

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: P333065-935

Luminaire Tested: **S124RDIW-S795D1050U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333065-935
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: S124RDIW-S795D1050U935-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6374.6 lumens
Efficiency: N/A
Efficacy: 121.2 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: General Diffuse

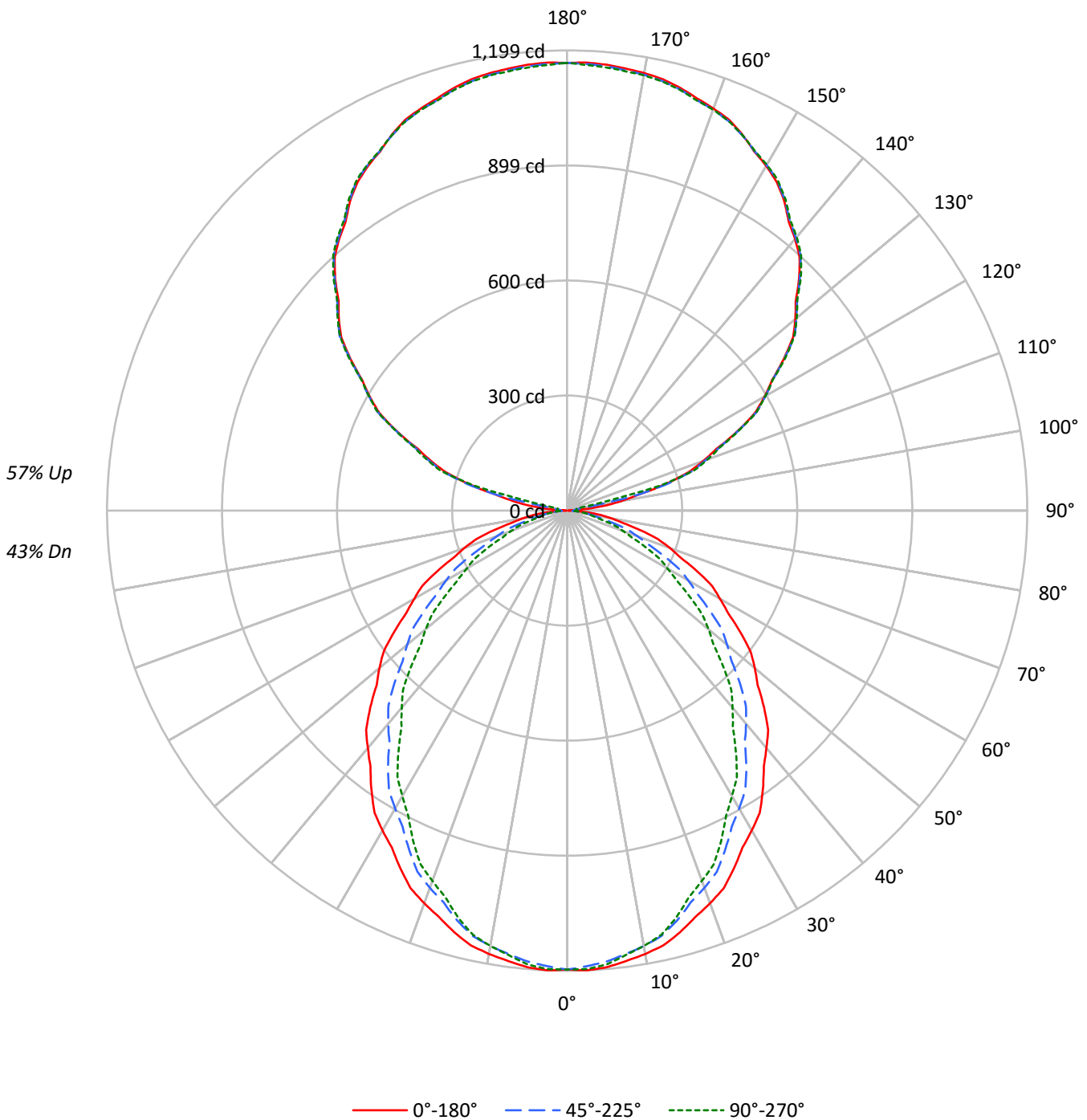
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	64	64	64	50	50	50	43
1	97	92	89	85	88	85	81	79	70	68	66	57	55	54	45	44	43	37
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	40	38	36	31
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	35	33	31	27
4	74	63	55	50	67	58	51	46	49	44	40	40	36	33	32	29	27	23
5	68	56	48	43	62	52	45	40	44	38	34	36	32	29	29	26	24	20
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18
7	58	46	38	32	53	42	35	30	36	30	26	29	25	22	24	21	19	16
8	53	41	34	29	49	38	32	27	33	27	23	27	23	20	22	19	17	14
9	50	38	30	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13
10	47	35	28	23	43	32	26	22	27	22	19	23	19	16	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9656	9656	9656
5°	9678	9559	9618
10°	9617	9444	9444
15°	9507	9246	9177
20°	9355	8985	8820
25°	9161	8679	8459
30°	8972	8358	8007
35°	8763	8024	7554
40°	8513	7644	7065
45°	8281	7267	6566
50°	8017	6832	6038
55°	7734	6380	5465
60°	7424	5885	4879
65°	7138	5266	4304
70°	6722	4584	3654
75°	6198	3799	2969
80°	5407	2896	2724
85°	4576	2631	2455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	1.8
10°-20°	313.3	4.9
20°-30°	452.4	7.1
30°-40°	512.8	8.0
40°-50°	495.2	7.8
50°-60°	411.8	6.5
60°-70°	284.4	4.5
70°-80°	144.1	2.3
80°-90°	40.3	0.6
90°-100°	39.9	0.6
100°-110°	254.3	4.0
110°-120°	486.6	7.6
120°-130°	617.7	9.7
130°-140°	660.8	10.4
140°-150°	618.0	9.7
150°-160°	498.3	7.8
160°-170°	321.4	5.0
170°-180°	110.8	1.7
0°-30°	878.1	13.8
0°-40°	1390.9	21.8
0°-60°	2297.9	36.0
0°-90°	2766.7	43.4
90°-120°	780.8	12.2
90°-150°	2677.3	42.0
90°-180°	3608.0	56.6
