

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: P333057-940

Luminaire Tested: **S124RDIW-S795D470U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333057-940
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-S795D470U940-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4534.9 lumens
Efficiency: N/A
Efficacy: 120.3 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-Direct

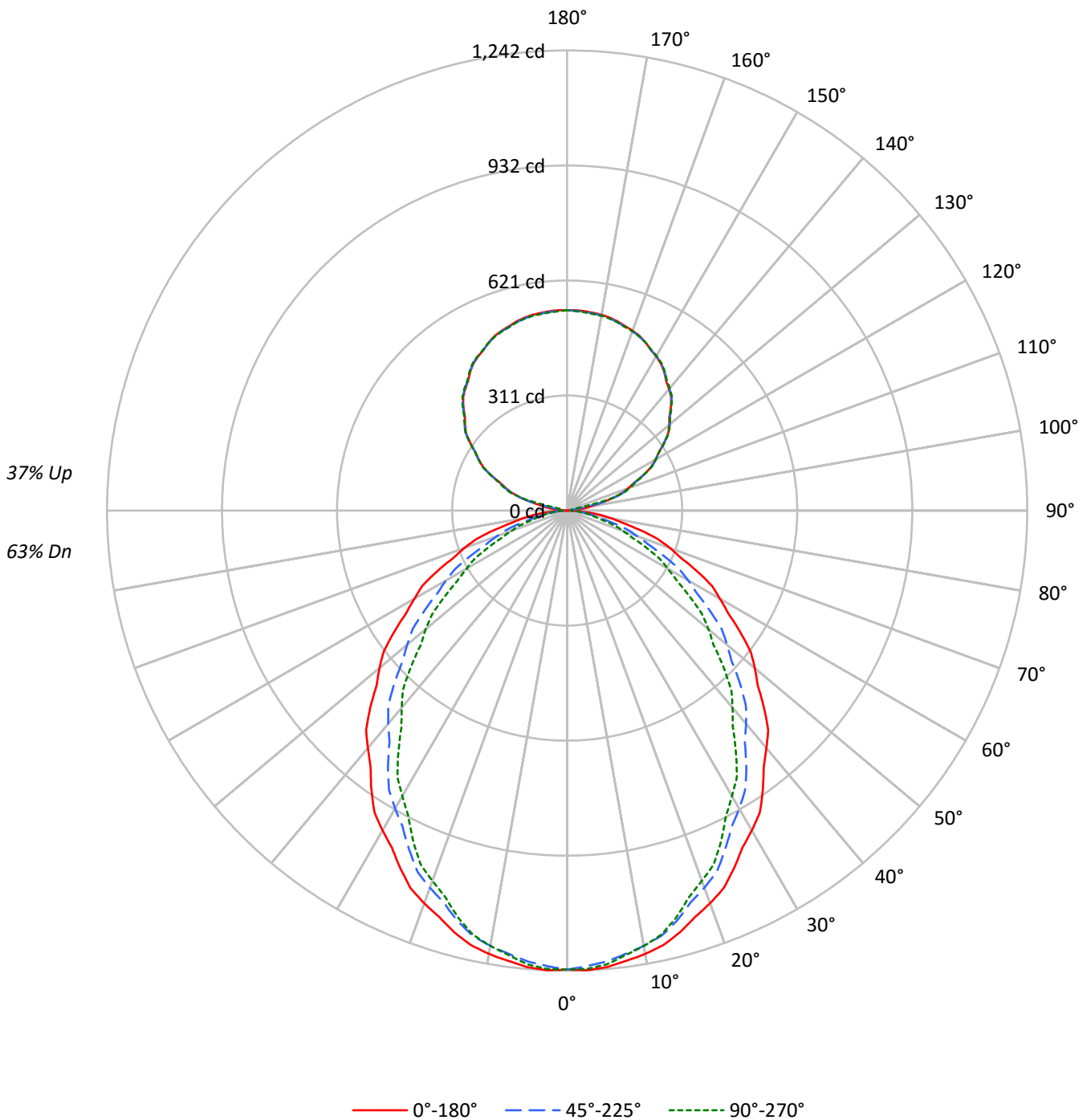
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68
1	101	97	93	90	95	91	88	85	80	78	75	70	68	67	61	60	58
2	92	85	79	74	86	80	75	70	71	66	63	62	59	56	54	52	50
3	84	75	68	62	79	71	64	59	63	57	53	55	51	48	48	45	43
4	77	67	59	53	72	63	56	50	56	50	46	49	45	41	43	40	37
5	71	60	51	45	67	56	49	43	50	44	40	44	40	36	39	35	32
6	66	54	45	40	62	51	43	38	45	39	35	40	35	32	36	32	29
7	61	49	41	35	57	46	39	34	41	35	31	37	32	28	33	29	26
8	57	44	36	31	53	42	35	30	38	32	28	34	29	25	30	26	23
9	53	41	33	28	50	39	32	27	35	29	25	31	26	23	28	24	21
10	49	37	30	25	47	36	29	24	32	26	23	29	24	21	26	22	19

