

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: P331848-927

Luminaire Tested: **S122RDIW-S1005D435U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331848-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S1005D435U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3950.1 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

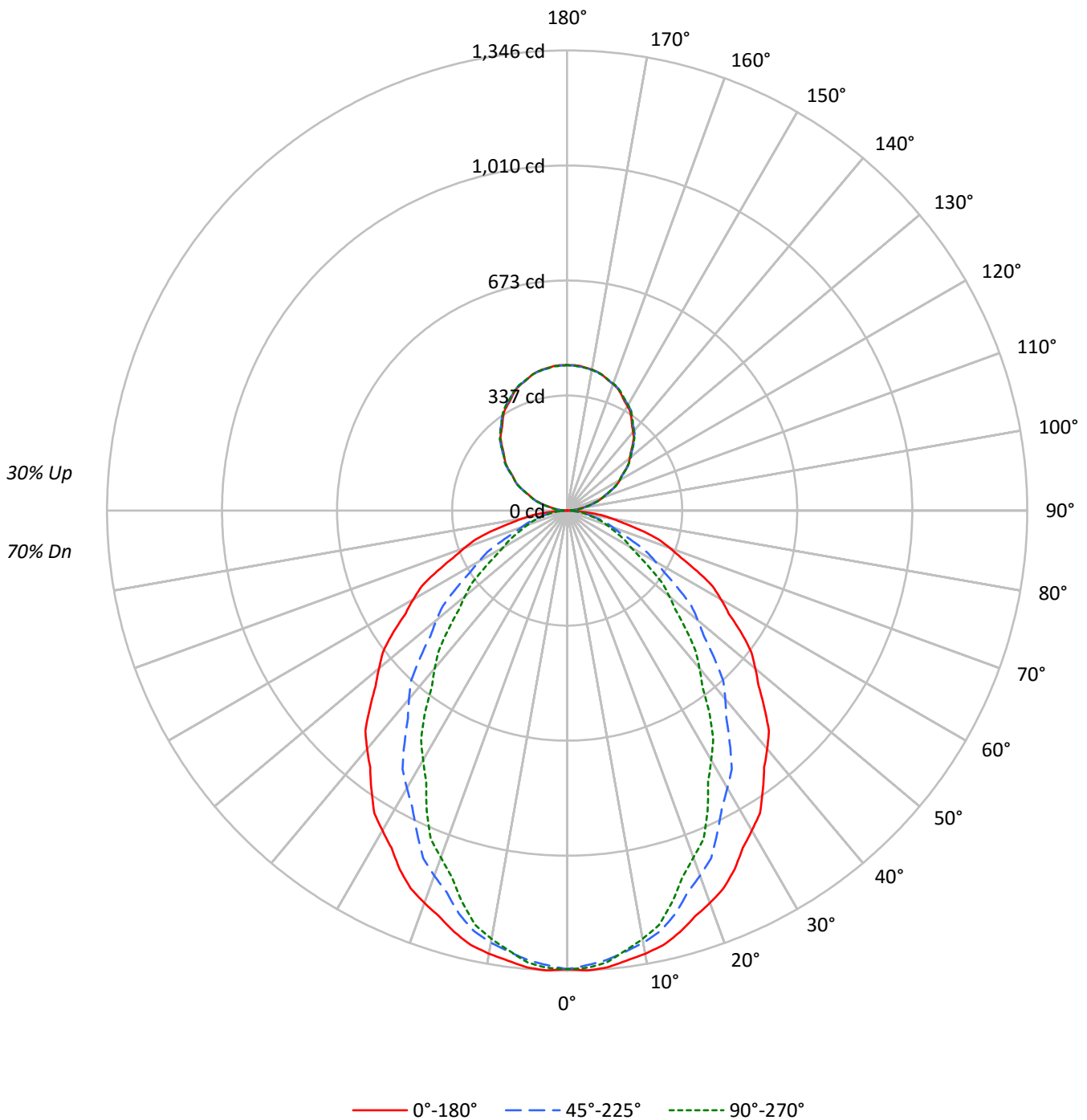
Input Watts (W): 52.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74	70
1	103	99	95	92	97	94	90	87	84	81	79	75	73	71	67	65	64	60
2	94	87	81	76	89	83	77	73	74	70	67	67	63	61	60	57	55	52
3	86	77	70	64	82	73	67	62	66	61	57	60	56	52	53	50	48	44
4	80	69	61	55	75	66	58	53	59	54	49	54	49	45	48	45	42	39
5	73	62	54	48	69	59	52	46	54	48	43	49	44	40	44	40	37	34
6	68	56	48	42	64	53	46	41	49	42	38	44	39	35	40	36	33	30
7	63	51	43	37	60	49	41	36	44	38	34	40	35	32	37	33	29	27
8	59	46	39	33	56	44	37	32	41	35	30	37	32	28	34	30	27	24
9	55	43	35	30	52	41	34	29	38	32	27	34	29	26	31	27	24	22
10	51	39	32	27	49	38	31	26	35	29	25	32	27	24	29	25	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21660	21660	21660
5°	21742	21389	21507
10°	21577	21040	20859
15°	21329	20415	19826
20°	20984	19524	18545
25°	20633	18513	17302
30°	20144	17473	15709
35°	19669	16344	14310
40°	19191	15173	12690
45°	18630	13860	11227
50°	18053	12534	9789
55°	17464	11108	8408
60°	16779	9607	6978
65°	16000	8073	6357
70°	15073	6652	5844
75°	13936	6057	5452
80°	12301	5421	4965
85°	9670	4279	4279



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.6	3.2
10°-20°	344.8	8.7
20°-30°	484.2	12.3
30°-40°	528.0	13.4
40°-50°	485.4	12.3
50°-60°	381.3	9.7
60°-70°	248.6	6.3
70°-80°	128.2	3.2
80°-90°	35.0	0.9
90°-100°	27.0	0.7
100°-110°	83.7	2.1
110°-120°	143.1	3.6
120°-130°	188.1	4.8
130°-140°	211.2	5.3
140°-150°	207.1	5.2
150°-160°	173.7	4.4
160°-170°	115.2	2.9
170°-180°	40.3	1.0
0°-30°	954.5	24.2
0°-40°	1482.5	37.5
0°-60°	2349.2	59.5
0°-90°	2760.9	69.9
90°-120°	253.7	6.4
90°-150°	860.1	21.8
90°-180°	1189.0	30.1
0°-180°	3950.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1342	1335	1320	1330	1327	127
15°	1276	1261	1221	1199	1186	359
25°	1158	1117	1039	991	971	532
35°	998	934	829	755	726	624
45°	816	732	607	524	492	630
55°	620	524	395	324	299	554
65°	419	320	211	172	166	415
75°	223	141	97	89	87	236
85°	52	28	23	23	23	62
90°	0	5	13	12	12	3
95°	19	22	23	23	22	21
105°	77	78	79	80	80	82
