

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: P332341-940

Luminaire Tested: **S123RDIP-S1000D585U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332341-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1000D585U940-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5272.8 lumens
Efficiency: N/A
Efficacy: 108.0 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

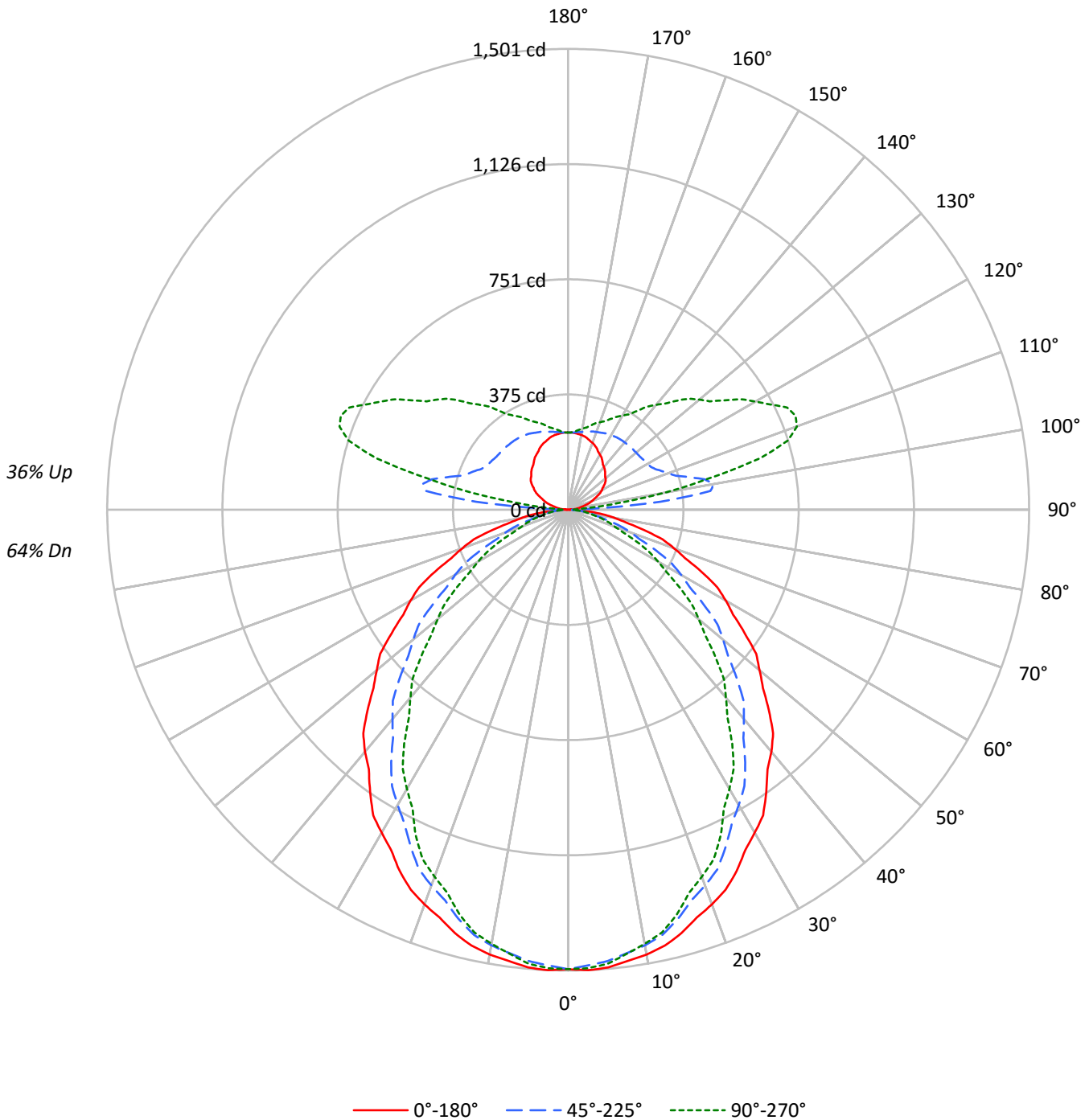
Input Watts (W): 48.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69
1	101	97	93	90	95	91	88	85	81	78	76	71	69	67	62	60	59
2	93	85	79	74	87	80	75	70	71	67	64	63	60	57	55	53	51
3	85	75	68	62	79	71	65	59	63	58	54	56	52	49	49	46	43
4	78	67	59	53	73	63	56	51	56	51	46	50	46	42	44	41	38
5	72	60	52	46	67	57	49	44	51	45	40	45	40	37	40	36	33
6	66	54	46	40	62	51	44	38	46	40	35	41	36	32	36	32	29
7	61	49	41	35	58	47	39	34	42	36	31	37	32	29	33	29	26
8	57	45	37	31	54	42	35	30	38	32	28	34	29	26	31	27	24
9	53	41	33	28	50	39	32	27	35	29	25	32	27	23	28	24	21
10	50	38	30	26	47	36	29	25	33	27	23	29	25	21	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16108	16108	16108
5°	16170	15946	16038
10°	16078	15746	15692
15°	15905	15377	15216
20°	15668	14917	14569
25°	15423	14400	13938
30°	15100	13803	13048
35°	14767	13205	12232
40°	14462	12500	11221
45°	14059	11805	10310
50°	13618	11015	9287
55°	13165	10113	8336
60°	12751	9145	7289
65°	12210	8099	6243
70°	11534	6801	5042
75°	10551	5352	4741
80°	9403	4736	4364
85°	7941	4199	3903



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	2.7
10°-20°	391.0	7.4
20°-30°	563.0	10.7
30°-40°	634.1	12.0
40°-50°	606.7	11.5
50°-60°	496.8	9.4
60°-70°	335.2	6.4
70°-80°	168.6	3.2
80°-90°	46.6	0.9
90°-100°	139.8	2.7
100°-110°	395.9	7.5
110°-120°	389.5	7.4
120°-130°	310.7	5.9
130°-140°	244.9	4.6
140°-150°	182.8	3.5
150°-160°	127.4	2.4
160°-170°	74.9	1.4
170°-180°	24.4	0.5
0°-30°	1094.5	20.8
0°-40°	1728.6	32.8
0°-60°	2832.1	53.7
0°-90°	3382.5	64.2
90°-120°	925.2	17.5
90°-150°	1663.7	31.6
90°-180°	1890.0	35.8
0°-180°	5272.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1496	1490	1476	1486	1484	142
15°	1427	1413	1380	1374	1365	402
25°	1299	1267	1212	1188	1174	597
35°	1124	1078	1005	954	931	703
45°	924	867	776	709	677	712
55°	702	640	539	471	444	629
65°	479	411	318	261	245	474
75°	254	195	129	117	114	270
85°	64	39	34	32	32	72
90°	1	6	13	14	15	4
95°	17	56	302	88	59	19
105°	59	87	409	715	647	63
