

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: P331746-930

Luminaire Tested: **S122RDIP-S1005D530U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331746-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIP-S1005D530U930-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4524.3 lumens  
Efficiency: N/A  
Efficacy: 82.1 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

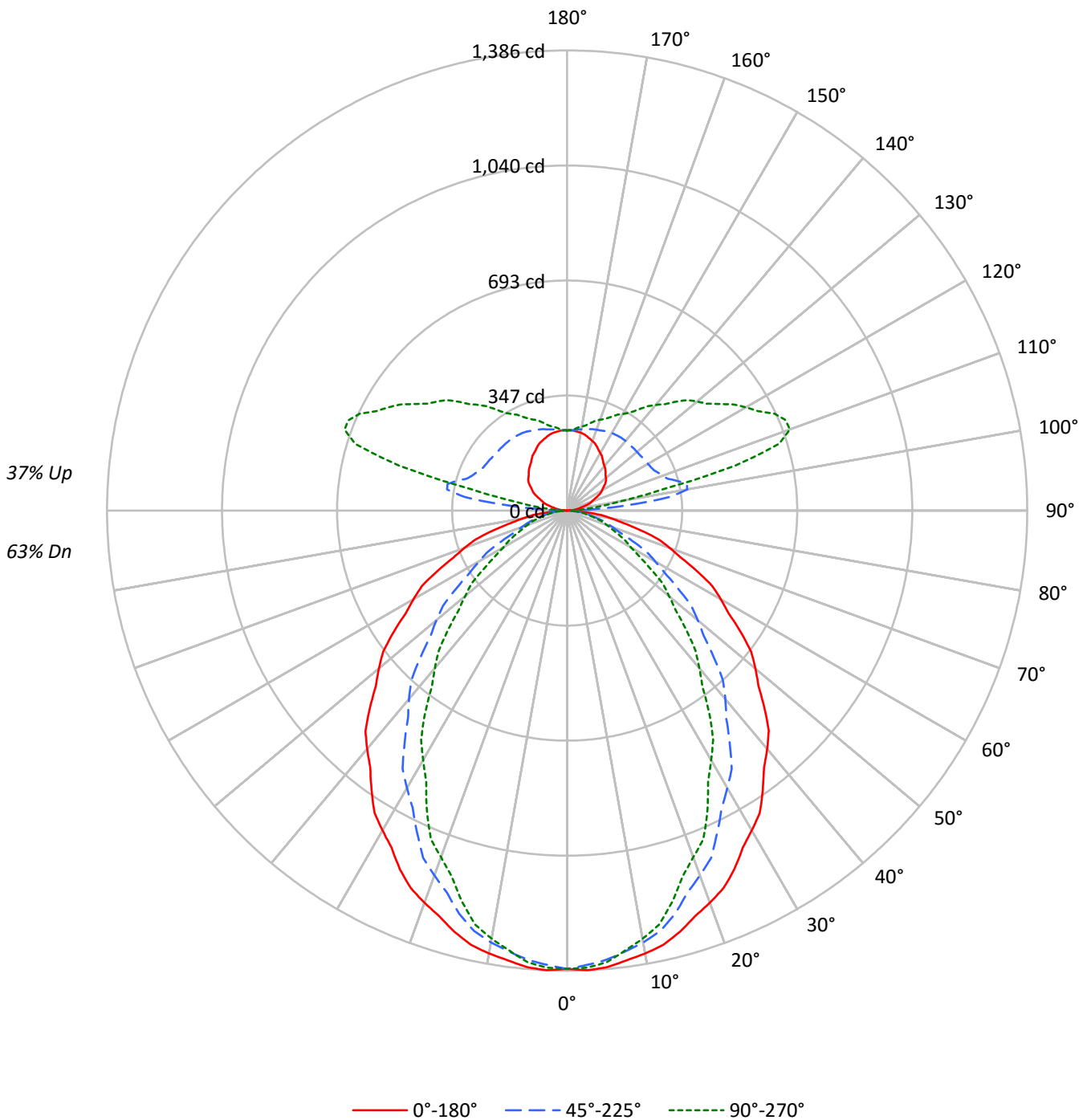
Input Watts (W): 55.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	79	79	79	68	68	68	63
1	101	97	93	90	95	91	88	85	80	78	76	70	68	67	61	60	59	54
2	93	85	80	74	87	80	75	71	71	67	64	62	59	57	54	52	50	46
3	85	76	69	63	79	71	65	60	63	58	54	56	52	49	49	46	43	40
4	78	67	60	54	73	64	57	51	57	51	47	50	46	42	44	41	38	35
5	72	61	52	47	67	57	50	45	51	45	41	45	41	37	40	36	33	31
6	67	55	47	41	62	52	44	39	46	40	36	41	36	33	36	33	30	27
7	62	50	42	36	58	47	40	35	42	36	32	38	33	29	33	30	27	24
8	57	45	38	32	54	43	36	31	39	33	29	35	30	26	31	27	24	22
9	54	42	34	29	50	39	33	28	36	30	26	32	27	24	29	25	22	20
10	50	38	31	26	47	36	30	25	33	27	24	30	25	22	27	23	20	18