115°	144	146	145	145	144	142
125°	209	212	211	210	210	187
135°	270	274	275	274	274	209
145°	328	331	333	333	332	205
155°	375	376	377	379	378	173
165°	408	408	408	410	408	115
175°	425	424	423	425	423	40
180°	425	425	425	425	425	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1346.4	1345.3	1344.2	1343.1	1342.0	1340.3	1337.9	1335.6	1333.2	1330.9	1333.0
5°	1341.5	1340.1	1338.8	1337.4	1336.1	1333.7	1330.2	1326.7	1323.2	1319.7	1322.1
7.5°	1327.7	1326.0	1324.4	1322.6	1321.0	1318.1	1314.0	1309.9	1305.8	1301.7	1302.4
10°	1316.1	1314.2	1312.2	1310.3	1308.4	1304.8	1299.4	1294.0	1288.6	1283.3	1282.5
12.5°	1301.5	1299.1	1296.8	1294.5	1292.2	1287.5	1280.6	1273.7	1266.9	1260.0	1258.5
15°	1276.0	1273.0	1270.0	1267.0	1264.1	1258.0	1248.9	1239.7	1230.5	1221.3	1216.2
17.5°	1244.6	1240.1	1235.6	1231.1	1226.5	1218.4	1206.6	1194.8	1183.0	1171.3	1165.2
20°	1221.3	1215.9	1210.5	1205.1	1199.8	1190.3	1176.8	1163.3	1149.9	1136.3	1129.6
22.5°	1196.0	1190.0	1184.0	1178.0	1171.9	1161.3	1146.1	1130.8	1115.6	1100.4	1091.7
25°	1158.2	1149.5	1140.9	1132.3	1123.6	1110.5	1092.7	1074.8	1057.0	1039.2	1028.2
27.5°	1112.5	1103.2	1093.8	1084.4	1075.0	1060.3	1040.2	1020.1	1000.1	980.0	967.1
30°	1080.5	1070.2	1060.0	1049.7	1039.5	1023.6	1002.0	980.4	958.9	937.2	923.4
32.5°	1049.4	1037.4	1025.5	1013.5	1001.5	984.5	962.5	940.5	918.5	896.4	880.7
35°	997.9	984.2	970.4	956.6	942.9	924.2	900.4	876.7	852.9	829.2	812.2
37.5°	946.5	931.4	916.2	901.1	886.1	865.9	840.5	815.2	789.9	764.6	745.9
40°	910.5	894.4	878.1	862.0	845.8	824.6	798.4	772.3	746.1	719.9	700.8
42.5°	873.6	856.6	839.6	822.4	805.4	783.4	756.4	729.3	702.3	675.3	655.5
45°	815.9	797.7	779.7	761.6	743.5	720.3	692.0	663.7	635.3	607.0	587.9
47.5°	759.5	740.4	721.2	702.0	682.9	658.7	629.5	600.2	570.9	541.7	522.7
50°	718.7	699.6	680.4	661.2	642.1	617.7	588.0	558.3	528.6	499.0	480.4
52.5°	678.9	658.9	638.9	618.9	598.8	574.3	545.3	516.3	487.2	458.2	440.2
55°	620.4	599.4	578.3	557.2	536.2	511.1	482.0	452.8	423.7	394.6	378.3
57.5°	560.4	538.8	517.2	495.7	474.0	449.2	421.3	393.2	365.3	337.2	322.4
60°	519.6	498.0	476.4	454.9	433.2	408.6	380.8	353.0	325.2	297.5	283.7
62.5°	479.8	458.2	436.7	415.0	393.5	369.4	342.9	316.4	289.9	263.5	250.3
65°	418.8	397.0	375.2	353.3	331.4	308.4	284.1	259.8	235.5	211.3	202.1
67.5°	360.0	338.4	316.7	295.0	273.3	251.5	229.7	207.9	186.0	164.1	159.9