0°-180°	6374.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1194	1190	1180	1188	1187	113
15°	1138	1128	1106	1104	1098	320
25°	1028	1011	974	959	950	474
35°	889	859	814	784	766	555
45°	725	690	636	593	575	559
55°	550	512	453	407	388	491
65°	374	333	276	238	225	369
75°	199	164	122	102	95	210
85°	49	32	28	27	26	56
90°	3	12	19	24	26	5
95°	48	20	19	24	25	62
105°	263	268	272	278	249	275
115°	490	493	492	494	494	482
125°	689	692	691	693	694	615
135°	855	854	858	859	861	658
145°	986	988	988	989	991	616
155°	1081	1082	1079	1082	1080	498
165°	1140	1136	1136	1142	1135	322
175°	1166	1161	1162	1169	1159	111
180°	1166	1166	1166	1166	1166	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1199.0	1198.3	1197.7	1197.0	1196.4	1195.2	1193.3	1191.6	1189.8	1188.0	1189.8
5°	1194.2	1193.4	1192.6	1191.8	1190.9	1189.4	1186.9	1184.5	1182.0	1179.6	1181.6
7.5°	1183.4	1182.6	1181.7	1180.9	1180.0	1178.0	1174.8	1171.6	1168.5	1165.3	1166.6
10°	1173.2	1172.2	1171.1	1170.1	1169.1	1166.7	1163.1	1159.4	1155.8	1152.1	1152.9
12.5°	1159.9	1158.8	1157.6	1156.4	1155.3	1152.5	1148.2	1143.8	1139.5	1135.2	1135.7
15°	1137.5	1135.7	1133.8	1132.0	1130.1	1126.7	1121.5	1116.5	1111.4	1106.3	1105.9
17.5°	1110.2	1107.5	1104.8	1102.3	1099.6	1095.2	1089.1	1083.0	1076.9	1070.7	1069.6
20°	1088.9	1086.2	1083.7	1081.0	1078.3	1073.6	1066.6	1059.7	1052.7	1045.9	1044.2
22.5°	1065.5	1062.5	1059.5	1056.5	1053.6	1048.4	1040.9	1033.5	1026.1	1018.7	1016.3
25°	1028.5	1024.8	1021.1	1017.4	1013.8	1007.8	999.4	991.1	982.7	974.4	970.9
27.5°	989.6	985.1	980.4	975.9	971.2	964.5	955.5	946.7	937.7	928.8	924.5
30°	962.5	957.4	952.4	947.3	942.2	934.9	925.3	915.8	906.1	896.6	891.5
32.5°	933.9	928.2	922.5	916.7	911.0	903.2	893.3	883.4	873.5	863.6	857.7
35°	889.2	882.8	876.2	869.7	863.2	854.9	844.7	834.5	824.3	814.2	807.3
37.5°	841.5	834.7	828.0	821.3	814.6	805.6	794.4	783.1	771.8	760.5	752.8
40°	807.8	801.1	794.4	787.6	780.9	771.7	760.1	748.6	736.9	725.3	716.8
42.5°	775.5	768.4	761.5	754.4	747.3	737.8	725.7	713.6	701.5	689.4	680.7
