

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: P333074-940

Luminaire Tested: **S124RDIW-S795D1560U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333074-940  
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: S124RDIW-S795D1560U940-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7690.5 lumens  
Efficiency: N/A  
Efficacy: 112.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

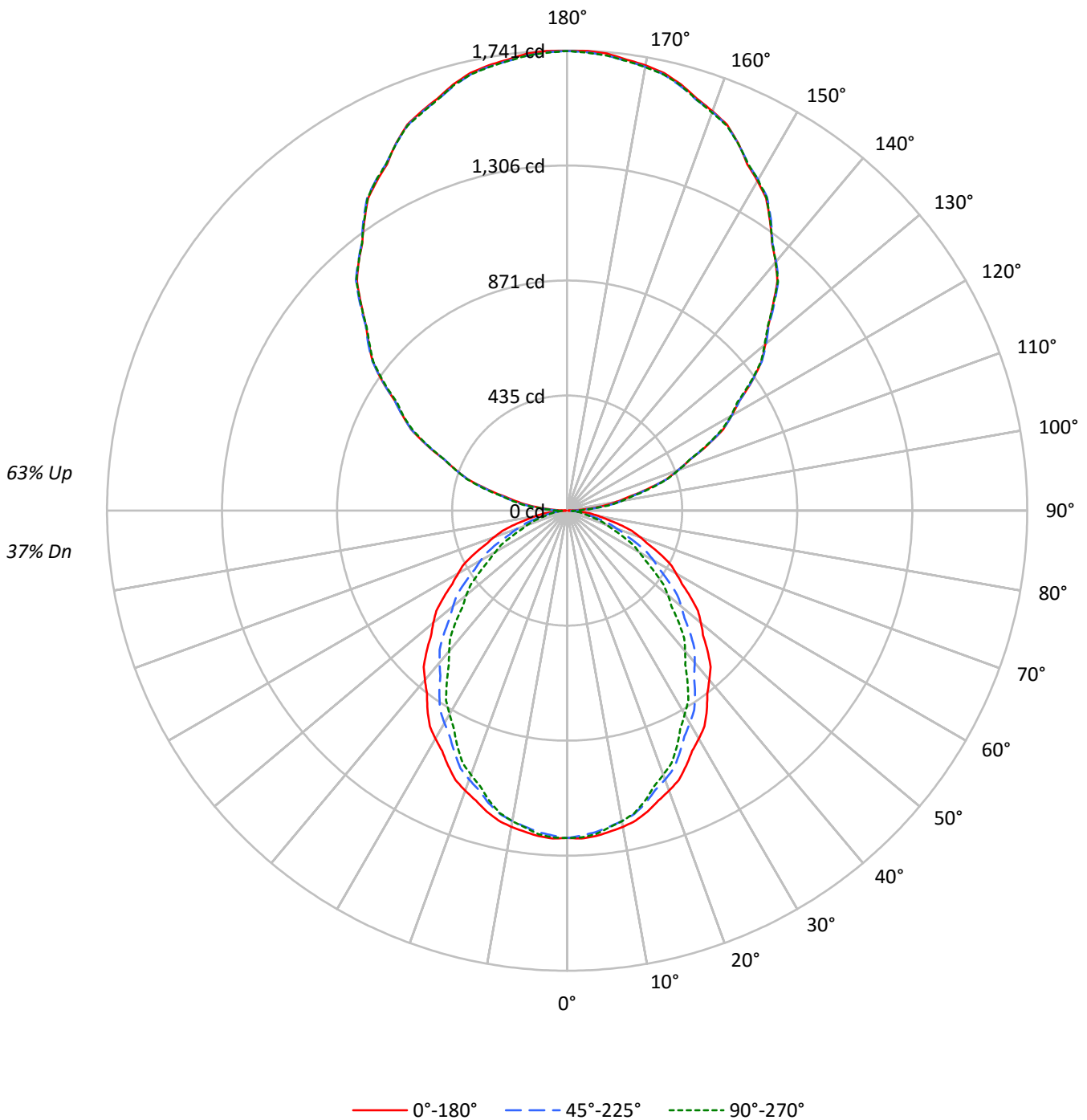
Input Watts (W): 68.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44
1	95	91	87	84	86	83	79	77	67	65	63	53	51	50	40	39	38
2	87	80	74	69	78	72	67	63	59	55	52	47	44	42	35	34	32
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28
4	73	62	54	49	66	57	50	45	46	42	38	37	33	31	28	26	24
5	67	55	47	42	60	51	44	39	42	36	33	33	29	27	25	23	21
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	20	18
7	57	45	37	32	51	41	34	29	34	29	25	27	23	21	21	18	16
8	53	41	33	28	48	37	31	26	31	26	22	25	21	18	19	17	15
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12

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

	0°	45°	90°
0°	10001	10001	10001
5°	10023	9900	9961
10°	9960	9781	9781
15°	9845	9576	9504
20°	9688	9306	9135
25°	9487	8989	8761
30°	9292	8655	8294
35°	9077	8310	7824
40°	8816	7917	7317
45°	8576	7526	6801
50°	8303	7076	6253
55°	8010	6608	5661
60°	7689	6095	5054
65°	7393	5454	4458
70°	6963	4747	3784
75°	6419	3936	3075
80°	5602	2999	2822
85°	4742	2723	2547



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.4	1.5
10°-20°	324.5	4.2
20°-30°	468.6	6.1
30°-40°	531.1	6.9
40°-50°	512.9	6.7
50°-60°	426.5	5.5
60°-70°	294.5	3.8
70°-80°	149.3	1.9
80°-90°	43.5	0.6
90°-100°	114.7	1.5
100°-110°	339.7	4.4
110°-120°	576.5	7.5
120°-130°	760.2	9.9
130°-140°	853.8	11.1
140°-150°	839.0	10.9
150°-160°	705.6	9.2
160°-170°	469.5	6.1
170°-180°	164.4	2.1
0°-30°	909.4	11.8
0°-40°	1440.5	18.7
0°-60°	2379.9	30.9
0°-90°	2867.2	37.3
90°-120°	1030.9	13.4
90°-150°	3483.9	45.3
90°-180°	4823.0	62.7
0°-180°	7690.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1239	1239	1239	1239	1239	
