S124DIW-S795D1050U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332791-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIW-S795D1050U940-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1050 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6777.6 lumens  
Efficiency: N/A  
Efficacy: 128.9 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

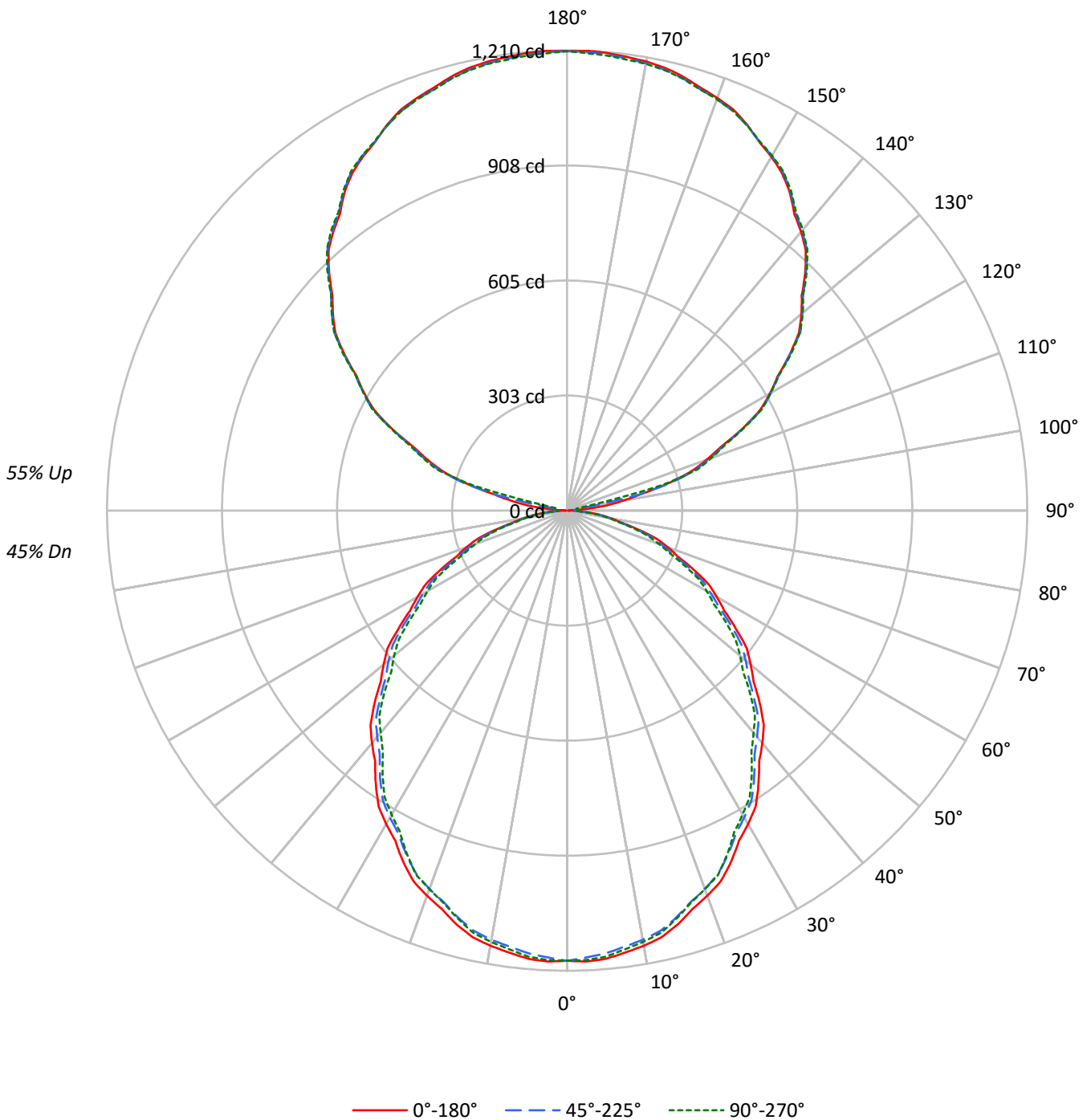
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	32
3	80	71	64	58	73	65	59	54	54	50	46	45	41	38	35	33	31	27
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

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

	0°	45°	90°
0°	9556	9556	9556
5°	9585	9469	9539
10°	9525	9393	9439
15°	9410	9260	9283
20°	9257	9094	9101
25°	9082	8905	8879
30°	8869	8682	8603
35°	8647	8451	8339
40°	8416	8186	8037
45°	8176	7927	7775
50°	7910	7695	7458
55°	7623	7396	7156
60°	7335	7061	6846
65°	7011	6739	6468
70°	6649	6314	6069
75°	6095	5798	5652
80°	5421	5202	5072
85°	4742	4566	4474



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.5	1.6
10°-20°	314.1	4.6
20°-30°	462.3	6.8
30°-40°	537.4	7.9
40°-50°	537.5	7.9
50°-60°	470.1	6.9
60°-70°	349.1	5.2
70°-80°	198.4	2.9
80°-90°	60.7	0.9
90°-100°	41.3	0.6
100°-110°	263.4	3.9
110°-120°	503.9	7.4
120°-130°	639.7	9.4
130°-140°	684.4	10.1
140°-150°	640.0	9.4
150°-160°	516.1	7.6
160°-170°	332.9	4.9
170°-180°	114.7	1.7
0°-30°	887.8	13.1
0°-40°	1425.3	21.0
0°-60°	2432.8	35.9
0°-90°	3041.1	44.9
90°-120°	808.6	11.9
90°-150°	2772.8	40.9
90°-180°	3737.0	55.1
0°-180°	6777.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1183	1179	1168	1178	1177	112
15°	1126	1122	1108	1113	1111	317
25°	1020	1013	1000	1000	997	469
35°	877	870	858	851	846	548
45°	716	709	694	684	681	552
55°	542	538	526	514	508	485
65°	367	362	353	344	339	363
75°	195	191	186	182	181	208
85°	51	51	49	49	48	56
90°	3	12	20	25	27	5
95°	50	21	20	25	26	64
105°	272	277	282	288	258	285
115°	508	510	510	511	511	499
125°	714	717	716	718	719	637
135°	885	885	888	890	892	682
145°	1021	1023	1024	1025	1026	638
155°	1119	1120	1118	1121	1118	516
165°	1181	1177	1176	1183	1175	334
175°	1208	1203	1204	1210	1201	115
180°	1208	1208	1208	1208	1208	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7
2.5°	1186.8	1186.2	1185.7	1185.3	1184.7	1183.6	1181.7	1179.8	1177.9	1176.2	1177.8
5°	1182.8	1182.0	1181.1	1180.3	1179.4	1177.8	1175.5	1173.1	1170.8	1168.5	1170.8