115°	104	130	313	686	787	103
125°	145	171	292	529	620	129
135°	170	203	288	436	503	131
145°	194	222	284	357	393	121
155°	220	238	275	313	326	101
165°	241	247	264	279	284	68
175°	251	251	253	256	256	24
180°	251	251	251	251	251	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1501.3	1500.4	1499.6	1498.7	1497.8	1496.1	1493.5	1490.9	1488.4	1485.8	1488.1
5°	1496.5	1495.0	1493.7	1492.4	1491.0	1488.7	1485.5	1482.3	1479.1	1475.8	1478.2
7.5°	1482.6	1481.1	1479.7	1478.2	1476.8	1473.9	1469.7	1465.5	1461.3	1457.1	1458.5
10°	1471.0	1469.1	1467.1	1465.3	1463.4	1460.0	1455.2	1450.3	1445.5	1440.6	1440.9
12.5°	1454.5	1452.3	1450.3	1448.1	1446.0	1442.0	1436.1	1430.1	1424.2	1418.3	1418.1
15°	1427.3	1424.3	1421.3	1418.4	1415.4	1410.2	1402.6	1395.0	1387.5	1379.9	1378.6
17.5°	1393.0	1389.6	1386.2	1382.7	1379.2	1372.7	1363.1	1353.5	1343.9	1334.3	1331.4
20°	1367.8	1363.5	1359.1	1354.9	1350.5	1343.3	1333.0	1322.8	1312.5	1302.3	1298.8
22.5°	1339.6	1334.7	1329.7	1324.7	1319.8	1311.9	1300.9	1290.0	1279.2	1268.3	1263.9
25°	1298.6	1291.9	1285.1	1278.4	1271.7	1262.0	1249.6	1237.2	1224.9	1212.5	1206.8
27.5°	1248.8	1241.4	1233.9	1226.5	1219.1	1208.4	1194.6	1180.8	1167.0	1153.2	1145.3
30°	1214.9	1206.8	1198.7	1190.6	1182.5	1170.9	1155.8	1140.7	1125.6	1110.5	1101.4
32.5°	1180.9	1171.7	1162.5	1153.3	1144.2	1131.7	1115.7	1099.7	1083.7	1067.7	1057.7
35°	1123.8	1114.1	1104.4	1094.8	1085.0	1071.7	1055.1	1038.3	1021.6	1004.9	993.3
37.5°	1066.0	1055.3	1044.5	1033.7	1022.9	1008.6	990.8	972.9	955.0	937.2	924.0
40°	1029.2	1017.4	1005.4	993.5	981.7	966.2	947.1	927.9	908.7	889.6	875.6
42.5°	987.4	975.5	963.7	951.8	940.0	924.2	904.4	884.6	864.8	845.0	829.6
45°	923.6	911.4	899.3	887.2	875.0	858.6	837.9	817.1	796.3	775.5	760.2
47.5°	859.8	846.4	833.1	819.7	806.5	789.4	768.7	747.9	727.1	706.3	689.6
50°	813.2	800.5	787.8	775.2	762.4	745.2	723.4	701.5	679.7	657.8	641.1
52.5°	771.4	757.7	743.9	730.1	716.4	698.7	677.1	655.4	633.8	612.2	594.8
55°	701.5	688.3	675.0	661.8	648.6	630.5	607.6	584.7	561.8	538.9	523.3
57.5°	636.9	622.5	608.1	593.7	579.3	560.6	537.5	514.5	491.5	468.5	453.7
60°	592.3	577.5	562.6	547.8	532.9	514.3	492.0	469.6	447.2	424.8	410.2
62.5°	547.6	532.8	517.9	503.1	488.3	469.7	447.3	424.9	402.5	380.1	366.4
65°	479.4	464.6	449.7	434.9	420.1	402.2	381.1	360.1	339.0	318.0	304.8
67.5°	411.2	396.2	381.2	366.2	351.2	333.6	313.4	293.3	273.1	252.9	243.1
70°	366.5	352.0	337.4	322.8	308.3	291.6	272.7	253.8	234.9	216.1	206.6