5°	1237	1233	1222	1230	1229	117
15°	1178	1169	1146	1144	1137	332
25°	1065	1047	1009	993	984	491
35°	921	890	843	812	794	575
45°	751	715	659	614	596	579
55°	569	530	470	422	402	509
65°	387	345	286	246	233	382
75°	206	170	126	105	99	217
85°	51	33	29	28	28	58
90°	4	19	30	37	40	8
95°	81	93	102	106	106	90
105°	313	315	320	324	328	332
115°	586	586	584	582	581	578
125°	854	854	852	850	847	761
135°	1101	1109	1109	1106	1102	852
145°	1338	1343	1344	1343	1339	837
155°	1533	1533	1531	1536	1531	705
165°	1669	1665	1662	1669	1665	470
175°	1736	1729	1728	1736	1728	165
180°	1738	1738	1738	1738	1738	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1241.8	1241.1	1240.4	1239.7	1239.0	1237.8	1235.9	1234.1	1232.3	1230.4	1232.3
5°	1236.8	1236.0	1235.1	1234.3	1233.4	1231.8	1229.2	1226.7	1224.1	1221.6	1223.8
7.5°	1225.7	1224.8	1223.9	1223.0	1222.1	1220.0	1216.7	1213.4	1210.1	1206.8	1208.2
10°	1215.0	1214.0	1212.9	1211.8	1210.8	1208.4	1204.6	1200.8	1197.0	1193.2	1194.0
12.5°	1201.3	1200.2	1198.9	1197.7	1196.5	1193.6	1189.2	1184.6	1180.2	1175.7	1176.3
15°	1178.0	1176.2	1174.2	1172.3	1170.5	1166.9	1161.5	1156.3	1151.0	1145.8	1145.3
17.5°	1149.8	1147.0	1144.2	1141.6	1138.8	1134.3	1127.9	1121.6	1115.3	1108.9	1107.8
20°	1127.7	1125.0	1122.3	1119.5	1116.8	1111.9	1104.7	1097.5	1090.3	1083.2	1081.5
22.5°	1103.5	1100.4	1097.3	1094.2	1091.2	1085.7	1078.1	1070.4	1062.7	1055.1	1052.6
25°	1065.1	1061.3	1057.6	1053.7	1050.0	1043.7	1035.1	1026.4	1017.8	1009.1	1005.6
27.5°	1024.9	1020.2	1015.4	1010.7	1005.8	998.9	989.6	980.4	971.2	962.0	957.5
30°	996.8	991.6	986.3	981.1	975.8	968.2	958.3	948.4	938.4	928.5	923.3
32.5°	967.2	961.4	955.4	949.4	943.5	935.4	925.1	914.9	904.6	894.4	888.3
35°	921.0	914.3	907.5	900.7	894.0	885.4	874.9	864.2	853.7	843.2	836.1
37.5°	871.5	864.5	857.6	850.6	843.6	834.4	822.7	811.0	799.3	787.6	779.6
40°	836.6	829.6	822.7	815.7	808.8	799.2	787.2	775.3	763.2	751.2	742.3
42.5°	803.2	795.9	788.6	781.3	774.0	764.1	751.6	739.0	726.6	714.0	705.0
45°	751.2	743.4	735.6	727.8	720.0	709.8	697.1	684.5	671.8	659.2	648.9