7.5°	1171.8	1170.9	1170.1	1169.2	1168.4	1166.7	1164.1	1161.5	1159.0	1156.4	1158.2
10°	1161.9	1161.1	1160.2	1159.4	1158.5	1156.7	1154.0	1151.3	1148.5	1145.8	1147.5
12.5°	1149.0	1148.2	1147.3	1146.5	1145.7	1143.7	1140.9	1137.9	1135.1	1132.1	1134.0
15°	1125.9	1125.0	1124.2	1123.3	1122.5	1120.5	1117.3	1114.2	1111.0	1107.9	1109.1
17.5°	1098.0	1096.9	1095.8	1094.8	1093.8	1091.7	1088.8	1085.7	1082.7	1079.8	1080.6
20°	1077.5	1076.4	1075.4	1074.3	1073.3	1071.1	1068.0	1064.8	1061.7	1058.5	1059.2
22.5°	1055.5	1054.1	1052.7	1051.3	1049.9	1047.7	1044.5	1041.3	1038.1	1035.0	1036.2
25°	1019.6	1018.2	1016.6	1015.2	1013.7	1011.5	1008.5	1005.6	1002.6	999.7	999.9
27.5°	978.7	977.1	975.6	974.1	972.6	970.4	967.7	965.0	962.2	959.5	958.9
30°	951.4	949.7	948.0	946.3	944.6	942.4	939.6	936.9	934.2	931.4	930.6
32.5°	922.5	921.0	919.4	917.9	916.4	914.2	911.3	908.4	905.5	902.6	901.6
35°	877.4	875.8	874.4	872.9	871.5	869.2	866.3	863.4	860.4	857.5	856.0
37.5°	829.7	828.4	827.1	825.7	824.3	822.1	818.9	815.7	812.6	809.4	807.8
40°	798.6	796.9	795.2	793.5	791.8	789.4	786.3	783.1	780.0	776.8	774.7
42.5°	765.3	764.2	763.2	762.2	761.2	758.9	755.5	752.0	748.4	744.9	742.5
45°	716.1	714.6	713.2	711.7	710.2	707.8	704.5	701.1	697.7	694.3	692.0
47.5°	664.7	663.7	662.7	661.6	660.7	658.6	655.5	652.4	649.3	646.1	643.5
50°	629.8	628.9	628.1	627.2	626.4	624.6	621.6	618.7	615.6	612.7	609.8
52.5°	595.7	594.7	593.6	592.6	591.6	589.5	586.4	583.3	580.1	577.0	574.4
55°	541.6	540.9	540.3	539.7	539.0	537.3	534.3	531.4	528.4	525.5	522.9
57.5°	490.0	489.3	488.6	487.9	487.1	485.3	482.4	479.5	476.6	473.7	471.3
60°	454.3	453.3	452.2	451.2	450.1	448.2	445.5	442.7	440.0	437.3	435.3
62.5°	419.5	418.6	417.7	416.8	415.9	414.0	411.1	408.1	405.3	402.3	400.6
65°	367.0	366.0	365.0	363.9	362.8	361.2	359.2	357.0	354.9	352.8	350.7
67.5°	314.3	313.3	312.4	311.4	310.5	309.0	306.9	304.9	302.9	300.9	298.8
70°	281.7	280.3	278.7	277.2	275.8	274.2	272.5	270.8	269.1	267.5	265.8
72.5°	246.8	245.3	243.9	242.4	240.9	239.5	238.2	236.7	235.4	234.1	232.7
75°	195.4	194.3	193.3	192.3	191.2	190.1	189.0	188.0	187.0	185.9	185.0
77.5°	146.2	145.8	145.3	144.9	144.4	143.7	142.8	141.9	140.9	140.0	139.7
80°	116.6	116.0	115.4	114.8	114.1	113.6	113.2	112.8	112.4	111.9	111.5
82.5°	87.8	87.6	87.2	86.9	86.7	86.5	86.4	86.3	86.2	86.1	85.9
85°	51.2	51.2	51.2	51.2	51.2	51.0	50.6	50.2	49.8	49.3	49.3
