

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: P333061-940

Luminaire Tested: **S124RDIW-S795D770U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333061-940
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: S124RDIW-S795D770U940-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5602.0 lumens
Efficiency: N/A
Efficacy: 124.5 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

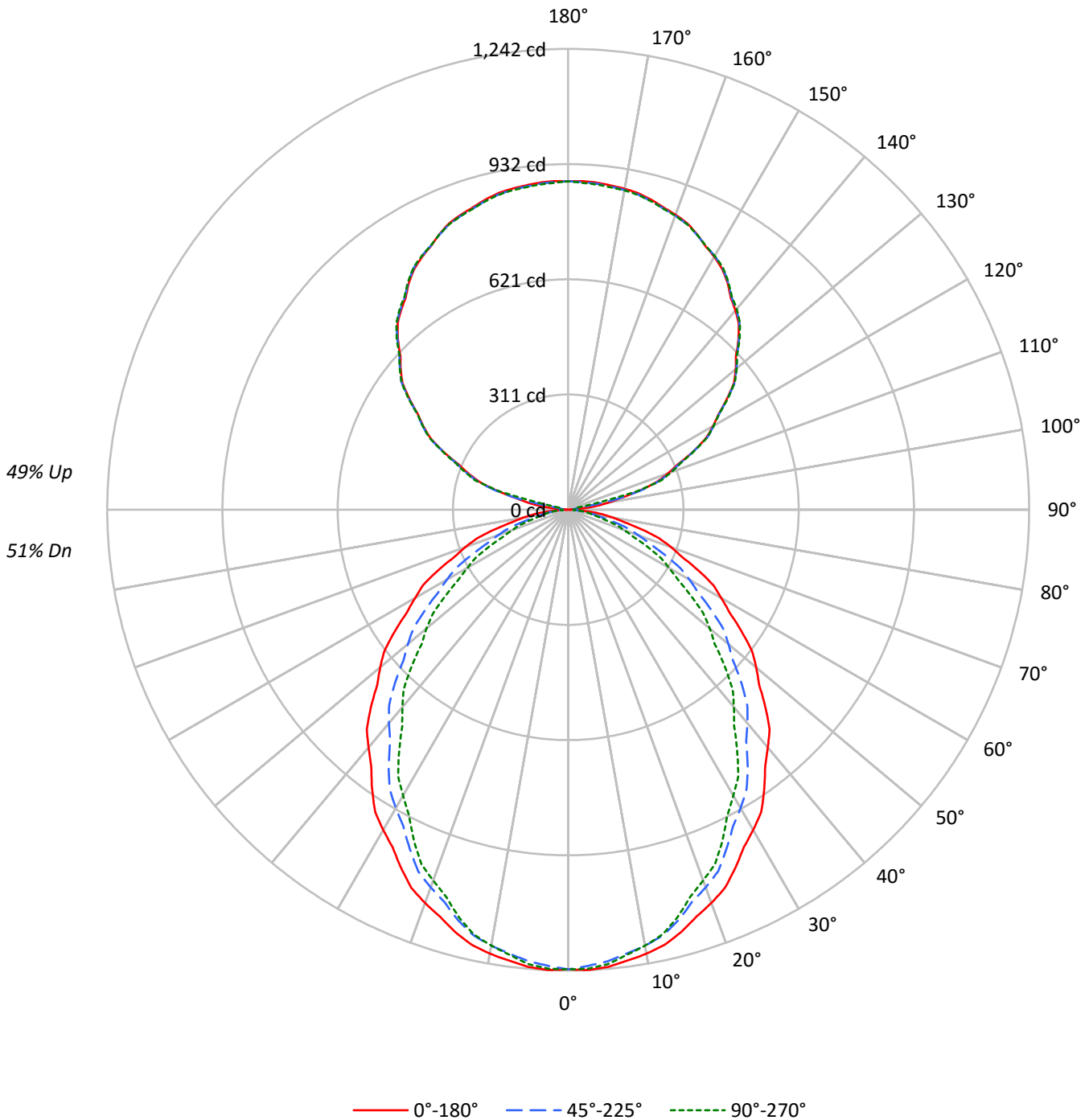
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84		70	70	70		57	57	57	51
1	98	94	90	87	91	87	84	81	74	72	70		62	60	59		51	50	49	44
2	90	82	76	71	83	76	71	67	65	61	58		55	52	50		45	43	42	37
3	82	73	66	60	76	68	61	56	58	53	49		49	45	42		40	38	36	32
4	75	65	57	51	69	60	53	48	51	46	42		43	40	36		36	33	31	27
5	69	58	50	44	64	54	47	41	46	41	36		39	35	32		33	30	27	24
6	64	52	44	38	59	48	41	36	42	36	32		35	31	28		30	26	24	21
7	59	47	39	33	54	44	37	32	38	32	28		32	28	25		27	24	21	19
8	55	43	35	30	51	40	33	28	35	29	25		30	25	22		25	22	19	17
9	51	39	31	26	47	36	30	25	32	26	23		27	23	20		23	20	17	15
10	48	36	29	24	44	33	27	23	29	24	20		25	21	18		21	18	16	14