72.5°	321.8	307.6	293.2	278.8	264.5	248.7	231.6	214.5	197.2	180.1	172.4
75°	253.7	240.7	227.7	214.8	201.9	188.0	173.2	158.3	143.5	128.7	125.9
77.5°	191.5	179.8	168.1	156.4	144.7	134.0	124.5	114.9	105.4	95.9	94.4
80°	151.7	140.6	129.6	118.5	107.5	99.2	93.5	87.7	82.1	76.4	75.6
82.5°	113.9	104.3	94.8	85.2	75.6	69.6	66.9	64.3	61.6	58.9	58.1
85°	64.3	58.4	52.4	46.5	40.6	37.2	36.4	35.6	34.8	34.0	33.4
87.5°	23.5	21.3	19.2	17.1	14.9	13.9	14.3	14.5	14.9	15.2	14.9
90°	1.0	2.1	3.0	4.5	5.6	6.6	8.1	9.6	11.1	12.8	12.2
92.5°	6.3	9.4	13.6	17.6	21.8	29.4	42.7	64.6	86.1	78.2	59.0
95°	17.3	18.8	24.4	33.1	46.3	66.1	109.3	185.1	268.6	301.6	244.6
97.5°	29.5	30.1	34.4	41.9	54.9	76.4	117.7	203.1	342.1	467.4	500.1
100°	37.6	38.2	41.7	48.9	61.0	80.9	116.5	191.7	325.5	481.6	581.8
102.5°	46.2	47.1	50.3	57.0	67.9	86.1	118.1	182.0	301.1	455.2	585.9
105°	59.0	60.5	63.6	69.6	79.4	95.1	122.6	175.0	271.1	408.9	554.9
107.5°	72.6	74.2	77.1	83.1	92.2	106.8	130.9	174.4	252.0	368.0	500.6
110°	82.4	83.9	86.5	92.0	100.7	114.9	137.9	176.5	244.6	344.8	466.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	91.3	92.9	95.4	101.0	109.7	123.5	144.7	180.6	240.6	329.4	436.7
115°	104.2	106.3	109.3	114.4	123.1	136.8	156.1	187.2	239.1	312.8	400.8
117.5°	117.2	119.5	122.1	126.7	136.4	149.1	168.3	195.9	240.0	303.0	379.2
120°	126.2	127.7	130.2	135.3	145.0	157.7	175.9	202.4	241.6	298.5	367.7
122.5°	133.8	135.4	137.9	143.4	152.7	166.2	184.1	208.6	244.4	295.7	358.4
125°	145.0	146.0	149.0	154.6	164.3	178.0	195.8	218.2	248.7	291.9	346.3
127.5°	153.4	154.9	158.7	164.3	175.0	188.8	206.0	226.1	253.6	290.1	335.8
130°	158.7	160.2	164.8	170.9	181.6	195.3	212.0	231.4	256.8	288.9	330.1
132.5°	162.7	164.7	169.7	177.0	187.7	201.0	217.4	236.3	259.3	288.5	324.8
135°	169.9	171.9	177.5	185.1	195.8	209.6	225.3	242.6	263.0	287.8	317.9
137.5°	176.6	178.7	184.2	192.3	203.0	215.6	230.8	247.3	265.4	286.8	311.9
140°	181.1	183.6	188.7	196.8	207.0	219.7	234.4	249.8	267.0	286.3	308.2
142.5°	185.9	188.1	193.6	200.9	211.1	223.0	237.3	252.2	268.2	285.5	305.0
145°	193.8	195.3	199.9	207.5	216.2	227.8	241.1	254.9	269.0	284.3	300.6
147.5°	201.7	202.6	207.1	213.7	222.0	232.0	244.2	256.5	269.0	282.4	296.3
150°	207.0	207.5	211.6	218.2	225.3	234.4	246.2	256.8	269.0	280.7	293.5
152.5°	212.3	212.4	216.5	222.3	228.5	237.3	247.4	257.7	267.9	278.7	290.3
155°	220.3	220.3	223.3	228.4	234.0	241.1	249.8	257.9	266.5	275.2	285.3