47.5°	697.5	689.5	681.4	673.3	665.3	654.7	641.6	628.4	615.3	602.1	591.4
50°	661.1	652.9	644.6	636.4	628.2	617.3	603.9	590.4	576.8	563.4	552.9
52.5°	623.9	615.9	607.8	599.8	591.7	580.8	566.9	553.1	539.3	525.5	514.8
55°	569.1	560.6	552.2	543.8	535.4	524.3	510.6	496.9	483.2	469.5	458.5
57.5°	514.9	506.0	497.3	488.6	479.7	468.6	455.1	441.7	428.2	414.6	403.6
60°	476.2	467.7	459.3	450.8	442.4	431.5	417.9	404.5	391.0	377.5	366.5
62.5°	441.2	432.5	423.7	414.9	406.2	394.8	381.0	367.2	353.4	339.6	329.4
65°	387.0	377.9	368.8	359.8	350.7	339.5	325.9	312.5	299.0	285.5	276.4
67.5°	330.6	322.0	313.3	304.6	295.9	285.3	272.8	260.3	247.7	235.2	227.4
70°	295.0	286.1	277.2	268.4	259.6	249.1	237.1	225.1	213.1	201.1	194.1
72.5°	257.1	249.1	241.0	233.0	225.0	215.3	204.0	192.6	181.3	170.0	164.0
75°	205.8	198.0	190.2	182.4	174.6	165.8	155.9	146.0	136.1	126.2	121.3
77.5°	153.8	147.2	140.6	134.0	127.3	120.0	112.1	104.1	96.0	88.0	85.2
80°	120.5	114.3	108.3	102.1	96.0	89.8	83.5	77.1	70.8	64.5	63.8
82.5°	91.7	86.1	80.4	74.8	69.2	64.6	61.0	57.3	53.7	50.1	49.6
85°	51.2	47.0	42.8	38.6	34.3	31.9	31.3	30.7	30.1	29.4	29.0
87.5°	18.3	17.6	16.9	16.1	15.5	15.3	15.6	16.0	16.2	16.5	16.8
90°	4.0	7.3	10.6	13.9	17.2	20.1	22.4	24.8	27.2	29.6	31.4
92.5°	28.8	32.5	36.3	40.0	43.9	46.5	48.2	49.9	51.5	53.2	54.3
95°	80.7	83.4	86.1	88.7	91.4	93.8	95.9	98.0	100.1	102.2	103.1
97.5°	140.9	143.0	145.2	147.4	149.5	151.9	154.3	156.7	159.2	161.6	162.6
100°	188.2	189.4	190.6	191.8	193.1	194.9	197.7	200.4	203.0	205.7	206.3
102.5°	237.7	238.2	238.7	239.2	239.6	241.1	243.5	246.0	248.4	250.9	251.7
105°	313.3	313.6	313.9	314.1	314.5	315.2	316.4	317.6	318.8	320.0	320.9
107.5°	392.6	393.0	393.3	393.7	394.0	394.3	394.5	394.7	394.8	395.0	395.8
110°	446.4	447.0	447.5	448.2	448.8	449.0	448.6	448.4	448.0	447.7	447.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	502.3	502.5	502.6	502.7	502.8	502.6	502.0	501.5	501.0	500.4	500.3
115°	586.2	586.2	586.2	586.2	586.2	585.9	585.3	584.7	584.2	583.5	583.3
117.5°	665.3	665.5	665.8	666.0	666.3	666.2	665.8	665.3	664.9	664.5	663.4