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	2.1
10°-20°	324.5	5.8
20°-30°	468.6	8.4
30°-40°	531.1	9.5
40°-50°	512.9	9.2
50°-60°	426.5	7.6
60°-70°	294.5	5.3
70°-80°	149.3	2.7
80°-90°	40.9	0.7
90°-100°	30.3	0.5
100°-110°	193.0	3.4
110°-120°	369.2	6.6
120°-130°	468.7	8.4
130°-140°	501.4	9.0
140°-150°	468.9	8.4
150°-160°	378.1	6.7
160°-170°	243.9	4.4
170°-180°	84.1	1.5
0°-30°	909.4	16.2
0°-40°	1440.5	25.7
0°-60°	2379.9	42.5
0°-90°	2864.5	51.1
90°-120°	592.4	10.6
90°-150°	2031.4	36.3
90°-180°	2737.0	48.9
0°-180°	5602.0	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°	2	9	14	18	20	4
95°	36	15	14	18	19	47
105°	199	203	206	211	189	208
115°	372	374	373	375	375	366
125°	523	525	524	526	527	467
135°	649	648	651	652	653	500
145°	748	750	750	751	752	467
155°	820	821	819	821	820	378
165°	865	862	862	866	861	244
175°	885	881	882	887	880	84
180°	885	885	885	885	885	



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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°	17.8	16.9	15.8	14.8	13.7	13.3	13.4	13.4	13.5	13.6	13.6
90°	2.0	3.6	5.3	6.9	8.5	9.9	11.1	12.2	13.4	14.5	15.4
92.5°	8.4	8.5	8.6	8.6	8.6	9.4	10.5	11.7	12.8	14.0	14.9
95°	36.4	31.4	26.4	21.4	16.4	14.0	14.1	14.3	14.4	14.5	15.4
97.5°	77.3	80.4	83.6	86.7	89.8	83.1	66.7	50.3	33.9	17.5	17.6
100°	108.5	111.2	113.9	116.5	119.1	110.3	90.1	69.7	49.4	29.2	26.7
102.5°	143.5	145.4	147.4	149.4	151.2	150.9	148.3	145.6	142.9	140.4	113.3
105°	199.2	200.1	201.0	201.9	202.8	203.6	204.3	205.0	205.8	206.5	207.9
107.5°	251.0	251.5	251.9	252.4	252.8	253.5	254.5	255.5	256.5	257.4	258.2
110°	286.0	286.4	286.9	287.3	287.7	288.4	289.3	290.2	291.1	291.9	292.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	319.9	320.7	321.5	322.2	323.0	323.6	324.0	324.4	324.9	325.3	325.2
115°	372.0	372.5	372.9	373.3	373.7	373.9	373.7	373.6	373.4	373.3	373.6
117.5°	419.0	419.5	420.2	420.7	421.3	421.8	422.1	422.4	422.8	423.1	423.0
120°	450.8	451.4	451.9	452.5	453.1	453.3	453.2	453.1	452.9	452.7	453.1
122.5°	480.5	480.7	481.1	481.4	481.8	482.1	482.3	482.5	482.7	483.0	483.1
125°	522.9	523.5	524.1	524.7	525.2	525.4	525.1	524.9	524.5	524.2	524.7
127.5°	563.1	563.3	563.5	563.6	563.7	564.2	564.8	565.5	566.1	566.9	566.8
130°	589.1	589.2	589.4	589.5	589.7	590.0	590.4	590.8	591.3	591.7	591.9
132.5°	613.0	613.2	613.5	613.7	613.9	614.4	614.9	615.5	616.1	616.6	616.8
135°	648.6	648.5	648.4	648.2	648.1	648.3	648.9	649.4	650.1	650.7	650.9
137.5°	680.3	680.4	680.5	680.5	680.6	680.9	681.5	682.2	682.9	683.5	683.8
140°	701.0	701.2	701.5	701.9	702.1	702.4	702.8	703.0	703.3	703.6	704.0
142.5°	719.5	720.1	720.6	721.0	721.6	721.9	722.1	722.3	722.5	722.6	723.0
145°	748.0	748.4	748.9	749.3	749.8	749.9	749.9	749.9	749.9	749.9	750.1
147.5°	770.6	771.4	772.2	773.0	773.9	774.2	774.1	773.9	773.7	773.6	773.7
150°	787.0	787.6	788.2	788.8	789.3	789.6	789.4	789.3	789.2	789.0	789.0
152.5°	800.8	801.2	801.7	802.2	802.6	802.7	802.5	802.3	802.0	801.7	801.9
155°	820.1	820.3	820.4	820.6	820.7	820.6	820.1	819.7	819.2	818.8	819.4
157.5°	836.4	836.3	836.2	836.2	836.1	835.7	835.3	834.7	834.2	833.7	834.5
160°	845.9	845.4	845.1	844.6	844.2	843.8	843.7	843.6	843.4	843.3	844.2
162.5°	854.3	853.8	853.3	852.7	852.1	851.8	851.7	851.5	851.3	851.2	852.1
165°	865.1	864.3	863.6	862.9	862.2	861.8	861.8	861.8	861.8	861.8	863.0
167.5°	873.6	872.8	872.1	871.3	870.5	870.1	870.0	870.0	869.9	869.8	871.0
170°	878.3	877.4	876.6	875.7	874.9	874.4	874.6	874.8	874.9	875.0	876.2
172.5°	881.5	880.7	879.8	878.9	878.0	877.6	877.8	877.9	878.1	878.2	879.4
175°	884.9	884.0	883.2	882.3	881.5	881.1	881.2	881.4	881.5	881.6	883.0
177.5°	886.5	885.7	884.9	884.0	883.2	883.0	883.2	883.4	883.7	883.9	884.8
180°	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9