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	2.6
10°-20°	324.5	7.2
20°-30°	468.6	10.3
30°-40°	531.1	11.7
40°-50°	512.9	11.3
50°-60°	426.5	9.4
60°-70°	294.5	6.5
70°-80°	149.3	3.3
80°-90°	39.9	0.9
90°-100°	18.5	0.4
100°-110°	117.8	2.6
110°-120°	225.4	5.0
120°-130°	286.1	6.3
130°-140°	306.1	6.8
140°-150°	286.3	6.3
150°-160°	230.9	5.1
160°-170°	148.9	3.3
170°-180°	51.3	1.1
0°-30°	909.4	20.1
0°-40°	1440.5	31.8
0°-60°	2379.9	52.5
0°-90°	2863.5	63.1
90°-120°	361.7	8.0
90°-150°	1240.3	27.3
90°-180°	1671.0	36.8
0°-180°	4534.9	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°	1	6	9	11	12	3
95°	22	9	9	11	12	29
105°	122	124	126	129	115	127
115°	227	228	228	229	229	223
125°	319	321	320	321	322	285
135°	396	396	397	398	399	305
145°	457	458	458	458	459	285
155°	501	501	500	501	500	231
165°	528	526	526	529	526	149
175°	540	538	538	541	537	51
180°	540	540	540	540	540	



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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°	17.7	16.6	15.4	14.3	13.1	12.5	12.5	12.5	12.4	12.4	12.3
90°	1.2	2.2	3.2	4.2	5.2	6.0	6.8	7.5	8.2	8.9	9.5
92.5°	5.1	5.2	5.2	5.3	5.4	5.7	6.4	7.1	7.8	8.6	9.1
95°	22.2	19.2	16.1	13.1	10.0	8.6	8.6	8.7	8.8	8.9	9.5
97.5°	47.2	49.1	51.0	52.9	54.8	50.7	40.8	30.7	20.7	10.7	10.7
100°	66.3	67.9	69.6	71.2	72.8	67.3	54.9	42.5	30.1	17.7	16.2
102.5°	87.7	88.8	90.0	91.1	92.4	92.1	90.5	88.9	87.3	85.7	69.2
105°	121.6	122.2	122.7	123.2	123.8	124.3	124.8	125.2	125.6	126.1	126.9
107.5°	153.3	153.6	153.8	154.1	154.4	154.8	155.3	156.0	156.6	157.2	157.6
110°	174.6	174.9	175.1	175.4	175.7	176.0	176.6	177.2	177.7	178.3	178.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	195.3	195.7	196.3	196.7	197.2	197.6	197.9	198.0	198.3	198.6	198.6
115°	227.1	227.4	227.7	227.9	228.2	228.3	228.2	228.1	228.0	227.9	228.1
117.5°	255.8	256.2	256.5	256.9	257.3	257.5	257.7	257.9	258.2	258.3	258.2
120°	275.2	275.5	275.9	276.3	276.6	276.8	276.7	276.6	276.5	276.4	276.6
122.5°	293.3	293.6	293.7	294.0	294.2	294.4	294.4	294.6	294.7	294.9	295.0
125°	319.2	319.6	319.9	320.3	320.7	320.7	320.6	320.4	320.2	320.0	320.3
127.5°	343.8	343.9	344.0	344.1	344.2	344.5	344.8	345.3	345.7	346.1	346.1
130°	359.6	359.7	359.9	360.0	360.1	360.3	360.5	360.8	361.1	361.3	361.4
132.5°	374.3	374.3	374.5	374.7	374.9	375.1	375.5	375.8	376.1	376.5	376.6
135°	396.0	395.9	395.8	395.7	395.7	395.8	396.2	396.5	396.9	397.3	397.4
137.5°	415.4	415.4	415.4	415.4	415.5	415.7	416.1	416.5	416.9	417.3	417.5
140°	427.9	428.1	428.3	428.5	428.6	428.8	429.0	429.3	429.4	429.6	429.9
142.5°	439.3	439.6	440.0	440.2	440.6	440.8	440.9	441.0	441.1	441.2	441.4
145°	456.6	456.9	457.2	457.4	457.7	457.9	457.9	457.9	457.9	457.9	458.0
147.5°	470.5	471.0	471.4	472.0	472.5	472.7	472.6	472.5	472.4	472.3	472.4
150°	480.5	480.9	481.3	481.6	482.0	482.1	482.0	481.9	481.8	481.7	481.7
152.5°	488.9	489.2	489.5	489.7	490.1	490.1	490.0	489.8	489.6	489.5	489.6
155°	500.7	500.8	500.9	501.0	501.1	501.0	500.7	500.4	500.2	499.9	500.2
157.5°	510.7	510.6	510.5	510.5	510.4	510.2	510.0	509.6	509.3	509.1	509.5
160°	516.5	516.2	515.9	515.7	515.4	515.2	515.1	515.1	515.0	514.9	515.4
162.5°	521.7	521.3	520.9	520.6	520.3	520.0	520.0	519.9	519.8	519.7	520.2
165°	528.2	527.7	527.3	526.8	526.4	526.2	526.2	526.2	526.2	526.2	526.9
167.5°	533.3	532.9	532.4	532.0	531.5	531.2	531.2	531.1	531.1	531.0	531.8
170°	536.3	535.7	535.2	534.7	534.1	533.9	534.0	534.0	534.1	534.2	534.9
172.5°	538.2	537.7	537.2	536.6	536.1	535.8	535.9	536.0	536.1	536.2	536.9
175°	540.3	539.8	539.2	538.7	538.1	538.0	538.1	538.1	538.2	538.3	539.1
177.5°	541.3	540.8	540.3	539.8	539.3	539.1	539.2	539.4	539.5	539.7	540.2
180°	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3