45°	725.3	717.8	710.2	702.7	695.2	685.4	673.1	660.9	648.7	636.5	626.5
47.5°	673.5	665.7	658.0	650.1	642.4	632.1	619.5	606.7	594.1	581.3	571.0
50°	638.3	630.4	622.4	614.5	606.6	596.1	583.1	570.1	557.0	544.0	533.8
52.5°	602.4	594.7	586.9	579.1	571.4	560.8	547.4	534.1	520.7	507.4	497.1
55°	549.5	541.3	533.2	525.0	516.9	506.3	493.0	479.7	466.6	453.3	442.7
57.5°	497.1	488.6	480.2	471.7	463.2	452.5	439.5	426.5	413.5	400.4	389.7
60°	459.8	451.6	443.5	435.3	427.1	416.6	403.6	390.5	377.5	364.5	353.9
62.5°	426.0	417.6	409.1	400.6	392.2	381.3	367.9	354.6	341.2	327.9	318.1
65°	373.7	364.9	356.1	347.4	338.6	327.8	314.7	301.7	288.7	275.7	266.9
67.5°	319.3	310.9	302.5	294.1	285.7	275.5	263.4	251.3	239.2	227.1	219.6
70°	284.8	276.3	267.7	259.2	250.6	240.6	228.9	217.3	205.8	194.2	187.4
72.5°	248.2	240.5	232.7	225.0	217.2	207.9	197.0	186.0	175.0	164.1	158.3
75°	198.7	191.2	183.7	176.2	168.6	160.1	150.5	140.9	131.4	121.8	117.1
77.5°	148.5	142.2	135.8	129.4	123.0	115.9	108.2	100.5	92.7	85.0	82.2
80°	116.3	110.4	104.5	98.6	92.7	86.7	80.6	74.5	68.4	62.3	61.6
82.5°	88.5	83.1	77.7	72.2	66.8	62.3	58.9	55.4	51.8	48.4	47.9
85°	49.4	45.4	41.3	37.3	33.1	30.8	30.2	29.6	29.0	28.4	28.0
87.5°	17.4	16.5	15.6	14.7	13.9	13.5	13.7	13.8	13.9	14.1	14.2
90°	2.6	4.7	6.9	9.0	11.1	13.0	14.6	16.1	17.7	19.2	20.3
92.5°	11.0	11.1	11.2	11.4	11.5	12.3	13.9	15.4	17.0	18.5	19.6
95°	48.0	41.4	34.8	28.2	21.6	18.4	18.6	18.8	19.0	19.2	20.3
97.5°	101.9	106.0	110.1	114.3	118.3	109.6	87.9	66.3	44.7	23.0	23.2
100°	143.1	146.5	150.1	153.5	157.0	145.4	118.6	91.9	65.2	38.4	35.1
102.5°	189.2	191.7	194.2	196.8	199.3	198.9	195.4	191.9	188.4	184.9	149.4
105°	262.6	263.7	264.9	266.0	267.3	268.3	269.2	270.3	271.2	272.2	273.9
107.5°	330.8	331.4	331.9	332.5	333.1	334.1	335.4	336.7	338.0	339.3	340.2
110°	376.9	377.5	378.0	378.6	379.2	380.0	381.3	382.4	383.6	384.7	385.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	421.5	422.6	423.6	424.6	425.7	426.5	427.1	427.6	428.1	428.7	428.6
115°	490.3	490.9	491.5	492.0	492.6	492.8	492.6	492.4	492.2	492.0	492.4