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	22291	22291	22291
5°	22376	22013	22135
10°	22207	21653	21469
15°	21951	21010	20404
20°	21596	20094	19086
25°	21235	19053	17808
30°	20734	17984	16168
35°	20243	16821	14728
40°	19751	15616	13061
45°	19173	14266	11556
50°	18580	12901	10073
55°	17973	11431	8653
60°	17270	9884	7182
65°	16466	8306	6541
70°	15512	6845	6014
75°	14342	6238	5608
80°	12664	5579	5114
85°	9948	4390	4390



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.2	2.9
10°-20°	354.8	7.8
20°-30°	498.3	11.0
30°-40°	543.4	12.0
40°-50°	499.6	11.0
50°-60°	392.4	8.7
60°-70°	255.8	5.7
70°-80°	131.9	2.9
80°-90°	36.4	0.8
90°-100°	96.7	2.1
100°-110°	328.1	7.3
110°-120°	348.5	7.7
120°-130°	286.9	6.3
130°-140°	230.4	5.1
140°-150°	174.1	3.8
150°-160°	122.4	2.7
160°-170°	72.0	1.6
170°-180°	23.4	0.5
0°-30°	982.4	21.7
0°-40°	1525.7	33.7
0°-60°	2417.7	53.4
0°-90°	2841.9	62.8
90°-120°	773.2	17.1
90°-150°	1464.6	32.4
90°-180°	1682.0	37.2
0°-180°	4524.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1381	1381	1381	1381	1381	
5°	1381	1374	1358	1369	1366	131
15°	1313	1298	1257	1234	1221	370
25°	1192	1150	1070	1020	1000	548
35°	1027	961	853	778	747	642
45°	840	753	625	539	506	648
55°	638	539	406	334	307	570
65°	431	329	217	177	171	427
75°	230	145	100	92	90	243
85°	54	29	24	24	24	63
90°	0	6	16	15	15	3
95°	16	40	182	69	53	17
105°	57	86	344	616	524	60
115°	100	126	288	595	690	99
125°	140	165	277	482	559	124
135°	164	195	274	405	464	126
145°	187	215	272	338	370	117
155°	212	229	265	299	311	98
165°	232	238	253	269	273	65
175°	241	242	244	247	246	23
180°	242	242	242	242	242	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6
2.5°	1385.7	1384.5	1383.4	1382.3	1381.2	1379.4	1377.0	1374.6	1372.1	1369.7	1371.9
5°	1380.6	1379.2	1377.9	1376.5	1375.1	1372.6	1369.0	1365.4	1361.8	1358.2	1360.7
7.5°	1366.4	1364.7	1363.0	1361.2	1359.5	1356.6	1352.3	1348.1	1343.9	1339.7	1340.4
10°	1354.5	1352.5	1350.5	1348.6	1346.6	1342.9	1337.3	1331.8	1326.2	1320.7	1319.9
12.5°	1339.5	1337.0	1334.6	1332.3	1329.9	1325.1	1318.0	1310.9	1303.8	1296.7	1295.2
15°	1313.2	1310.1	1307.1	1304.0	1301.0	1294.7	1285.3	1275.9	1266.4	1256.9	1251.7
17.5°	1280.9	1276.3	1271.6	1267.0	1262.3	1253.9	1241.8	1229.7	1217.6	1205.5	1199.2
20°	1256.9	1251.4	1245.9	1240.3	1234.8	1225.1	1211.1	1197.3	1183.4	1169.5	1162.5
22.5°	1230.9	1224.7	1218.5	1212.4	1206.1	1195.1	1179.5	1163.8	1148.2	1132.5	1123.6
25°	1192.0	1183.1	1174.2	1165.3	1156.4	1142.9	1124.5	1106.2	1087.9	1069.5	1058.2
27.5°	1145.0	1135.4	1125.7	1116.1	1106.4	1091.2	1070.6	1049.9	1029.2	1008.6	995.3
30°	1112.1	1101.5	1091.0	1080.4	1069.8	1053.4	1031.2	1009.0	986.8	964.6	950.4
32.5°	1080.0	1067.7	1055.4	1043.1	1030.7	1013.3	990.6	967.9	945.3	922.6	906.4
35°	1027.0	1012.9	998.7	984.6	970.5	951.1	926.7	902.3	877.8	853.4	835.9
37.5°	974.1	958.5	943.0	927.4	911.9	891.1	865.0	839.0	812.9	786.9	767.7
40°	937.1	920.5	903.8	887.1	870.5	848.6	821.7	794.8	767.8	740.9	721.2
42.5°	899.1	881.6	864.1	846.4	828.9	806.2	778.4	750.6	722.8	695.0	674.6
