

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: P332339-930

Luminaire Tested: **S123RDIP-S1000D585U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332339-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1000D585U930-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5001.4 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

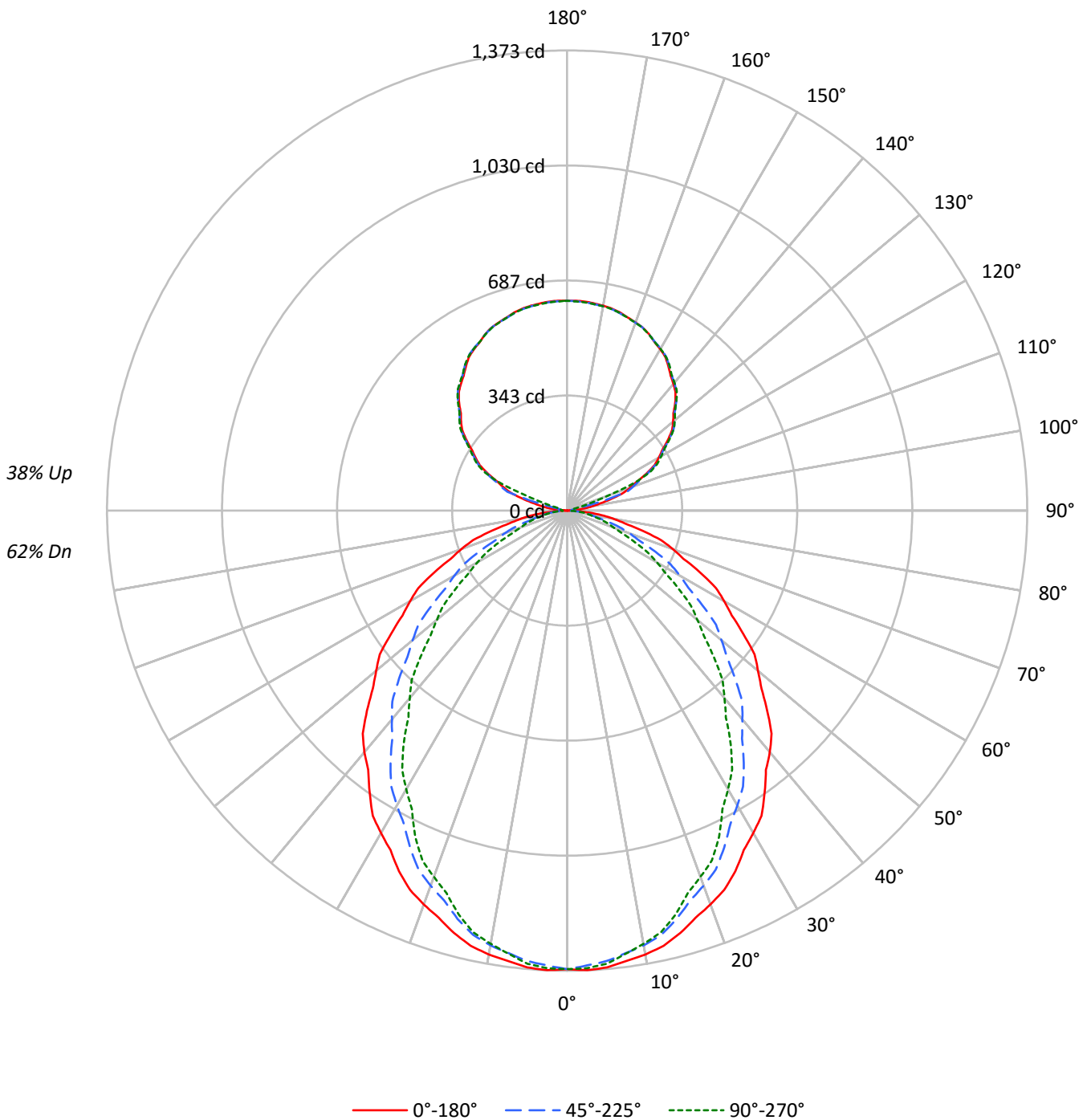
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	90	90	78	78	78	67	67	67
1	101	97	93	89	94	91	87	84	80	77	75	69	67	66	60	59	57
2	92	85	79	74	86	80	74	70	70	66	63	61	58	56	53	51	49
3	84	75	68	62	79	71	64	59	62	57	53	55	51	47	47	45	42
4	77	67	59	53	72	63	56	50	56	50	46	49	45	41	43	39	37
5	71	60	51	45	67	56	49	44	50	44	40	44	39	36	39	35	32
6	66	54	46	40	61	51	43	38	45	39	35	40	35	32	35	31	28
7	61	49	41	35	57	46	39	34	41	35	31	37	32	28	32	28	25
8	57	44	37	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	27	24	21
10	49	37	30	25	46	36	29	24	32	26	23	29	24	21	26	22	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14727	14727	14727
5°	14783	14579	14664
10°	14700	14397	14348
15°	14542	14060	13912
20°	14325	13639	13321
25°	14101	13166	12744
30°	13806	12621	11931
35°	13502	12073	11184
40°	13222	11428	10260
45°	12855	10794	9426
50°	12450	10071	8492
55°	12037	9246	7621
60°	11657	8361	6665
65°	11163	7404	5708
70°	10546	6216	4611
75°	9649	4891	4338
80°	8598	4333	3986
85°	7262	3841	3569



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.5	2.6
10°-20°	357.5	7.1
20°-30°	514.7	10.3
30°-40°	579.8	11.6
40°-50°	554.7	11.1
50°-60°	454.2	9.1
60°-70°	306.5	6.1
70°-80°	154.2	3.1
80°-90°	42.5	0.9
90°-100°	22.8	0.5
100°-110°	108.4	2.2
110°-120°	260.5	5.2
120°-130°	331.7	6.6
130°-140°	354.4	7.1
140°-150°	331.4	6.6
150°-160°	267.4	5.3
160°-170°	172.6	3.5
170°-180°	59.5	1.2
0°-30°	1000.7	20.0
0°-40°	1580.5	31.6
0°-60°	2589.5	51.8
0°-90°	3092.7	61.8
90°-120°	391.7	7.8
90°-150°	1409.3	28.2
90°-180°	1909.0	38.2
0°-180°	5001.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1368	1368	1368	1368	1368	
5°	1368	1362	1349	1359	1357	130
15°	1305	1292	1262	1256	1248	367
25°	1187	1158	1109	1086	1073	546
35°	1028	986	919	873	851	643
45°	844	793	709	648	619	651
55°	641	585	493	431	406	575
65°	438	376	291	239	224	434
75°	232	178	118	107	104	247
85°	59	36	31	29	29	66
90°	0	5	11	13	14	4
95°	28	11	14	18	18	35
105°	139	141	102	24	20	147
115°	260	263	267	271	274	257