117.5°	552.2	552.9	553.7	554.5	555.3	555.9	556.3	556.7	557.2	557.6	557.5
120°	594.1	594.9	595.6	596.4	597.2	597.4	597.3	597.1	596.8	596.7	597.1
122.5°	633.2	633.6	634.0	634.6	635.0	635.4	635.7	635.9	636.2	636.5	636.7
125°	689.1	689.9	690.7	691.5	692.2	692.4	692.1	691.6	691.3	690.9	691.5
127.5°	742.2	742.4	742.6	742.8	743.0	743.5	744.4	745.3	746.1	747.1	747.0
130°	776.4	776.6	776.8	777.0	777.1	777.6	778.2	778.7	779.3	779.9	780.1
132.5°	807.8	808.1	808.5	808.8	809.2	809.8	810.5	811.2	811.9	812.7	812.9
135°	854.9	854.7	854.5	854.3	854.1	854.5	855.2	856.0	856.8	857.6	857.9
137.5°	896.6	896.6	896.7	896.8	896.9	897.3	898.2	899.1	899.9	900.8	901.2
140°	923.9	924.2	924.6	925.0	925.4	925.7	926.2	926.5	927.0	927.3	927.9
142.5°	948.2	948.9	949.6	950.4	951.1	951.5	951.7	951.9	952.2	952.4	952.9
145°	985.8	986.4	986.9	987.5	988.1	988.3	988.3	988.3	988.3	988.3	988.6
147.5°	1015.5	1016.7	1017.8	1018.8	1019.9	1020.4	1020.2	1020.0	1019.8	1019.6	1019.8
150°	1037.2	1038.0	1038.8	1039.6	1040.3	1040.6	1040.4	1040.3	1040.0	1039.8	1039.8
152.5°	1055.3	1056.0	1056.6	1057.2	1057.8	1058.0	1057.7	1057.3	1057.0	1056.6	1056.9
155°	1080.8	1081.1	1081.2	1081.4	1081.6	1081.4	1080.8	1080.3	1079.7	1079.1	1079.9
157.5°	1102.3	1102.2	1102.1	1101.9	1101.8	1101.5	1100.8	1100.1	1099.5	1098.8	1099.8
160°	1114.8	1114.3	1113.7	1113.1	1112.5	1112.2	1112.0	1111.7	1111.6	1111.4	1112.5
162.5°	1126.0	1125.3	1124.6	1123.8	1123.1	1122.6	1122.4	1122.2	1122.1	1121.8	1123.0
165°	1140.1	1139.2	1138.2	1137.2	1136.3	1135.8	1135.8	1135.8	1135.8	1135.8	1137.4
167.5°	1151.3	1150.3	1149.3	1148.3	1147.3	1146.8	1146.6	1146.5	1146.4	1146.2	1148.0
170°	1157.6	1156.4	1155.3	1154.1	1153.0	1152.4	1152.6	1152.9	1153.1	1153.2	1154.8
172.5°	1161.7	1160.6	1159.4	1158.3	1157.1	1156.7	1156.8	1157.0	1157.3	1157.4	1159.0
175°	1166.3	1165.2	1164.0	1162.9	1161.7	1161.2	1161.4	1161.6	1161.7	1162.0	1163.7
177.5°	1168.4	1167.3	1166.2	1165.2	1164.1	1163.7	1164.0	1164.3	1164.6	1164.9	1166.1
180°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1	1196.1
2.5°	1191.6	1193.3	1195.2	1196.0	1195.8	1195.7	1195.5	1195.3