120°	718.0	719.2	720.4	721.6	722.7	722.9	722.0	721.1	720.2	719.3	717.8
122.5°	772.8	773.3	773.8	774.3	774.7	774.8	774.4	773.9	773.6	773.1	772.1
125°	853.8	853.8	853.8	853.8	853.8	853.6	853.4	853.0	852.7	852.5	851.9
127.5°	927.2	928.1	929.0	929.9	930.8	931.0	930.5	930.1	929.6	929.1	928.4
130°	978.8	979.7	980.6	981.5	982.4	982.8	982.8	982.8	982.8	982.8	982.3
132.5°	1031.5	1032.2	1032.9	1033.5	1034.2	1034.4	1034.1	1033.9	1033.7	1033.4	1032.9
135°	1101.2	1103.0	1104.7	1106.6	1108.4	1109.3	1109.3	1109.3	1109.3	1109.3	1108.7
137.5°	1177.1	1177.9	1178.7	1179.6	1180.4	1181.1	1181.5	1182.0	1182.5	1182.9	1182.1
140°	1227.6	1228.2	1228.8	1229.4	1229.9	1230.3	1230.3	1230.3	1230.3	1230.3	1229.9
142.5°	1273.8	1274.4	1275.1	1275.6	1276.2	1276.4	1276.1	1275.9	1275.7	1275.4	1275.4
145°	1337.8	1339.0	1340.2	1341.4	1342.6	1343.4	1343.6	1344.0	1344.3	1344.5	1344.3
147.5°	1401.3	1402.8	1404.2	1405.6	1407.0	1407.7	1407.4	1407.1	1406.9	1406.7	1406.4
150°	1440.0	1441.2	1442.4	1443.6	1444.8	1445.4	1445.4	1445.4	1445.4	1445.4	1445.4
152.5°	1476.6	1477.3	1478.0	1478.7	1479.4	1480.0	1480.2	1480.4	1480.7	1480.9	1481.6
155°	1532.8	1532.8	1532.8	1532.8	1532.8	1532.7	1532.3	1532.0	1531.8	1531.4	1532.7
157.5°	1580.1	1579.6	1579.0	1578.5	1578.0	1577.7	1577.6	1577.5	1577.5	1577.4	1578.3
160°	1608.1	1607.8	1607.5	1607.2	1606.9	1606.6	1606.3	1606.0	1605.7	1605.4	1606.3
162.5°	1633.9	1633.2	1632.4	1631.6	1630.8	1630.2	1630.0	1629.7	1629.3	1629.1	1630.7
165°	1668.6	1667.7	1666.8	1665.9	1665.0	1664.3	1663.7	1663.0	1662.5	1661.9	1663.7
167.5°	1695.2	1694.0	1692.7	1691.5	1690.2	1689.6	1689.7	1689.7	1689.8	1689.9	1691.7
170°	1710.3	1708.8	1707.3	1705.8	1704.3	1703.7	1704.0	1704.3	1704.6	1704.9	1706.6
172.5°	1721.0	1719.8	1718.5	1717.3	1716.0	1715.4	1715.5	1715.6	1715.6	1715.7	1717.7
175°	1735.8	1734.3	1732.9	1731.3	1729.8	1728.9	1728.7	1728.3	1728.0	1727.8	1729.8
177.5°	1740.6	1739.5	1738.3	1737.1	1735.9	1735.3	1735.3	1735.3	1735.3	1735.3	1737.0
180°	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8	1238.8
2.5°	1234.1	1235.9	1237.8	1238.7	1238.5	1238.3	1238.1	1238.0