125°	366	370	372	373	374	327
135°	456	459	461	462	461	351
145°	526	530	531	531	532	329
155°	580	579	579	581	579	267
165°	612	610	610	613	610	173
175°	626	624	624	627	624	60
180°	626	626	626	626	626	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1372.6	1371.8	1371.1	1370.3	1369.5	1367.9	1365.5	1363.2	1360.8	1358.5	1360.6
5°	1368.2	1366.9	1365.7	1364.5	1363.3	1361.1	1358.2	1355.3	1352.3	1349.3	1351.5
7.5°	1355.5	1354.2	1352.9	1351.5	1350.2	1347.6	1343.8	1339.9	1336.1	1332.3	1333.5
10°	1344.9	1343.2	1341.4	1339.7	1338.0	1334.9	1330.5	1326.0	1321.6	1317.2	1317.4
12.5°	1329.8	1327.9	1326.0	1324.0	1322.1	1318.4	1313.0	1307.6	1302.2	1296.7	1296.6
15°	1305.0	1302.3	1299.5	1296.8	1294.1	1289.3	1282.4	1275.5	1268.6	1261.7	1260.5
17.5°	1273.7	1270.5	1267.4	1264.2	1261.0	1255.1	1246.3	1237.5	1228.7	1219.9	1217.3
20°	1250.6	1246.7	1242.7	1238.8	1234.8	1228.2	1218.8	1209.4	1200.0	1190.7	1187.5
22.5°	1224.8	1220.3	1215.8	1211.2	1206.7	1199.5	1189.4	1179.5	1169.5	1159.6	1155.6
25°	1187.3	1181.2	1175.0	1168.8	1162.7	1153.9	1142.6	1131.2	1119.9	1108.6	1103.3
27.5°	1141.8	1135.1	1128.2	1121.4	1114.6	1104.9	1092.3	1079.6	1067.0	1054.4	1047.2
30°	1110.8	1103.3	1096.0	1088.6	1081.2	1070.6	1056.8	1042.9	1029.2	1015.4	1007.0
32.5°	1079.7	1071.3	1062.9	1054.5	1046.2	1034.7	1020.1	1005.5	990.8	976.2	967.1
35°	1027.5	1018.6	1009.7	1000.9	992.1	979.9	964.7	949.3	934.1	918.8	908.2
37.5°	974.7	964.8	955.0	945.1	935.2	922.2	905.9	889.5	873.2	856.9	844.8
40°	941.0	930.2	919.2	908.4	897.6	883.4	865.9	848.4	830.9	813.3	800.5
42.5°	902.8	891.9	881.1	870.3	859.4	845.0	826.9	808.8	790.7	772.6	758.6
45°	844.5	833.3	822.2	811.1	800.1	785.1	766.1	747.1	728.1	709.1	695.0
47.5°	786.1	773.9	761.7	749.5	737.4	721.8	702.8	683.8	664.8	645.8	630.6
50°	743.5	731.9	720.3	708.7	697.1	681.3	661.4	641.4	621.4	601.4	586.1
52.5°	705.3	692.8	680.1	667.6	655.0	638.8	619.1	599.2	579.5	559.7	543.8
55°	641.4	629.3	617.2	605.1	593.0	576.5	555.5	534.6	513.6	492.7	478.4
57.5°	582.4	569.2	556.0	542.8	529.7	512.6	491.5	470.4	449.4	428.4	414.8
60°	541.5	528.0	514.4	500.8	487.2	470.3	449.8	429.3	408.9	388.4	375.0
62.5°	500.7	487.1	473.5	460.0	446.5	429.4	409.0	388.5	368.0	347.6	335.0
65°	438.3	424.8	411.2	397.6	384.1	367.7	348.5	329.2	310.0	290.7	278.7
67.5°	375.9	362.2	348.5	334.8	321.1	305.0	286.6	268.2	249.7	231.2	222.3
70°	335.1	321.8	308.5	295.1	281.8	266.6	249.3	232.0	214.7	197.5	188.9