5°	1183.6	1185.7	1187.7	1188.5	1188.1	1187.7	1187.3	1186.9
7.5°	1167.9	1169.2	1170.5	1170.8	1170.2	1169.5	1168.9	1168.2
10°	1153.7	1154.5	1155.4	1155.4	1154.5	1153.7	1152.9	1152.1
12.5°	1136.3	1136.7	1137.2	1136.9	1135.7	1134.6	1133.4	1132.3
15°	1105.5	1105.1	1104.7	1103.8	1102.3	1100.9	1099.5	1098.0
17.5°	1068.5	1067.4	1066.2	1064.5	1062.4	1060.2	1058.1	1055.9
20°	1042.6	1040.9	1039.3	1037.2	1034.6	1031.9	1029.2	1026.7
22.5°	1013.9	1011.4	1009.0	1006.7	1004.5	1002.4	1000.2	998.1
25°	967.5	964.1	960.6	957.9	955.8	953.8	951.7	949.7
27.5°	920.2	916.0	911.7	908.1	905.2	902.2	899.3	896.4
30°	886.4	881.3	876.2	872.0	868.8	865.6	862.3	859.0
32.5°	851.8	845.9	840.0	835.5	832.4	829.3	826.2	823.1
35°	800.3	793.4	786.5	781.2	777.6	773.9	770.2	766.5
37.5°	745.0	737.3	729.5	723.8	720.2	716.5	712.9	709.2
40°	708.3	699.6	691.1	685.0	681.4	677.7	674.1	670.4
42.5°	672.0	663.3	654.6	648.3	644.5	640.7	636.9	633.0
45°	616.6	606.6	596.6	589.8	586.1	582.5	578.8	575.1
47.5°	560.7	550.4	540.0	532.8	528.8	524.8	520.7	516.7
50°	523.7	513.5	503.3	496.3	492.4	488.5	484.7	480.8
52.5°	486.7	476.4	466.0	458.8	454.8	450.7	446.8	442.7
55°	432.1	421.5	411.0	403.8	399.9	396.1	392.2	388.3
57.5°	378.9	368.2	357.4	350.6	347.7	344.7	341.8	338.9
60°	343.4	332.8	322.2	315.2	312.0	308.8	305.5	302.2
62.5°	308.3	298.6	288.8	282.6	280.0	277.4	274.7	272.2
65°	258.1	249.4	240.6	235.1	232.6	230.1	227.7	225.3
67.5°	212.1	204.6	197.0	191.9	189.2	186.5	183.8	181.2
70°	180.7	174.0	167.3	162.9	160.9	158.9	156.8	154.8
72.5°	152.7	146.9	141.1	137.3	135.5	133.6	131.7	129.8
75°	112.4	107.8	103.1	100.1	98.9	97.7	96.4	95.2
77.5°	79.6	76.8	74.0	72.5	72.2	71.8	71.5	71.0
80°	61.0	60.4	59.8	59.4	59.2	59.0	58.8	58.6
82.5°	47.4	47.0	46.6	46.2	46.1	45.8	45.6	45.5
85°	27.6	27.2	26.8	26.5	26.5	26.5	26.5	26.5
87.5°	14.2	14.3	14.4	14.6	14.8	15.0	15.2	15.5
90°	21.5	22.6	23.8	24.6	25.0	25.4	25.7	26.2
92.5°	20.8	22.0	23.2	23.8	23.8	23.9	24.0	24.1
95°	21.5	22.6	23.8	24.5	24.7	24.9	25.1	25.3
97.5°	23.2	23.4	23.5	23.7	23.8	24.0	24.2	24.5