87.5°	20.2	20.5	20.8	21.1	21.4	21.6	21.8	21.8	22.0	22.2	22.5
90°	2.7	4.9	7.1	9.4	11.5	13.5	15.1	16.7	18.3	19.9	21.0
92.5°	11.4	11.5	11.6	11.8	11.9	12.8	14.4	16.0	17.6	19.2	20.3
95°	49.7	42.9	36.0	29.2	22.4	19.1	19.3	19.4	19.7	19.9	21.0
97.5°	105.5	109.8	114.0	118.3	122.5	113.5	91.0	68.7	46.3	23.8	24.0
100°	148.2	151.8	155.4	159.0	162.6	150.6	122.9	95.1	67.5	39.8	36.4
102.5°	195.9	198.5	201.2	203.8	206.4	206.0	202.4	198.8	195.1	191.5	154.7
105°	272.0	273.1	274.4	275.5	276.8	277.9	278.8	279.9	280.9	281.9	283.7
107.5°	342.6	343.2	343.8	344.4	345.0	346.0	347.3	348.7	350.1	351.4	352.3
110°	390.3	390.9	391.5	392.1	392.7	393.6	394.8	396.0	397.3	398.4	398.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	436.6	437.7	438.7	439.8	440.9	441.8	442.3	442.8	443.4	444.0	443.9
115°	507.7	508.4	509.0	509.5	510.1	510.3	510.1	510.0	509.8	509.5	510.0
117.5°	571.9	572.7	573.5	574.3	575.1	575.7	576.1	576.6	577.0	577.5	577.4
120°	615.3	616.1	616.9	617.7	618.5	618.8	618.6	618.4	618.1	618.0	618.4
122.5°	655.8	656.2	656.7	657.2	657.6	658.1	658.4	658.6	658.9	659.2	659.4
125°	713.7	714.5	715.3	716.1	716.9	717.1	716.8	716.3	716.0	715.5	716.1
127.5°	768.7	768.8	769.1	769.3	769.5	770.0	771.0	771.9	772.8	773.7	773.6
130°	804.1	804.3	804.5	804.7	804.9	805.3	805.9	806.5	807.1	807.7	807.9
132.5°	836.6	837.0	837.3	837.7	838.0	838.7	839.4	840.2	840.9	841.7	841.9
135°	885.4	885.2	885.0	884.8	884.6	884.9	885.7	886.5	887.3	888.1	888.5
137.5°	928.5	928.6	928.7	928.8	928.9	929.3	930.2	931.1	932.0	932.9	933.4
140°	956.8	957.2	957.6	958.0	958.4	958.8	959.2	959.6	960.0	960.4	961.0
142.5°	982.0	982.8	983.5	984.3	985.0	985.4	985.7	985.9	986.1	986.4	986.9
145°	1020.9	1021.5	1022.1	1022.7	1023.3	1023.6	1023.6	1023.6	1023.6	1023.6	1023.9
147.5°	1051.8	1052.9	1054.1	1055.2	1056.3	1056.8	1056.6	1056.4	1056.1	1056.0	1056.1
150°	1074.2	1075.0	1075.8	1076.7	1077.5	1077.7	1077.5	1077.4	1077.1	1076.9	1076.9
152.5°	1093.0	1093.7	1094.3	1094.9	1095.6	1095.7	1095.4	1095.0	1094.7	1094.3	1094.6
155°	1119.4	1119.6	1119.8	1120.0	1120.2	1120.0	1119.4	1118.8	1118.2	1117.6	1118.4
157.5°	1141.7	1141.5	1141.4	1141.2	1141.1	1140.8	1140.1	1139.3	1138.7	1138.0	1139.1
160°	1154.6	1154.1	1153.4	1152.8	1152.2	1151.8	1151.6	1151.4	1151.2	1151.0	1152.2
162.5°	1166.2	1165.5	1164.7	1163.9	1163.1	1162.6	1162.4	1162.3	1162.1	1161.8	1163.1
