

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: P331847-940

Luminaire Tested: **S122RDIW-S1005D435U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331847-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S1005D435U940-4F0-1E-UDD-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4650.7 lumens
Efficiency: N/A
Efficacy: 88.8 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

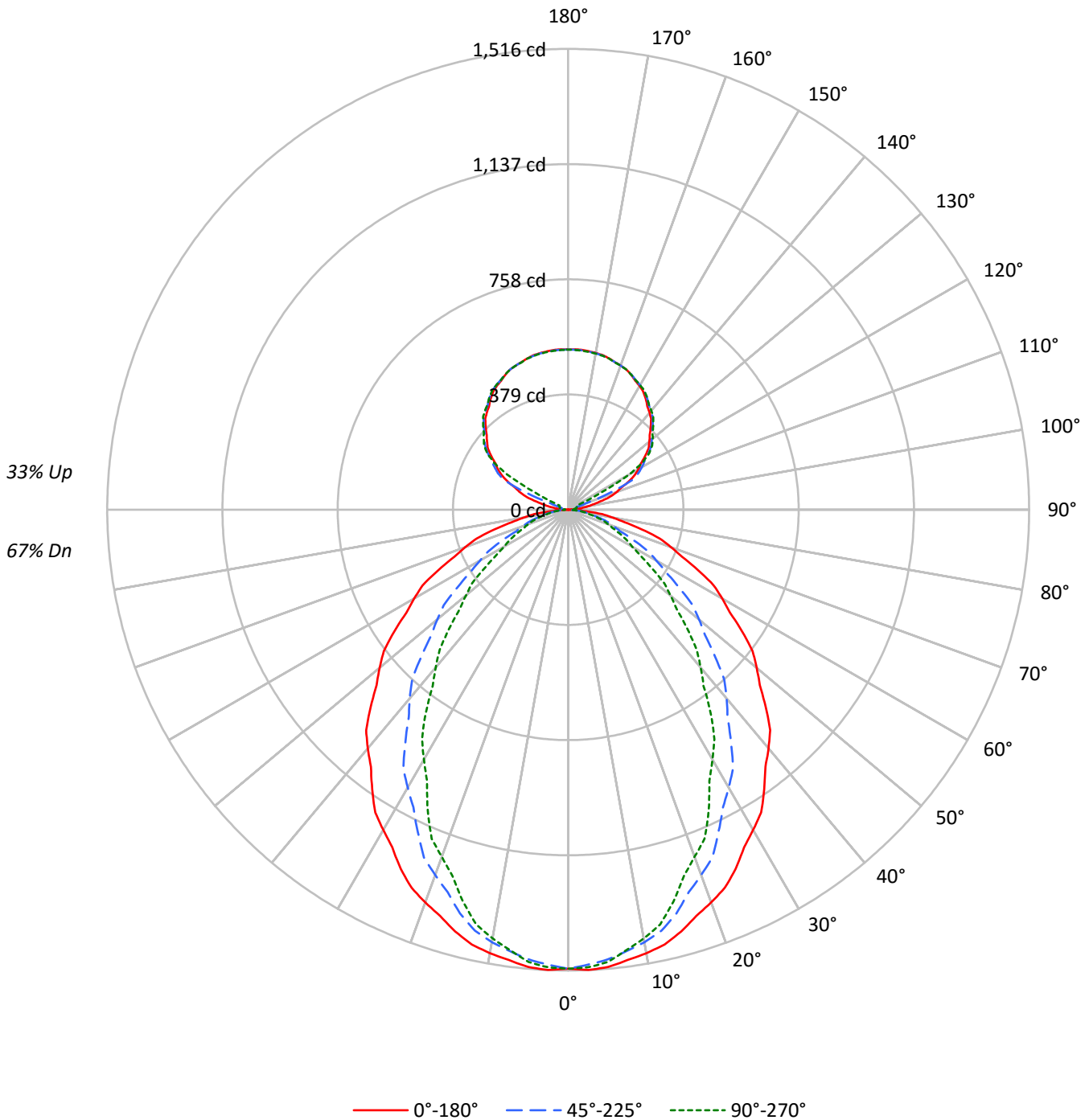
Input Watts (W): 52.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	98	94	91	96	93	89	86	82	80	78	73	71	69	64	63	62	58
2	94	86	80	75	88	82	76	72	73	69	65	65	62	59	57	55	53	49
3	86	77	69	64	81	72	66	61	65	60	56	58	54	51	51	48	46	42
4	79	68	60	54	74	65	58	52	58	53	48	52	48	44	46	43	40	37
5	73	61	53	47	68	58	51	45	52	47	42	47	42	39	42	38	35	33
6	67	55	47	41	63	53	45	40	48	42	37	43	38	34	38	35	31	29
7	62	50	42	37	59	48	41	36	43	37	33	39	34	31	35	31	28	26
8	58	46	38	33	55	44	37	32	40	34	30	36	31	28	33	29	26	23
9	54	42	35	30	51	40	33	29	37	31	27	33	29	25	30	26	23	21
10	51	39	32	27	48	37	31	26	34	28	24	31	26	23	28	24	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	24380	24380	24380
5°	24473	24076	24209
10°	24287	23682	23481
15°	24008	22980	22318
20°	23622	21978	20874
25°	23225	20838	19475
30°	22676	19669	17682
35°	22141	18398	16109
40°	21602	17081	14286
45°	20970	15602	12638
50°	20321	14109	11017
55°	19657	12504	9464
60°	18887	10811	7857
65°	18010	9085	7156
70°	16966	7482	6581
75°	15689	6818	6138
80°	13845	6100	5588
85°	10893	4798	4798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.3	3.0
10°-20°	388.1	8.3
20°-30°	545.0	11.7
30°-40°	594.3	12.8
40°-50°	546.4	11.7
50°-60°	429.2	9.2
60°-70°	279.8	6.0
70°-80°	144.3	3.1
80°-90°	38.7	0.8
90°-100°	17.6	0.4
100°-110°	64.4	1.4
110°-120°	172.2	3.7
120°-130°	284.3	6.1
130°-140°	302.4	6.5
140°-150°	281.0	6.0
150°-160°	225.9	4.9
160°-170°	145.6	3.1
170°-180°	50.1	1.1
0°-30°	1074.4	23.1
0°-40°	1668.7	35.9
0°-60°	2644.3	56.9
0°-90°	3107.1	66.8
90°-120°	254.2	5.5
90°-150°	1121.9	24.1
90°-180°	1544.0	33.2
0°-180°	4650.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1510	1510	1510	1510	1510	
5°	1510	1503	1486	1497	1494	143
15°	1436	1419	1375	1350	1335	404
25°	1304	1257	1170	1116	1093	599
35°	1123	1051	933	850	817	703
45°	918	824	683	590	554	709
55°	698	589	444	365	336	624
65°	471	360	238	194	187	467
75°	252	158	109	100	98	266
85°	59	31	26	26	26	69