100°	31.8	28.5	25.2	23.7	23.8	24.0	24.2	24.5
102.5°	113.8	78.3	42.7	25.0	25.0	25.1	25.1	25.1
105°	275.7	277.4	279.1	276.6	269.6	262.6	255.6	248.7
107.5°	341.0	341.9	342.8	343.5	344.3	345.0	345.8	346.5
110°	385.5	385.9	386.2	386.8	387.4	387.9	388.5	389.1



TEST NUMBER: P333065-935

CATALOG NUMBER: S124RDIW-S795D1050U935-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	428.5	428.4	428.3	428.7	429.5	430.2	430.9	431.6
115°	492.8	493.2	493.5	493.8	493.8	493.8	493.8	493.8
117.5°	557.4	557.4	557.3	557.2	557.2	557.1	557.0	556.9
120°	597.4	597.9	598.2	598.2	597.9	597.4	597.1	596.7
122.5°	637.0	637.1	637.4	637.3	637.0	636.5	636.2	635.8
125°	692.1	692.7	693.2	693.6	693.8	694.0	694.2	694.4
127.5°	746.8	746.7	746.6	746.5	746.3	746.1	746.0	745.9
130°	780.2	780.5	780.7	780.8	780.8	780.8	780.8	780.8
132.5°	813.0	813.3	813.5	813.5	813.3	813.1	813.0	812.9
135°	858.3	858.7	859.1	859.5	859.9	860.2	860.7	861.0
137.5°	901.6	902.1	902.5	902.7	902.5	902.4	902.3	902.2
140°	928.5	929.0	929.6	930.1	930.2	930.4	930.6	930.8
142.5°	953.3	953.7	954.2	954.3	954.4	954.4	954.5	954.5
145°	988.8	988.9	989.1	989.5	989.8	990.2	990.6	991.0
147.5°	1019.9	1020.0	1020.2	1020.4	1020.6	1020.8	1021.0	1021.1
150°	1039.8	1039.8	1039.8	1039.9	1040.1	1040.3	1040.5	1040.7
152.5°	1057.2	1057.5	1057.8	1057.9	1057.8	1057.7	1057.6	1057.5
155°	1080.6	1081.4	1082.2	1082.3	1081.7	1081.2	1080.6	1080.0
157.5°	1100.8	1101.8	1102.9	1102.9	1101.8	1100.8	1099.8	1098.8
160°	1113.7	1114.8	1116.0	1116.0	1114.8	1113.7	1112.5	1111.4
162.5°	1124.1	1125.3	1126.4	1126.4	1125.1	1123.8	1122.5	1121.1
165°	1138.9	1140.5	1142.0	1141.9	1140.1	1138.4	1136.7	1134.9
167.5°	1149.7	1151.4	1153.1	1153.0	1151.1	1149.1	1147.2	1145.2
170°	1156.3	1157.9	1159.4	1159.3	1157.3	1155.4	1153.4	1151.5
172.5°	1160.5	1162.1	1163.6	1163.4	1161.2	1159.2	1157.1	1154.9
175°	1165.4	1167.2	1169.0	1168.6	1166.3	1164.0	1161.7	1159.3
177.5°	1167.4	1168.6	1169.9	1169.6	1167.7	1165.9	1164.0	1162.2
180°	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3	1166.3

(END OF REPORT)