72.5°	294.2	281.2	268.1	254.9	241.8	227.4	211.7	196.1	180.3	164.7	157.6
75°	232.0	220.0	208.2	196.4	184.6	171.9	158.3	144.7	131.2	117.6	115.1
77.5°	175.1	164.4	153.7	143.0	132.3	122.5	113.8	105.1	96.4	87.6	86.3
80°	138.7	128.6	118.5	108.4	98.2	90.7	85.4	80.2	75.1	69.9	69.1
82.5°	104.1	95.4	86.7	77.9	69.1	63.6	61.1	58.8	56.3	53.9	53.2
85°	58.8	53.4	47.9	42.6	37.1	34.0	33.3	32.5	31.8	31.1	30.6
87.5°	21.4	19.4	17.4	15.5	13.5	12.7	13.0	13.2	13.5	13.8	13.7
90°	0.5	1.5	2.5	3.6	4.6	5.8	7.1	8.5	9.8	11.2	11.6
92.5°	8.6	8.4	8.1	7.7	7.5	7.8	8.9	9.9	10.9	11.9	12.6
95°	28.4	24.1	19.9	15.7	11.4	9.9	11.0	12.1	13.3	14.4	15.2
97.5°	57.0	55.1	53.2	51.3	49.4	44.8	37.3	29.8	22.4	15.0	15.8
100°	78.6	80.6	82.8	84.8	86.8	79.8	63.7	47.6	31.5	15.3	16.1
102.5°	103.1	104.6	106.2	107.6	109.1	101.0	83.4	65.8	48.2	30.6	28.0
105°	138.6	139.7	140.9	141.9	143.1	139.0	129.7	120.4	111.1	101.8	83.6
107.5°	175.9	176.8	177.8	178.7	179.6	180.8	182.2	183.7	185.2	186.6	173.3
110°	200.9	201.7	202.5	203.3	204.2	205.2	206.3	207.4	208.6	209.7	206.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	224.7	225.4	226.2	226.9	227.6	228.6	229.8	230.9	232.0	233.2	233.3
115°	259.9	260.6	261.1	261.8	262.4	263.2	264.2	265.1	266.0	266.9	268.0
117.5°	294.1	294.8	295.6	296.4	297.1	297.7	298.2	298.7	299.2	299.6	300.5
120°	315.3	316.2	317.2	318.0	319.0	319.6	319.9	320.2	320.6	320.8	321.7
122.5°	336.9	337.6	338.3	339.2	339.9	340.5	340.9	341.3	341.7	342.1	342.7
125°	366.4	367.3	368.1	368.9	369.7	370.4	370.8	371.2	371.6	372.0	372.2
127.5°	395.1	395.9	396.7	397.5	398.4	399.0	399.5	400.1	400.6	401.0	401.4
130°	412.9	413.8	414.6	415.4	416.2	416.9	417.3	417.7	418.1	418.5	418.9
132.5°	430.1	430.9	431.7	432.5	433.3	433.9	434.2	434.6	434.9	435.3	435.7
135°	456.2	456.8	457.4	458.0	458.7	459.2	459.6	460.0	460.4	460.8	461.1
137.5°	478.5	479.3	480.0	480.9	481.6	482.2	482.3	482.6	482.8	483.1	483.6
140°	493.3	494.0	494.6	495.2	495.9	496.4	496.6	496.9	497.3	497.6	498.0
142.5°	507.1	507.8	508.4	509.0	509.6	510.1	510.4	510.7	511.0	511.4	511.7
145°	526.4	527.1	527.8	528.6	529.3	529.8	529.9	530.2	530.4	530.6	530.8
147.5°	544.5	545.0	545.5	545.9	546.4	546.7	547.0	547.1	547.4	547.6	547.8
150°	555.7	556.0	556.3	556.6	556.9	557.2	557.4	557.6	557.8	558.0	558.2
152.5°	565.7	565.9	566.0	566.1	566.3	566.5	566.6	566.7	566.8	567.0	567.3
155°	579.8	579.7	579.4	579.3	579.0	579.0	579.1	579.2	579.3	579.4	579.9