5°	1225.8	1228.0	1230.1	1230.9	1230.5	1230.1	1229.7	1229.2
7.5°	1209.5	1210.9	1212.3	1212.5	1211.9	1211.2	1210.6	1209.9
10°	1194.9	1195.7	1196.6	1196.6	1195.7	1194.9	1194.0	1193.2
12.5°	1176.8	1177.2	1177.8	1177.4	1176.3	1175.1	1173.8	1172.7
15°	1145.0	1144.5	1144.1	1143.2	1141.7	1140.1	1138.7	1137.2
17.5°	1106.6	1105.5	1104.2	1102.5	1100.3	1098.1	1095.8	1093.6
20°	1079.8	1078.1	1076.4	1074.2	1071.5	1068.7	1066.0	1063.3
22.5°	1050.1	1047.5	1045.0	1042.6	1040.4	1038.1	1035.9	1033.7
25°	1002.0	998.4	994.9	992.0	989.9	987.8	985.7	983.6
27.5°	953.1	948.7	944.2	940.5	937.5	934.4	931.4	928.4
30°	918.0	912.8	907.5	903.1	899.8	896.4	893.0	889.7
32.5°	882.2	876.1	870.0	865.3	862.1	858.9	855.7	852.5
35°	828.8	821.7	814.6	809.0	805.3	801.5	797.6	793.9
37.5°	771.6	763.6	755.5	749.7	745.9	742.1	738.3	734.5
40°	733.5	724.6	715.8	709.4	705.7	701.9	698.1	694.3
42.5°	696.0	687.0	678.0	671.5	667.4	663.5	659.6	655.6
45°	638.6	628.2	617.9	610.8	607.0	603.2	599.4	595.7
47.5°	580.7	570.0	559.3	551.8	547.7	543.5	539.3	535.1
50°	542.3	531.8	521.2	514.0	510.0	506.0	501.9	497.9
52.5°	504.1	493.4	482.6	475.2	471.0	466.8	462.7	458.5
55°	447.5	436.6	425.7	418.2	414.2	410.2	406.2	402.2
57.5°	392.4	381.3	370.1	363.1	360.1	357.0	354.0	351.0
60°	355.6	344.6	333.7	326.5	323.2	319.8	316.4	313.0
62.5°	319.3	309.2	299.1	292.7	290.0	287.3	284.5	281.9
65°	267.3	258.3	249.2	243.4	240.9	238.4	235.9	233.4
67.5°	219.6	211.9	204.0	198.8	196.0	193.1	190.4	187.6
70°	187.2	180.2	173.3	168.7	166.7	164.5	162.4	160.3
72.5°	158.1	152.1	146.2	142.2	140.4	138.4	136.4	134.5
75°	116.5	111.6	106.7	103.7	102.5	101.2	99.9	98.6
77.5°	82.4	79.5	76.7	75.1	74.7	74.4	74.0	73.6
80°	63.2	62.6	62.0	61.5	61.3	61.1	60.9	60.7
82.5°	49.1	48.7	48.2	47.9	47.7	47.4	47.3	47.1
85°	28.5	28.2	27.7	27.5	27.5	27.5	27.5	27.5
87.5°	16.9	17.1	17.3	17.6	17.8	18.1	18.4	18.7
90°	33.2	35.0	36.7	38.0	38.5	39.1	39.8	40.3
92.5°	55.4	56.4	57.5	58.2	58.6	58.9	59.3	59.7
95°	104.0	104.9	105.8	106.2	106.2	106.2	106.2	106.2
97.5°	163.8	164.9	165.9	166.5	166.5	166.5	166.5	166.5
100°	206.9	207.5	208.1	208.4	208.4	208.4	208.4	208.4