165°	1180.8	1179.8	1178.8	1177.8	1176.8	1176.3	1176.3	1176.3	1176.3	1176.3	1177.9
167.5°	1192.4	1191.3	1190.3	1189.3	1188.2	1187.7	1187.5	1187.4	1187.3	1187.1	1188.9
170°	1198.9	1197.7	1196.5	1195.2	1194.1	1193.6	1193.7	1194.0	1194.2	1194.4	1196.0
172.5°	1203.2	1202.0	1200.8	1199.6	1198.4	1197.9	1198.1	1198.3	1198.5	1198.7	1200.3
175°	1207.9	1206.8	1205.5	1204.3	1203.1	1202.7	1202.8	1203.0	1203.2	1203.5	1205.2
177.5°	1210.1	1209.0	1207.8	1206.8	1205.6	1205.2	1205.5	1205.9	1206.1	1206.5	1207.7
180°	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7	1183.7
2.5°	1179.5	1181.2	1182.9	1183.7	1183.5	1183.3	1183.1	1182.9
5°	1173.1	1175.5	1177.8	1178.8	1178.3	1177.9	1177.5	1177.1
7.5°	1160.1	1162.0	1163.8	1164.6	1164.4	1164.1	1163.9	1163.6
10°	1149.1	1150.8	1152.5	1153.2	1152.7	1152.3	1151.9	1151.5
12.5°	1135.9	1137.6	1139.5	1140.1	1139.6	1139.0	1138.4	1137.8
15°	1110.4	1111.6	1112.9	1113.2	1112.6	1112.0	1111.3	1110.7
17.5°	1081.4	1082.2	1083.0	1083.2	1082.7	1082.3	1081.9	1081.5
20°	1059.8	1060.4	1061.0	1061.1	1060.7	1060.3	1059.9	1059.4
22.5°	1037.2	1038.4	1039.6	1039.7	1038.9	1038.2	1037.4	1036.7
25°	1000.1	1000.3	1000.6	1000.2	999.4	998.5	997.7	996.8
27.5°	958.5	958.0	957.4	956.7	955.6	954.6	953.5	952.4
30°	929.7	928.9	928.0	927.1	926.0	925.0	923.9	922.9
32.5°	900.5	899.6	898.6	897.5	896.4	895.4	894.3	893.3
35°	854.5	853.0	851.5	850.2	849.2	848.2	847.1	846.1
37.5°	806.2	804.6	803.1	801.6	800.1	798.8	797.4	795.9
40°	772.6	770.5	768.4	766.8	765.7	764.7	763.7	762.6
42.5°	740.0	737.6	735.1	733.6	732.9	732.2	731.5	730.8
45°	689.6	687.3	685.0	683.6	682.9	682.2	681.6	681.0
47.5°	640.9	638.3	635.6	633.6	632.0	630.4	628.7	627.1
50°	606.8	603.9	600.9	598.8	597.5	596.3	595.0	593.8
52.5°	571.9	569.2	566.6	564.5	562.9	561.3	559.7	558.1
55°	520.4	517.9	515.3	513.4	512.2	511.0	509.6	508.4
57.5°	468.9	466.5	464.0	462.3	461.0	459.8	458.6	457.4
60°	433.5	431.6	429.6	428.2	427.1	426.1	425.0	424.0
62.5°	398.9	397.2	395.5	394.0	393.0	391.9	390.9	389.9
65°	348.7	346.5	344.4	342.9	341.8	340.7	339.7	338.6
67.5°	296.9	294.8	292.7	291.6	291.3	291.1	290.7	290.4
70°	264.1	262.4	260.7	259.6	259.0	258.3	257.7	257.1
72.5°	231.4	230.1	228.7	227.7	227.0	226.4	225.8	225.2
75°	184.2	183.3	182.5	182.0	181.8	181.6	181.4	181.2
77.5°	139.5	139.2	139.0	138.6	138.0	137.5	137.0	136.4
80°	111.1	110.7	110.2	109.9	109.7	109.5	109.3	109.1