90°	0	4	8	9	10	4
95°	25	13	15	17	16	30
105°	116	121	23	27	29	124
115°	219	226	235	67	31	216
125°	310	315	322	325	326	276
135°	383	389	393	396	396	296
145°	445	445	451	453	452	278
155°	490	487	491	493	490	226
165°	516	514	515	517	515	146
175°	528	525	526	528	525	50
180°	527	527	527	527	527	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0
2.5°	1515.6	1514.3	1513.1	1511.9	1510.6	1508.7	1506.0	1503.4	1500.7	1498.1	1500.5
5°	1510.0	1508.5	1507.0	1505.5	1504.0	1501.3	1497.3	1493.3	1489.4	1485.5	1488.2
7.5°	1494.5	1492.6	1490.8	1488.8	1486.9	1483.7	1479.1	1474.4	1469.9	1465.3	1466.1
10°	1481.4	1479.3	1477.1	1475.0	1472.8	1468.7	1462.7	1456.6	1450.5	1444.5	1443.6
12.5°	1465.0	1462.3	1459.7	1457.1	1454.6	1449.3	1441.5	1433.8	1426.0	1418.3	1416.6
15°	1436.3	1432.9	1429.6	1426.2	1422.9	1416.0	1405.8	1395.4	1385.1	1374.8	1369.0
17.5°	1401.0	1395.9	1390.8	1385.7	1380.6	1371.5	1358.2	1345.0	1331.7	1318.5	1311.6
20°	1374.8	1368.7	1362.6	1356.6	1350.5	1339.9	1324.6	1309.5	1294.3	1279.1	1271.5
22.5°	1346.3	1339.5	1332.8	1326.0	1319.1	1307.2	1290.0	1272.9	1255.8	1238.7	1228.9
25°	1303.7	1294.0	1284.2	1274.5	1264.8	1250.0	1229.9	1209.9	1189.8	1169.7	1157.4
27.5°	1252.3	1241.8	1231.2	1220.7	1210.1	1193.5	1170.9	1148.3	1125.7	1103.1	1088.6
30°	1216.3	1204.7	1193.2	1181.6	1170.1	1152.2	1127.8	1103.6	1079.3	1055.0	1039.5
32.5°	1181.2	1167.8	1154.3	1140.9	1127.3	1108.2	1083.4	1058.6	1033.8	1009.1	991.4
35°	1123.3	1107.9	1092.3	1076.8	1061.4	1040.3	1013.5	986.9	960.1	933.4	914.3
37.5°	1065.4	1048.4	1031.4	1014.3	997.4	974.6	946.1	917.7	889.1	860.7	839.6
40°	1024.9	1006.7	988.5	970.3	952.1	928.2	898.8	869.3	839.8	810.4	788.8
42.5°	983.4	964.2	945.0	925.8	906.6	881.8	851.4	820.9	790.5	760.1	737.8
45°	918.4	898.0	877.6	857.3	837.0	810.8	778.9	747.1	715.2	683.3	661.7
47.5°	854.9	833.4	811.8	790.2	768.7	741.5	708.6	675.6	642.7	609.8	588.4
50°	809.0	787.5	765.9	744.3	722.7	695.3	661.9	628.5	595.0	561.7	540.7
52.5°	764.2	741.6	719.2	696.6	674.0	646.5	613.8	581.1	548.4	515.8	495.5
55°	698.3	674.7	650.9	627.2	603.6	575.3	542.5	509.7	477.0	444.2	425.9
57.5°	630.8	606.5	582.2	557.9	533.6	505.7	474.2	442.6	411.2	379.6	362.9
60°	584.9	560.6	536.3	512.0	487.7	459.9	428.6	397.3	366.0	334.8	319.3
62.5°	540.1	515.8	491.5	467.2	442.9	415.8	386.0	356.1	326.4	296.6	281.8
65°	471.4	446.8	422.3	397.7	373.1	347.1	319.8	292.5	265.1	237.8	227.5