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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°	12.3	12.2	12.1	12.2	12.4	12.7	12.8	13.0
90°	10.0	10.5	11.1	11.4	11.6	11.8	11.9	12.1
92.5°	9.6	10.2	10.7	11.0	11.1	11.1	11.1	11.1
95°	10.0	10.5	11.1	11.3	11.4	11.5	11.6	11.7
97.5°	10.8	10.8	10.9	11.0	11.1	11.1	11.2	11.3
100°	14.7	13.2	11.7	11.0	11.1	11.1	11.2	11.3
102.5°	52.7	36.3	19.8	11.6	11.6	11.6	11.6	11.7
105°	127.7	128.5	129.3	128.1	124.8	121.6	118.4	115.2
107.5°	158.0	158.4	158.8	159.2	159.5	159.8	160.2	160.5
110°	178.6	178.8	179.0	179.1	179.4	179.7	179.9	180.2



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CATALOG NUMBER: S124RDIW-S795D470U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	198.5	198.5	198.4	198.6	198.9	199.3	199.7	199.9
115°	228.3	228.5	228.6	228.7	228.7	228.7	228.7	228.7
117.5°	258.2	258.2	258.2	258.2	258.1	258.1	258.1	258.0
120°	276.8	277.0	277.1	277.1	277.0	276.8	276.6	276.4
122.5°	295.1	295.2	295.2	295.2	295.1	294.9	294.7	294.5
125°	320.6	320.8	321.1	321.3	321.4	321.5	321.6	321.6
127.5°	346.0	345.9	345.9	345.8	345.7	345.6	345.6	345.5
130°	361.5	361.6	361.7	361.7	361.7	361.7	361.7	361.7
132.5°	376.7	376.7	376.8	376.8	376.7	376.7	376.7	376.6
135°	397.6	397.8	398.0	398.1	398.3	398.5	398.7	398.9
137.5°	417.7	417.9	418.1	418.1	418.1	418.0	418.0	417.9
140°	430.2	430.4	430.7	430.9	431.0	431.1	431.1	431.2
142.5°	441.6	441.8	442.0	442.1	442.1	442.2	442.2	442.2
145°	458.1	458.2	458.3	458.3	458.5	458.7	458.9	459.1
147.5°	472.5	472.5	472.6	472.7	472.8	472.9	473.0	473.1
150°	481.7	481.7	481.7	481.8	481.9	482.0	482.1	482.1
152.5°	489.7	489.9	490.1	490.1	490.1	490.0	489.9	489.9
155°	500.6	501.0	501.3	501.4	501.1	500.9	500.6	500.3
157.5°	510.0	510.4	510.9	510.9	510.4	510.0	509.5	509.1
160°	515.9	516.5	517.0	517.0	516.5	515.9	515.4	514.9
162.5°	520.8	521.3	521.8	521.8	521.2	520.6	520.0	519.4
165°	527.6	528.3	529.1	529.0	528.2	527.4	526.6	525.8
167.5°	532.6	533.4	534.2	534.1	533.2	532.4	531.5	530.6
170°	535.7	536.4	537.2	537.1	536.1	535.2	534.3	533.4
172.5°	537.6	538.3	539.0	539.0	538.0	537.0	536.0	535.0
175°	539.9	540.7	541.5	541.4	540.3	539.2	538.1	537.1
177.5°	540.8	541.4	542.0	541.8	541.0	540.1	539.2	538.4
180°	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3

(END OF REPORT)