157.5°	226.5	226.9	229.3	233.9	238.6	244.2	251.0	258.4	264.7	272.0	279.8
160°	231.4	231.4	233.4	237.6	241.1	246.2	252.3	258.4	263.9	269.6	276.2
162.5°	235.1	235.1	236.7	240.0	243.1	247.4	252.7	258.0	262.3	267.2	272.5
165°	240.6	240.0	241.1	243.6	245.7	249.2	253.2	256.8	259.9	263.5	267.5
167.5°	244.8	244.2	244.6	246.6	248.0	250.2	253.2	256.0	257.4	259.8	262.8
170°	247.2	246.2	246.6	248.2	249.2	250.2	252.8	254.9	255.8	257.3	259.9
172.5°	248.8	248.2	248.3	249.4	250.0	250.7	252.8	254.4	254.6	255.3	257.1
175°	250.7	250.2	249.8	250.7	250.7	251.3	252.3	253.2	252.8	252.8	253.8
177.5°	251.6	251.3	250.8	251.3	251.3	251.3	251.6	252.4	251.6	251.3	251.6
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1490.5	1492.9	1495.2	1496.2	1495.8	1495.4	1495.0	1494.5
5°	1480.7	1483.1	1485.5	1486.5	1485.9	1485.4	1484.9	1484.3
7.5°	1459.8	1461.2	1462.5	1462.8	1461.8	1460.9	1460.0	1459.0
10°	1441.2	1441.5	1441.7	1441.2	1439.8	1438.4	1437.1	1435.7
12.5°	1417.9	1417.8	1417.6	1416.8	1415.2	1413.6	1412.1	1410.5
15°	1377.2	1375.9	1374.6	1372.9	1371.0	1369.1	1367.3	1365.4
17.5°	1328.6	1325.7	1322.9	1320.0	1317.2	1314.4	1311.6	1308.8
20°	1295.2	1291.7	1288.3	1284.9	1281.7	1278.4	1275.1	1271.9
22.5°	1259.5	1255.2	1250.8	1247.1	1244.1	1241.1	1238.1	1235.0
25°	1201.1	1195.4	1189.8	1185.4	1182.5	1179.6	1176.6	1173.6
27.5°	1137.5	1129.6	1121.7	1115.5	1111.0	1106.4	1101.9	1097.4
30°	1092.2	1083.0	1073.8	1067.1	1062.7	1058.5	1054.1	1049.8
32.5°	1047.7	1037.7	1027.6	1020.4	1015.8	1011.3	1006.7	1002.2
35°	981.7	970.1	958.5	950.3	945.5	940.6	935.8	930.9
37.5°	910.9	897.7	884.6	874.9	869.0	863.0	857.0	851.0
40°	861.6	847.6	833.5	823.4	817.2	811.0	804.8	798.6
42.5°	814.3	799.0	783.6	773.2	767.7	762.1	756.5	751.0
45°	744.8	729.4	714.0	703.1	696.6	690.2	683.7	677.3
47.5°	672.9	656.2	639.4	628.2	622.4	616.7	610.9	605.1
50°	624.4	607.6	590.9	579.4	573.3	567.0	560.9	554.6
52.5°	577.5	560.1	542.7	531.2	525.7	520.1	514.6	509.0
55°	507.6	492.0	476.3	465.7	460.4	455.0	449.6	444.2
57.5°	438.9	424.1	409.4	399.7	395.1	390.5	385.9	381.3
60°	395.7	381.1	366.5	357.0	352.4	347.8	343.2	338.6
62.5°	352.7	339.0	325.3	316.0	311.3	306.5	301.7	296.9
65°	291.6	278.3	265.1	257.0	254.0	251.1	248.2	245.1
67.5°	233.2	223.3	213.5	206.9	203.8	200.5	197.3	194.2
70°	197.2	187.7	178.3	172.1	169.1	166.1	163.2	160.2
72.5°	164.7	156.9	149.3	144.8	143.6	142.3	141.1	139.8