157.5°	590.8	590.8	590.8	590.8	590.8	590.7	590.6	590.5	590.4	590.3	590.9
160°	597.5	597.5	597.4	597.2	597.1	597.0	596.9	596.8	596.7	596.6	597.2
162.5°	603.9	603.6	603.3	603.1	602.8	602.6	602.5	602.4	602.3	602.2	602.9
165°	611.5	611.1	610.9	610.6	610.3	610.0	609.9	609.8	609.8	609.6	610.5
167.5°	617.4	617.0	616.6	616.2	615.8	615.6	615.6	615.6	615.6	615.6	616.4
170°	620.8	620.4	620.0	619.5	619.1	618.9	618.9	618.9	618.9	618.9	619.8
172.5°	623.1	622.6	622.0	621.5	621.0	620.9	620.9	621.0	621.1	621.2	622.0
175°	625.9	625.4	624.8	624.4	623.9	623.6	623.7	623.9	623.9	624.0	624.8
177.5°	626.6	626.2	625.8	625.4	625.0	624.8	624.9	625.0	625.1	625.2	625.8
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2	1368.2
2.5°	1362.8	1365.0	1367.1	1368.0	1367.6	1367.3	1366.8	1366.4
5°	1353.8	1356.0	1358.2	1359.1	1358.6	1358.1	1357.6	1357.1
7.5°	1334.7	1335.9	1337.2	1337.4	1336.5	1335.7	1334.9	1334.0
10°	1317.7	1317.9	1318.2	1317.7	1316.4	1315.2	1313.9	1312.7
12.5°	1296.4	1296.3	1296.2	1295.3	1294.0	1292.5	1291.1	1289.6
15°	1259.2	1258.0	1256.8	1255.2	1253.5	1251.8	1250.1	1248.4
17.5°	1214.7	1212.1	1209.5	1206.9	1204.4	1201.8	1199.2	1196.6
20°	1184.2	1181.0	1177.9	1174.8	1171.8	1168.8	1165.9	1162.9
22.5°	1151.6	1147.6	1143.6	1140.2	1137.5	1134.7	1132.0	1129.2
25°	1098.2	1093.0	1087.9	1083.9	1081.2	1078.5	1075.8	1073.0
27.5°	1040.0	1032.8	1025.6	1019.9	1015.8	1011.6	1007.5	1003.4
30°	998.6	990.2	981.8	975.7	971.7	967.8	963.8	959.9
32.5°	957.9	948.8	939.6	932.9	928.8	924.6	920.5	916.3
35°	897.6	887.0	876.4	868.9	864.5	860.0	855.6	851.1
37.5°	832.8	820.8	808.8	800.0	794.5	789.0	783.6	778.1
40°	787.7	774.9	762.1	752.8	747.1	741.5	735.8	730.2
42.5°	744.5	730.5	716.5	706.9	701.9	696.8	691.7	686.6
45°	680.9	666.9	652.8	642.9	636.9	631.0	625.1	619.2
47.5°	615.2	600.0	584.7	574.4	569.1	563.9	558.6	553.3
50°	570.9	555.5	540.3	529.8	524.2	518.4	512.8	507.1
52.5°	528.0	512.1	496.2	485.7	480.6	475.6	470.5	465.4
55°	464.1	449.8	435.5	425.8	420.9	416.0	411.1	406.1
57.5°	401.3	387.8	374.3	365.4	361.3	357.0	352.9	348.6
60°	361.7	348.5	335.1	326.4	322.2	318.0	313.8	309.6
62.5°	322.5	310.0	297.4	288.9	284.6	280.2	275.8	271.4
65°	266.6	254.5	242.4	235.0	232.3	229.6	226.9	224.1
67.5°	213.2	204.2	195.2	189.1	186.3	183.4	180.4	177.6
70°	180.3	171.6	163.0	157.4	154.6	151.9	149.2	146.5
72.5°	150.6	143.5	136.5	132.4	131.3	130.1	129.0	127.8