70°	319.3	298.3	277.2	256.2	235.1	215.3	196.7	178.1	159.5	140.9	138.2
72.5°	280.4	260.2	240.1	219.9	199.7	182.1	167.2	152.3	137.3	122.4	120.1
75°	223.4	204.5	185.6	166.8	147.8	133.8	124.6	115.5	106.3	97.1	95.2
77.5°	167.3	150.8	134.2	117.6	101.0	90.5	86.1	81.7	77.2	72.9	71.8
80°	132.3	118.6	104.8	91.0	77.3	69.1	66.4	63.7	61.0	58.3	57.2
82.5°	100.3	89.5	78.8	68.0	57.4	51.0	49.2	47.4	45.6	43.7	43.1
85°	52.2	46.5	40.9	35.2	29.5	26.3	25.5	24.7	23.8	23.1	23.1
87.5°	15.6	14.1	12.5	11.0	9.5	8.9	9.3	9.6	9.9	10.3	10.1
90°	0.4	1.3	2.3	3.2	4.2	5.5	7.3	9.0	10.8	12.6	12.4
92.5°	6.4	7.1	7.8	8.5	9.2	9.7	10.1	10.6	11.0	11.4	11.4
95°	18.7	19.5	20.3	21.1	21.9	22.3	22.5	22.7	22.8	23.0	23.0
97.5°	34.1	34.8	35.5	36.2	36.9	37.4	37.7	38.0	38.3	38.6	38.6
100°	45.6	46.2	46.8	47.5	48.2	48.6	48.8	49.0	49.3	49.5	49.5
102.5°	57.7	58.1	58.6	59.2	59.7	60.1	60.4	60.7	61.0	61.3	61.4
105°	77.2	77.4	77.6	77.9	78.1	78.3	78.5	78.7	78.8	79.0	79.1
107.5°	96.8	97.2	97.5	97.9	98.2	98.4	98.4	98.4	98.4	98.4	98.5
110°	109.5	110.0	110.4	110.9	111.4	111.6	111.6	111.6	111.6	111.6	111.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	123.3	123.7	124.2	124.7	125.2	125.4	125.3	125.2	125.2	125.1	124.9
115°	143.5	144.0	144.5	145.0	145.4	145.6	145.4	145.3	145.1	145.0	144.9
117.5°	163.8	164.5	165.1	165.7	166.4	166.4	166.0	165.6	165.1	164.7	164.5
120°	177.3	177.9	178.6	179.2	179.8	179.8	179.2	178.6	177.9	177.3	177.3
122.5°	189.6	190.4	191.2	191.9	192.7	192.9	192.4	191.9	191.5	191.1	190.9
125°	208.9	209.6	210.3	211.0	211.8	212.0	211.8	211.5	211.3	211.0	210.8
127.5°	227.6	228.5	229.4	230.4	231.2	231.6	231.3	231.0	230.7	230.4	230.1
130°	239.4	240.4	241.5	242.5	243.5	244.0	243.8	243.7	243.5	243.4	243.2
132.5°	252.6	253.4	254.3	255.2	256.0	256.4	256.4	256.5	256.5	256.5	256.2
135°	270.3	271.2	272.0	272.9	273.8	274.3	274.4	274.6	274.7	274.9	274.8
137.5°	288.8	289.5	290.3	291.0	291.7	292.2	292.4	292.6	292.8	293.0	292.9
140°	300.1	300.8	301.5	302.2	302.9	303.5	303.9	304.3	304.7	305.1	305.1
142.5°	311.6	312.3	313.0	313.7	314.4	314.9	315.1	315.4	315.7	316.0	316.1
145°	328.0	328.6	329.2	329.7	330.3	330.8	331.3	331.8	332.2	332.7	332.8
147.5°	342.8	343.4	344.1	344.8	345.5	345.9	346.3	346.6	346.9	347.2	347.4
150°	352.8	353.3	353.8	354.3	354.7	355.1	355.5	355.8	356.1	356.4	356.6
152.5°	361.7	362.2	362.7	363.1	363.6	364.1	364.4	364.8	365.2	365.6	365.9
155°	375.0	375.3	375.5	375.8	376.0	376.3	376.5	376.8	377.0	377.2	377.6