67.5°	405.3	380.9	356.5	332.1	307.6	283.1	258.6	234.0	209.4	184.8	180.0
70°	359.4	335.7	312.0	288.4	264.7	242.4	221.4	200.5	179.5	158.5	155.5
72.5°	315.7	292.9	270.3	247.5	224.8	205.0	188.2	171.4	154.5	137.8	135.2
75°	251.5	230.2	208.9	187.7	166.4	150.6	140.3	130.0	119.7	109.3	107.2
77.5°	188.3	169.7	151.1	132.4	113.7	101.9	96.9	91.9	86.9	82.0	80.8
80°	148.9	133.5	118.0	102.5	87.0	77.8	74.7	71.7	68.7	65.6	64.4
82.5°	112.9	100.8	88.7	76.6	64.6	57.4	55.4	53.3	51.3	49.2	48.5
85°	58.8	52.3	46.0	39.6	33.3	29.6	28.7	27.8	26.8	25.9	25.9
87.5°	17.6	15.8	14.1	12.3	10.5	9.7	9.9	10.0	10.2	10.3	10.1
90°	0.4	1.3	2.2	3.2	4.1	4.9	5.6	6.2	7.0	7.6	8.0
92.5°	7.7	7.6	7.5	7.4	7.4	7.5	7.8	8.2	8.5	8.8	9.1
95°	24.8	21.9	19.2	16.4	13.6	12.5	13.1	13.6	14.3	14.9	15.2
97.5°	49.1	41.3	33.4	25.5	17.7	14.4	15.8	17.1	18.5	19.9	20.2
100°	67.5	55.8	44.2	32.6	21.0	16.0	17.4	18.8	20.2	21.8	22.4
102.5°	87.6	85.2	82.7	80.3	77.8	70.5	58.5	46.5	34.4	22.3	23.2
105°	115.8	118.4	120.9	123.5	126.0	115.7	92.6	69.5	46.4	23.3	24.2
107.5°	148.1	150.2	152.2	154.3	156.3	143.5	115.7	88.0	60.3	32.5	31.6
110°	168.8	170.6	172.4	174.2	175.9	164.6	140.1	115.7	91.1	66.7	58.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	188.3	189.9	191.5	193.1	194.7	192.4	186.4	180.3	174.2	168.3	137.3
115°	219.2	220.6	222.0	223.5	224.9	226.7	228.8	231.0	233.0	235.1	195.9
117.5°	246.6	248.3	249.9	251.5	253.1	254.7	256.1	257.5	259.0	260.5	251.0
120°	266.8	268.0	269.3	270.6	271.9	273.3	274.8	276.3	277.9	279.4	280.4
122.5°	283.8	285.2	286.5	287.8	289.2	290.7	292.4	294.0	295.7	297.4	298.0
125°	309.9	310.9	312.1	313.2	314.2	315.6	317.3	318.9	320.5	322.1	322.6
127.5°	333.4	334.7	335.8	337.1	338.3	339.5	340.7	341.9	343.1	344.3	345.2
130°	348.4	349.7	351.1	352.4	353.7	354.9	355.9	356.8	357.8	358.6	359.5
132.5°	363.6	364.7	365.9	367.0	368.2	369.3	370.1	371.1	372.0	373.0	373.8
135°	383.4	384.8	386.1	387.4	388.9	389.9	390.7	391.5	392.2	393.0	393.8
137.5°	403.5	404.4	405.4	406.4	407.2	408.1	409.0	409.9	410.7	411.6	412.4
140°	416.6	417.2	417.9	418.6	419.3	420.1	421.1	422.0	422.8	423.8	424.5
142.5°	427.6	428.2	428.7	429.4	430.0	430.9	431.9	432.9	434.0	435.1	435.8
145°	444.8	444.7	444.6	444.5	444.4	445.1	446.6	448.0	449.4	450.8	451.5
147.5°	459.8	459.5	459.1	458.9	458.5	459.1	460.5	461.9	463.3	464.8	465.2
150°	469.6	469.0	468.3	467.8	467.2	467.5	469.0	470.3	471.6	473.0	473.5
152.5°	477.8	477.2	476.4	475.8	475.1	475.5	476.7	478.0	479.3	480.6	481.1