75°	112.7	110.2	107.8	106.3	105.8	105.3	104.8	104.3
77.5°	85.0	83.6	82.3	81.4	81.0	80.5	80.0	79.5
80°	68.4	67.7	66.9	66.4	65.9	65.4	64.8	64.3
82.5°	52.4	51.7	51.0	50.5	50.5	50.4	50.2	50.1
85°	30.1	29.6	29.1	28.9	28.9	28.9	28.9	28.9
87.5°	13.5	13.5	13.3	13.2	13.0	12.9	12.7	12.6
90°	12.0	12.4	12.8	13.1	13.4	13.5	13.8	13.9
92.5°	13.2	13.9	14.5	14.9	15.1	15.2	15.3	15.4
95°	15.9	16.6	17.3	17.7	17.7	17.7	17.7	17.7
97.5°	16.6	17.4	18.3	18.8	18.8	18.9	19.1	19.2
100°	17.0	17.9	18.7	19.1	19.2	19.3	19.4	19.6
102.5°	25.4	22.9	20.4	19.2	19.3	19.6	19.7	19.9
105°	65.2	47.0	28.7	19.6	19.8	20.1	20.2	20.5
107.5°	159.8	146.4	133.0	119.4	105.6	91.8	78.0	64.2
110°	202.9	199.5	196.1	186.9	172.2	157.4	142.7	127.8



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CATALOG NUMBER: S123RDIP-S1000D585U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.3	233.3	233.4	231.9	228.8	225.6	222.5	219.4
115°	269.0	270.0	271.1	271.7	272.1	272.6	273.0	273.5
117.5°	301.3	302.1	303.0	303.5	303.5	303.6	303.7	303.8
120°	322.5	323.3	324.2	324.6	324.6	324.6	324.6	324.6
122.5°	343.2	343.8	344.4	344.7	344.8	344.9	345.0	345.0
125°	372.4	372.6	372.8	373.1	373.2	373.5	373.7	373.9
127.5°	401.7	402.0	402.4	402.4	402.2	402.0	401.8	401.6
130°	419.3	419.7	420.1	420.3	420.0	419.9	419.6	419.5
132.5°	436.1	436.5	436.9	437.0	436.7	436.3	436.1	435.8
135°	461.5	461.8	462.0	462.0	461.8	461.5	461.1	460.8
137.5°	484.0	484.5	485.0	485.2	484.9	484.8	484.5	484.4
140°	498.4	498.8	499.2	499.3	499.1	498.9	498.7	498.5
142.5°	512.0	512.3	512.7	512.7	512.4	512.1	511.8	511.5
145°	531.0	531.2	531.4	531.5	531.5	531.5	531.5	531.5
147.5°	548.0	548.2	548.5	548.3	547.8	547.3	546.9	546.4
150°	558.4	558.6	558.8	558.8	558.5	558.2	557.8	557.6
152.5°	567.7	568.0	568.4	568.3	567.9	567.4	567.0	566.5
155°	580.4	581.0	581.5	581.4	580.8	580.2	579.6	578.9
157.5°	591.5	592.2	592.8	592.6	591.8	591.1	590.3	589.5
160°	597.9	598.4	599.1	599.0	598.3	597.6	596.9	596.1
162.5°	603.6	604.3	605.0	605.0	604.4	603.7	603.1	602.5
165°	611.3	612.1	612.9	613.0	612.3	611.6	610.8	610.1
167.5°	617.3	618.1	618.9	618.9	618.1	617.3	616.4	615.6
170°	620.6	621.4	622.2	622.2	621.4	620.6	619.8	618.9
172.5°	622.8	623.6	624.4	624.4	623.5	622.6	621.7	620.8
175°	625.5	626.2	627.0	626.9	626.1	625.3	624.4	623.5
177.5°	626.5	627.1	627.8	627.7	626.9	626.1	625.3	624.4
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9

(END OF REPORT)