157.5°	386.5	386.7	386.8	387.0	387.1	387.2	387.4	387.5	387.7	387.9	388.4
160°	393.4	393.6	393.7	393.9	394.0	394.1	394.2	394.3	394.3	394.4	394.9
162.5°	399.7	399.7	399.7	399.7	399.8	399.9	400.0	400.1	400.1	400.2	400.7
165°	408.1	408.0	407.9	407.8	407.7	407.7	407.7	407.7	407.7	407.7	408.3
167.5°	415.1	414.9	414.6	414.4	414.2	414.0	414.0	414.0	414.0	414.0	414.5
170°	418.8	418.6	418.4	418.1	417.9	417.7	417.6	417.6	417.5	417.4	418.0
172.5°	421.4	421.2	421.0	420.7	420.5	420.3	420.3	420.2	420.1	420.0	420.6
175°	424.6	424.4	424.1	423.9	423.7	423.4	423.3	423.1	422.9	422.8	423.3
177.5°	425.9	425.7	425.5	425.3	425.1	424.9	424.8	424.7	424.5	424.5	424.8
180°	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5	1341.5
2.5°	1335.1	1337.3	1339.5	1340.3	1339.9	1339.5	1339.0	1338.6
5°	1324.5	1327.0	1329.4	1330.2	1329.4	1328.6	1327.8	1327.0
7.5°	1303.1	1303.8	1304.5	1304.2	1302.7	1301.3	1300.0	1298.5
10°	1281.6	1280.8	1280.0	1278.8	1277.2	1275.6	1273.9	1272.3
12.5°	1257.0	1255.5	1254.1	1252.0	1249.4	1246.7	1244.0	1241.3
15°	1211.1	1205.9	1200.8	1196.9	1194.2	1191.5	1188.8	1186.1
17.5°	1159.1	1153.0	1146.9	1141.5	1136.9	1132.3	1127.6	1123.0
20°	1122.8	1116.1	1109.4	1103.0	1097.1	1091.2	1085.2	1079.3
22.5°	1083.1	1074.4	1065.6	1059.1	1054.7	1050.3	1045.8	1041.4
25°	1017.1	1006.1	995.0	987.5	983.3	979.3	975.3	971.2
27.5°	954.2	941.3	928.4	918.7	912.3	905.9	899.4	893.0
30°	909.7	896.0	882.2	871.7	864.4	857.1	849.9	842.6
32.5°	865.1	849.4	833.6	822.4	815.6	808.7	801.8	795.0
35°	795.2	778.2	761.2	749.7	743.8	737.8	731.9	726.0
37.5°	727.1	708.4	689.7	676.9	670.2	663.4	656.6	649.7
40°	681.6	662.4	643.3	630.3	623.2	616.2	609.2	602.1
42.5°	635.6	615.8	596.0	582.7	575.9	569.1	562.4	555.6
45°	568.7	549.5	530.4	517.6	511.1	504.6	498.1	491.7
47.5°	503.6	484.6	465.5	453.0	447.2	441.3	435.4	429.5
50°	461.8	443.1	424.5	412.3	406.7	401.0	395.4	389.7
52.5°	422.2	404.3	386.3	374.7	369.5	364.2	359.0	353.8
55°	362.2	346.0	329.8	319.2	314.0	308.9	303.8	298.7
57.5°	307.6	292.7	277.9	268.3	264.0	259.7	255.4	251.0
60°	269.9	256.2	242.4	233.4	229.0	224.7	220.4	216.1
62.5°	237.3	224.1	211.0	203.1	200.6	198.0	195.4	192.8
65°	192.9	183.7	174.5	169.5	168.7	167.9	167.2	166.4
67.5°	155.7	151.5	147.3	144.7	143.9	143.1	142.2	141.3
70°	135.5	132.8	130.1	128.2	127.1	126.0	124.9	123.8
72.5°	117.9	115.6	113.3	111.9	111.2	110.6	109.9	109.2