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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°	13.6	13.6	13.6	13.6	13.9	14.2	14.4	14.6
90°	16.3	17.2	18.1	18.6	19.0	19.3	19.5	19.9
92.5°	15.8	16.7	17.6	18.0	18.1	18.2	18.2	18.3
95°	16.3	17.2	18.1	18.6	18.7	18.9	19.1	19.2
97.5°	17.7	17.7	17.8	17.9	18.1	18.3	18.4	18.5
100°	24.2	21.6	19.1	17.9	18.1	18.3	18.4	18.5
102.5°	86.4	59.4	32.5	18.9	19.0	19.0	19.0	19.1
105°	209.2	210.4	211.8	209.8	204.6	199.2	193.9	188.7
107.5°	258.8	259.4	260.1	260.6	261.3	261.8	262.3	262.9
110°	292.5	292.7	293.1	293.5	293.9	294.4	294.8	295.2



TEST NUMBER: P333061-940

CATALOG NUMBER: S124RDIW-S795D770U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	325.1	325.1	325.0	325.3	325.8	326.4	327.0	327.5
115°	373.9	374.2	374.5	374.6	374.6	374.6	374.6	374.6
117.5°	422.9	422.9	422.8	422.8	422.8	422.7	422.6	422.6
120°	453.3	453.6	453.9	453.9	453.6	453.3	453.1	452.7
122.5°	483.3	483.5	483.7	483.6	483.3	483.0	482.7	482.4
125°	525.1	525.6	526.0	526.3	526.5	526.6	526.7	526.9
127.5°	566.7	566.6	566.5	566.4	566.3	566.1	566.1	566.0
130°	592.0	592.2	592.4	592.4	592.4	592.4	592.4	592.4
132.5°	616.9	617.1	617.2	617.2	617.2	617.0	616.9	616.8
135°	651.2	651.6	651.8	652.1	652.4	652.7	653.0	653.3
137.5°	684.1	684.5	684.7	684.9	684.8	684.7	684.7	684.6
140°	704.5	704.9	705.3	705.7	705.8	706.0	706.1	706.2
142.5°	723.4	723.6	724.0	724.2	724.2	724.2	724.2	724.2
145°	750.2	750.4	750.6	750.7	751.0	751.4	751.6	751.9
147.5°	773.8	774.0	774.1	774.3	774.4	774.5	774.7	774.8
150°	789.0	789.0	789.0	789.1	789.3	789.3	789.5	789.6
152.5°	802.2	802.4	802.6	802.7	802.6	802.5	802.5	802.4
155°	819.9	820.6	821.1	821.2	820.7	820.3	819.8	819.5
157.5°	835.3	836.1	836.8	836.8	836.1	835.3	834.5	833.7
160°	845.1	845.9	846.8	846.8	845.9	845.1	844.2	843.3
162.5°	853.0	853.8	854.7	854.7	853.7	852.7	851.7	850.7
165°	864.2	865.3	866.5	866.5	865.1	863.8	862.5	861.1
167.5°	872.4	873.6	874.9	874.9	873.3	871.9	870.4	869.0
170°	877.4	878.6	879.8	879.6	878.2	876.6	875.2	873.7
172.5°	880.6	881.7	882.9	882.7	881.1	879.6	878.0	876.4
175°	884.3	885.6	887.0	886.7	884.9	883.2	881.5	879.7
177.5°	885.8	886.7	887.7	887.4	886.0	884.6	883.2	881.8
180°	884.9	884.9	884.9	884.9	884.9	884.9	884.9	884.9

(END OF REPORT)