155°	489.7	489.0	488.2	487.5	486.7	486.9	487.9	488.8	489.9	490.9	491.4
157.5°	499.1	498.5	497.8	497.2	496.6	496.6	497.3	498.0	498.7	499.4	500.0
160°	504.6	504.1	503.6	503.1	502.6	502.6	503.1	503.6	504.1	504.6	505.2
162.5°	509.5	509.0	508.5	508.0	507.5	507.5	507.8	508.3	508.7	509.2	509.8
165°	516.0	515.6	515.1	514.5	514.0	513.9	514.2	514.4	514.7	514.9	515.5
167.5°	520.9	520.4	520.0	519.4	518.9	518.8	519.0	519.2	519.5	519.7	520.3
170°	523.7	523.2	522.6	522.2	521.7	521.5	521.7	521.8	522.0	522.2	522.7
172.5°	525.5	525.0	524.5	524.0	523.4	523.3	523.4	523.6	523.8	524.0	524.6
175°	527.9	527.3	526.6	526.1	525.5	525.3	525.5	525.7	525.8	525.9	526.6
177.5°	528.2	527.8	527.3	526.8	526.4	526.1	526.2	526.3	526.4	526.4	526.9
180°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0	1510.0
2.5°	1502.9	1505.3	1507.8	1508.7	1508.2	1507.8	1507.3	1506.8
5°	1490.9	1493.7	1496.4	1497.3	1496.4	1495.5	1494.6	1493.7
7.5°	1466.8	1467.6	1468.4	1468.0	1466.4	1464.8	1463.3	1461.7
10°	1442.6	1441.7	1440.8	1439.5	1437.6	1435.8	1434.0	1432.2
12.5°	1415.0	1413.3	1411.7	1409.3	1406.3	1403.3	1400.3	1397.2
15°	1363.2	1357.5	1351.7	1347.3	1344.3	1341.2	1338.2	1335.2
17.5°	1304.8	1297.9	1291.0	1285.0	1279.8	1274.5	1269.3	1264.1
20°	1263.9	1256.3	1248.8	1241.6	1234.9	1228.2	1221.6	1214.9
22.5°	1219.1	1209.3	1199.5	1192.1	1187.2	1182.2	1177.2	1172.2
25°	1144.9	1132.5	1120.0	1111.5	1106.9	1102.3	1097.8	1093.2
27.5°	1074.1	1059.5	1045.0	1034.1	1026.9	1019.7	1012.4	1005.2
30°	1024.0	1008.5	993.0	981.2	973.0	964.8	956.6	948.4
32.5°	973.7	956.1	938.3	925.7	918.0	910.3	902.5	894.8
35°	895.1	876.0	856.8	843.9	837.2	830.5	823.9	817.3
37.5°	818.5	797.5	776.3	762.0	754.4	746.7	739.0	731.4
40°	767.2	745.6	724.2	709.4	701.5	693.6	685.7	677.8
42.5°	715.5	693.2	670.9	655.9	648.3	640.6	633.0	625.4
45°	640.2	618.6	597.0	582.6	575.3	568.0	560.7	553.5
47.5°	566.9	545.5	524.0	510.0	503.4	496.8	490.1	483.5
50°	519.8	498.8	477.9	464.1	457.8	451.4	445.1	438.6
52.5°	475.3	455.0	434.9	421.8	415.9	410.0	404.1	398.2
55°	407.7	389.5	371.2	359.3	353.5	347.7	342.0	336.2
57.5°	346.3	329.5	312.8	302.0	297.2	292.3	287.5	282.6
60°	303.8	288.4	272.9	262.7	257.8	253.0	248.1	243.3
62.5°	267.1	252.3	237.6	228.6	225.8	222.8	219.9	217.0
65°	217.1	206.8	196.4	190.8	189.9	189.0	188.2	187.3
67.5°	175.3	170.6	165.8	162.9	162.0	161.0	160.1	159.1
70°	152.5	149.5	146.4	144.3	143.0	141.8	140.6	139.4