75°	93.3	91.5	89.6	88.5	88.2	87.9	87.7	87.4
77.5°	70.7	69.6	68.5	67.7	67.3	66.9	66.5	66.1
80°	56.1	55.1	53.9	53.4	53.4	53.4	53.4	53.4
82.5°	42.4	41.7	41.1	40.8	40.8	40.8	40.8	40.8
85°	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1
87.5°	9.8	9.5	9.3	9.2	9.2	9.2	9.2	9.3
90°	12.3	12.1	12.0	11.9	12.0	12.0	12.1	12.2
92.5°	11.5	11.5	11.6	11.6	11.6	11.6	11.6	11.6
95°	23.0	23.0	23.0	22.9	22.7	22.6	22.4	22.3
97.5°	38.6	38.6	38.6	38.6	38.6	38.6	38.6	38.6
100°	49.5	49.5	49.5	49.5	49.4	49.4	49.3	49.2
102.5°	61.4	61.5	61.6	61.6	61.5	61.4	61.3	61.2
105°	79.3	79.5	79.6	79.7	79.7	79.7	79.7	79.7
107.5°	98.5	98.6	98.7	98.5	98.2	97.8	97.4	97.0
110°	111.6	111.6	111.6	111.5	111.2	111.0	110.7	110.5



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CATALOG NUMBER: S122RDIW-S1005D435U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	124.8	124.5	124.4	124.1	124.0	123.8	123.7	123.5
115°	144.8	144.7	144.7	144.5	144.3	144.0	143.8	143.5
117.5°	164.3	164.1	163.9	163.7	163.4	163.2	163.0	162.7
120°	177.3	177.3	177.3	177.2	177.0	176.7	176.5	176.3
122.5°	190.7	190.5	190.3	190.1	190.0	189.8	189.6	189.4
125°	210.6	210.3	210.1	209.9	209.8	209.8	209.7	209.6
127.5°	229.8	229.6	229.3	229.0	228.7	228.5	228.2	228.0
130°	243.0	242.9	242.7	242.5	242.2	241.9	241.5	241.2
132.5°	255.9	255.5	255.2	254.8	254.6	254.3	254.1	253.8
135°	274.7	274.6	274.6	274.4	274.2	273.9	273.7	273.5
137.5°	292.9	292.8	292.8	292.6	292.2	291.9	291.6	291.3
140°	305.1	305.1	305.1	304.9	304.6	304.3	304.0	303.6
142.5°	316.1	316.2	316.2	316.1	315.8	315.4	315.1	314.8
145°	332.9	333.0	333.0	332.9	332.6	332.2	331.9	331.6
147.5°	347.5	347.8	347.9	347.8	347.5	347.2	346.9	346.7
150°	356.9	357.1	357.4	357.4	357.1	356.9	356.6	356.4
152.5°	366.1	366.5	366.8	366.8	366.5	366.1	365.9	365.6
155°	378.0	378.4	378.8	378.9	378.7	378.4	378.2	378.0
157.5°	388.9	389.4	390.0	390.1	389.7	389.3	389.0	388.6
160°	395.4	395.9	396.3	396.4	396.1	395.8	395.5	395.1
162.5°	401.2	401.8	402.3	402.4	402.0	401.6	401.2	400.9
165°	408.8	409.4	410.0	410.0	409.6	409.2	408.8	408.4
167.5°	415.1	415.7	416.2	416.3	415.8	415.4	415.0	414.6
170°	418.5	419.1	419.6	419.7	419.2	418.7	418.3	417.8
172.5°	421.1	421.7	422.2	422.2	421.8	421.3	420.8	420.3
175°	423.9	424.5	425.0	425.1	424.6	424.1	423.7	423.2
177.5°	425.2	425.6	426.0	426.0	425.6	425.2	424.8	424.5
180°	425.3	425.3	425.3	425.3	425.3	425.3	425.3	425.3

(END OF REPORT)