82.5°	85.6	85.3	85.1	84.9	84.7	84.4	84.3	84.0
85°	49.3	49.3	49.3	49.2	49.0	48.8	48.6	48.3
87.5°	22.6	22.9	23.2	23.3	23.4	23.5	23.5	23.6
90°	22.3	23.5	24.7	25.5	25.9	26.3	26.7	27.1
92.5°	21.6	22.7	24.0	24.6	24.7	24.8	24.9	25.0
95°	22.3	23.5	24.7	25.4	25.6	25.8	26.0	26.2
97.5°	24.1	24.3	24.3	24.5	24.7	24.9	25.1	25.3
100°	32.9	29.5	26.1	24.5	24.7	24.9	25.1	25.3
102.5°	117.9	81.1	44.2	25.9	25.9	25.9	25.9	26.0
105°	285.5	287.3	289.1	286.4	279.2	272.0	264.7	257.5
107.5°	353.2	354.1	355.0	355.8	356.6	357.3	358.1	358.8
110°	399.2	399.7	400.0	400.6	401.2	401.7	402.3	403.0





TEST NUMBER: P332791-940

CATALOG NUMBER: S124DIW-S795D1050U940-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	443.8	443.7	443.6	444.0	444.8	445.5	446.3	447.0
115°	510.3	510.8	511.1	511.4	511.4	511.4	511.4	511.4
117.5°	577.3	577.3	577.2	577.1	577.0	576.9	576.8	576.8
120°	618.8	619.2	619.6	619.6	619.2	618.8	618.4	618.0
122.5°	659.7	659.9	660.1	660.0	659.7	659.2	658.9	658.4
125°	716.8	717.4	717.9	718.4	718.5	718.7	719.0	719.2
127.5°	773.5	773.4	773.2	773.1	772.9	772.8	772.6	772.5
130°	808.1	808.3	808.5	808.6	808.6	808.6	808.6	808.6
132.5°	842.0	842.3	842.5	842.5	842.3	842.1	842.0	841.9
135°	888.9	889.3	889.7	890.1	890.6	890.9	891.4	891.7
137.5°	933.8	934.2	934.7	934.9	934.7	934.6	934.5	934.3
140°	961.6	962.2	962.8	963.2	963.4	963.6	963.8	964.0
142.5°	987.3	987.7	988.2	988.4	988.5	988.5	988.6	988.6
145°	1024.0	1024.2	1024.4	1024.8	1025.1	1025.6	1025.9	1026.4
147.5°	1056.3	1056.4	1056.6	1056.8	1057.0	1057.2	1057.4	1057.6
150°	1076.9	1076.9	1076.9	1077.0	1077.2	1077.5	1077.6	1077.8
152.5°	1094.9	1095.2	1095.6	1095.6	1095.6	1095.4	1095.3	1095.2
155°	1119.2	1120.0	1120.8	1120.9	1120.3	1119.7	1119.1	1118.5
157.5°	1140.1	1141.1	1142.2	1142.2	1141.1	1140.1	1139.1	1138.0
160°	1153.4	1154.6	1155.8	1155.8	1154.6	1153.4	1152.2	1151.0
162.5°	1164.2	1165.5	1166.6	1166.6	1165.2	1163.9	1162.5	1161.1
165°	1179.6	1181.2	1182.8	1182.6	1180.8	1179.0	1177.2	1175.4
167.5°	1190.7	1192.5	1194.2	1194.1	1192.1	1190.1	1188.1	1186.1
170°	1197.6	1199.2	1200.8	1200.6	1198.5	1196.6	1194.5	1192.6
172.5°	1201.9	1203.5	1205.1	1204.9	1202.7	1200.5	1198.4	1196.1
175°	1207.0	1208.8	1210.7	1210.3	1207.9	1205.5	1203.1	1200.7
177.5°	1209.1	1210.3	1211.7	1211.3	1209.3	1207.5	1205.5	1203.6
180°	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9	1207.9

(END OF REPORT)