102.5°	252.5	253.4	254.2	254.8	255.0	255.3	255.5	255.7
105°	321.8	322.7	323.6	324.5	325.4	326.3	327.2	328.1
107.5°	396.7	397.5	398.4	398.8	398.7	398.7	398.6	398.5
110°	446.6	445.9	445.3	445.5	446.4	447.3	448.2	449.1





TEST NUMBER: P333074-940

CATALOG NUMBER: S124RDIW-S795D1560U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	500.2	500.1	500.0	500.0	500.2	500.3	500.5	500.7
115°	582.9	582.6	582.4	582.0	581.8	581.5	581.1	580.9
117.5°	662.5	661.5	660.4	659.6	659.0	658.4	657.8	657.2
120°	716.3	714.9	713.4	712.9	713.5	714.1	714.7	715.3
122.5°	771.1	770.1	769.1	768.0	767.0	765.9	764.8	763.8
125°	851.2	850.7	850.1	849.4	848.8	848.3	847.7	847.0
127.5°	927.9	927.3	926.7	926.1	925.7	925.2	924.7	924.3
130°	981.7	981.1	980.4	979.5	978.4	977.2	976.0	974.8
132.5°	1032.2	1031.6	1031.0	1030.5	1030.0	1029.6	1029.0	1028.6
135°	1108.0	1107.5	1106.9	1106.1	1105.2	1104.3	1103.4	1102.5
137.5°	1181.4	1180.6	1179.8	1179.6	1179.7	1179.9	1180.1	1180.3
140°	1229.7	1229.4	1229.0	1228.8	1228.5	1228.2	1227.9	1227.6
142.5°	1275.3	1275.2	1275.2	1275.1	1275.1	1275.1	1275.0	1274.9
145°	1344.0	1343.6	1343.4	1342.7	1341.8	1341.0	1340.1	1339.2
147.5°	1406.2	1406.0	1405.7	1405.4	1405.2	1404.9	1404.5	1404.3
150°	1445.4	1445.4	1445.4	1445.3	1444.9	1444.7	1444.4	1444.0
152.5°	1482.3	1483.0	1483.7	1483.7	1482.9	1482.2	1481.4	1480.6
155°	1533.8	1535.0	1536.2	1536.2	1535.0	1533.8	1532.7	1531.4
157.5°	1579.2	1580.1	1581.0	1580.9	1579.9	1579.0	1577.9	1576.9
160°	1607.2	1608.1	1609.0	1608.6	1607.2	1605.7	1604.2	1602.7
162.5°	1632.3	1633.9	1635.5	1635.6	1634.1	1632.6	1631.1	1629.6
165°	1665.4	1667.2	1669.0	1669.4	1668.1	1667.0	1665.7	1664.6
167.5°	1693.4	1695.2	1697.0	1697.0	1695.1	1693.3	1691.4	1689.5
170°	1708.5	1710.3	1712.1	1711.9	1709.9	1707.7	1705.7	1703.5
172.5°	1719.8	1721.7	1723.8	1723.8	1721.6	1719.6	1717.4	1715.4
175°	1732.0	1734.0	1736.2	1736.2	1734.0	1732.0	1729.8	1727.8
177.5°	1738.7	1740.3	1742.0	1741.9	1739.9	1738.0	1736.2	1734.2
180°	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5	1738.5

(END OF REPORT)