72.5°	132.7	130.1	127.5	125.9	125.2	124.5	123.7	123.0
75°	105.0	103.0	100.9	99.6	99.3	99.0	98.7	98.4
77.5°	79.5	78.4	77.1	76.2	75.8	75.3	74.8	74.4
80°	63.1	62.0	60.7	60.1	60.1	60.1	60.1	60.1
82.5°	47.7	47.0	46.3	45.9	45.9	45.9	45.9	45.9
85°	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
87.5°	10.0	9.8	9.6	9.5	9.6	9.6	9.7	9.7
90°	8.5	8.9	9.3	9.6	9.8	10.0	10.2	10.3
92.5°	9.3	9.5	9.7	9.9	10.0	10.1	10.2	10.3
95°	15.7	16.1	16.6	16.8	16.7	16.6	16.5	16.4
97.5°	20.6	21.0	21.2	21.5	21.6	21.7	21.8	21.8
100°	23.1	23.7	24.4	24.9	25.1	25.2	25.3	25.5
102.5°	24.1	25.0	25.9	26.4	26.7	26.9	27.1	27.4
105°	25.1	26.0	27.0	27.6	27.9	28.3	28.6	29.0
107.5°	30.7	29.7	28.7	28.4	28.8	29.2	29.4	29.8
110°	49.8	41.3	32.8	28.7	29.1	29.4	29.8	30.1



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CATALOG NUMBER: S122RDIW-S1005D435U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	106.5	75.5	44.7	29.3	29.6	29.9	30.1	30.4
115°	156.8	117.5	78.3	55.6	49.6	43.4	37.4	31.2
117.5°	241.5	232.0	222.5	207.8	187.7	167.6	147.7	127.6
120°	281.4	282.4	283.5	278.2	266.8	255.4	243.9	232.5
122.5°	298.5	299.2	299.8	299.0	296.8	294.5	292.3	290.1
125°	323.2	323.9	324.4	324.9	325.1	325.4	325.7	325.8
127.5°	346.1	346.9	347.8	348.2	348.3	348.3	348.4	348.4
130°	360.5	361.4	362.4	362.8	362.7	362.7	362.6	362.5
132.5°	374.6	375.3	376.1	376.5	376.4	376.3	376.3	376.2
135°	394.7	395.5	396.4	396.6	396.5	396.4	396.2	396.0
137.5°	413.3	414.1	414.9	415.2	414.9	414.6	414.4	414.0
140°	425.3	426.1	426.9	427.0	426.6	426.1	425.8	425.3
142.5°	436.5	437.2	437.9	438.0	437.6	437.2	436.8	436.3
145°	452.1	452.6	453.3	453.3	452.9	452.5	452.1	451.7
147.5°	465.7	466.1	466.5	466.5	466.2	465.8	465.5	465.1
150°	474.0	474.5	475.0	475.1	474.7	474.2	473.8	473.4
152.5°	481.6	482.1	482.7	482.6	482.1	481.5	480.9	480.4
155°	492.0	492.4	492.9	492.8	492.1	491.5	490.8	490.2
157.5°	500.6	501.1	501.8	501.7	501.1	500.3	499.7	499.1
160°	505.6	506.1	506.7	506.6	506.0	505.4	504.8	504.3
162.5°	510.3	511.0	511.5	511.4	510.7	510.0	509.3	508.5
165°	516.1	516.7	517.3	517.3	516.7	516.1	515.5	514.9
167.5°	520.9	521.5	522.1	522.0	521.2	520.5	519.7	519.0
170°	523.3	524.0	524.5	524.4	523.7	522.9	522.2	521.4
172.5°	525.1	525.8	526.4	526.3	525.5	524.8	524.0	523.3
175°	527.2	527.7	528.3	528.2	527.4	526.6	525.7	524.9
177.5°	527.4	527.8	528.3	528.2	527.6	527.0	526.4	525.8
180°	526.7	526.7	526.7	526.7	526.7	526.7	526.7	526.7

(END OF REPORT)