75°	123.2	120.6	117.9	116.3	115.7	115.1	114.6	114.0
77.5°	93.0	91.5	90.1	89.1	88.5	88.0	87.5	86.9
80°	74.8	74.0	73.2	72.6	72.1	71.5	70.9	70.4
82.5°	57.3	56.5	55.7	55.3	55.2	55.1	54.9	54.8
85°	32.9	32.4	31.8	31.6	31.6	31.6	31.6	31.6
87.5°	14.7	14.6	14.5	14.5	14.2	14.1	13.9	13.6
90°	12.8	13.2	13.7	14.7	14.3	14.7	15.2	14.7
92.5°	42.8	34.0	30.1	27.4	26.5	24.9	25.4	24.5
95°	183.1	124.1	97.1	78.8	69.2	64.6	61.0	59.0
97.5°	456.5	365.6	300.0	239.2	201.6	178.7	165.0	160.6
100°	599.7	558.5	498.9	426.7	375.3	338.2	318.4	318.9
102.5°	647.3	646.0	611.3	565.4	525.5	496.1	479.5	467.8
105°	661.2	712.0	721.8	708.5	685.1	665.8	649.5	646.9
107.5°	621.1	703.7	748.2	766.3	766.8	760.3	754.7	750.1
110°	582.8	676.5	740.6	776.1	790.4	794.4	793.4	792.4



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CATALOG NUMBER: S123RDIP-S1000D585U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	545.0	640.6	712.5	758.2	784.3	796.9	800.8	800.9
115°	494.9	583.4	658.2	713.5	751.7	774.1	784.3	786.8
117.5°	458.5	534.9	602.1	658.4	698.1	723.7	738.4	741.8
120°	439.4	508.1	569.1	620.5	660.7	689.2	701.3	704.5
122.5°	424.4	486.5	543.1	590.8	626.5	652.1	665.6	669.4
125°	404.3	459.8	508.6	549.3	581.8	604.2	617.0	620.5
127.5°	386.8	436.3	480.4	517.4	546.4	565.4	576.9	580.2
130°	375.9	421.6	462.8	497.4	524.4	542.7	553.4	557.4
132.5°	365.7	407.8	446.1	479.1	504.4	522.7	532.2	535.0
135°	352.0	388.1	421.2	450.1	475.0	490.3	499.4	503.0
137.5°	339.5	369.1	397.5	422.7	443.6	459.1	466.8	469.1
140°	332.2	358.0	382.5	404.3	423.7	437.9	446.0	445.5
142.5°	325.2	347.5	368.6	387.6	404.1	416.8	424.1	423.6
145°	316.8	333.7	349.9	364.7	377.4	388.1	392.2	393.2
147.5°	310.0	323.3	336.5	347.0	356.6	363.8	367.7	368.1
150°	305.1	316.8	327.5	337.2	344.8	350.4	353.5	353.5
152.5°	300.7	310.8	320.2	328.2	334.2	339.5	341.3	341.3
155°	294.0	302.1	309.8	315.8	320.4	324.5	325.5	326.0
157.5°	286.9	293.6	299.6	304.3	308.4	311.4	312.2	312.1
160°	282.8	288.4	293.5	297.0	300.6	303.6	303.6	303.1
162.5°	277.9	282.7	287.4	290.5	292.8	295.5	295.5	295.0
165°	271.6	274.6	278.2	280.7	282.8	284.8	284.3	284.3
167.5°	266.1	268.4	270.5	272.3	273.2	274.6	274.1	274.1
170°	262.4	263.9	266.0	267.0	267.5	268.6	268.0	268.0
172.5°	259.2	260.3	261.9	262.5	262.6	263.7	262.8	262.3
175°	254.9	255.3	256.4	256.4	256.4	256.8	256.4	255.8
177.5°	252.1	252.4	252.9	252.9	252.4	252.9	252.1	252.1
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3

(END OF REPORT)