45°	839.7	821.0	802.4	783.8	765.2	741.4	712.2	683.1	653.9	624.8	605.0
47.5°	781.6	762.0	742.2	722.5	702.8	677.9	647.8	617.7	587.6	557.5	537.9
50°	739.7	720.0	700.3	680.5	660.8	635.7	605.2	574.6	544.0	513.6	494.4
52.5°	698.7	678.1	657.5	636.9	616.3	591.1	561.2	531.3	501.4	471.6	453.1
55°	638.5	616.9	595.2	573.5	551.9	526.0	496.0	466.0	436.1	406.1	389.4
57.5°	576.7	554.6	532.3	510.1	487.9	462.4	433.6	404.7	375.9	347.1	331.8
60°	534.8	512.6	490.3	468.1	445.9	420.5	391.9	363.3	334.7	306.1	292.0
62.5°	493.8	471.6	449.4	427.1	405.0	380.2	352.9	325.6	298.4	271.2	257.6
65°	431.0	408.5	386.1	363.6	341.1	317.4	292.4	267.4	242.4	217.4	208.0
67.5°	370.6	348.3	326.0	303.6	281.3	258.9	236.4	213.9	191.4	168.9	164.6
70°	328.6	307.0	285.3	263.7	242.0	221.6	202.4	183.3	164.1	145.0	142.2
72.5°	288.6	267.8	247.1	226.3	205.5	187.4	172.1	156.7	141.3	126.0	123.6
75°	229.9	210.4	191.0	171.6	152.1	137.7	128.2	118.9	109.4	100.0	98.0
77.5°	172.2	155.2	138.1	121.1	104.0	93.2	88.6	84.1	79.5	75.0	73.9
80°	136.2	122.1	107.9	93.7	79.6	71.1	68.3	65.6	62.8	60.0	58.9
82.5°	103.2	92.1	81.1	70.0	59.0	52.5	50.6	48.8	46.9	45.0	44.4
85°	53.7	47.9	42.1	36.2	30.4	27.1	26.3	25.4	24.5	23.7	23.7
87.5°	16.1	14.6	13.2	11.6	10.0	9.4	9.9	10.5	11.1	11.2	10.8
90°	0.5	1.9	3.8	4.6	5.5	7.0	9.3	12.6	15.3	15.8	15.3
92.5°	5.7	8.2	11.5	13.6	16.7	21.1	31.6	46.4	59.6	60.4	51.0
95°	16.3	18.1	22.7	27.0	34.4	45.6	66.9	107.4	161.3	182.3	159.5
97.5°	26.5	29.0	33.9	40.3	48.8	61.5	88.4	144.7	234.3	311.1	326.4
100°	35.8	37.2	41.4	48.8	58.1	71.2	95.8	152.5	252.9	367.3	434.2
102.5°	44.4	45.4	49.6	57.0	66.7	79.7	102.5	152.9	245.9	369.2	474.4
105°	56.7	58.6	61.8	68.8	79.0	92.0	113.9	155.3	232.0	344.5	468.2
107.5°	70.1	71.6	74.8	81.2	91.3	104.4	125.6	161.7	225.1	318.1	427.4
110°	79.0	80.9	83.7	89.8	99.5	113.0	133.5	166.9	223.6	305.5	401.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	87.2	89.1	92.2	97.9	107.3	121.2	140.9	172.5	224.0	297.3	383.8
115°	100.0	102.3	105.1	110.6	119.9	132.5	152.5	180.8	226.0	288.3	361.7
117.5°	113.2	115.0	117.8	122.8	131.7	144.7	163.2	189.8	229.3	283.9	347.8
120°	121.3	123.2	126.0	130.2	139.5	152.5	170.6	195.8	231.5	281.3	340.4
122.5°	129.1	130.7	133.5	138.0	147.3	160.7	177.7	201.0	234.2	279.8	334.0
125°	139.5	140.9	143.7	149.3	158.6	171.5	188.3	209.2	238.1	277.1	325.0
127.5°	147.7	149.5	153.4	159.6	168.5	181.9	198.2	217.0	242.1	275.6	316.7
130°	152.5	154.3	159.0	165.5	174.8	187.8	204.2	221.8	245.0	274.8	311.0
132.5°	156.9	159.2	164.2	171.1	180.8	193.8	209.3	226.7	248.0	274.4	306.6
135°	163.6	165.5	171.1	178.1	188.7	201.8	216.7	232.9	251.5	273.9	300.4
137.5°	170.0	172.2	177.8	185.2	195.8	207.9	222.7	237.7	254.7	273.8	296.0
140°	174.8	176.7	182.3	189.7	199.9	212.1	226.0	240.4	256.2	273.4	293.4
142.5°	179.7	181.2	186.4	193.8	203.7	215.0	228.6	242.6	257.3	273.4	290.8
145°	186.9	188.7	193.4	200.4	209.7	219.9	232.4	245.5	258.5	272.5	287.3
147.5°	194.7	196.1	200.6	207.0	214.7	223.8	235.6	247.1	258.9	270.8	283.8
150°	199.9	201.3	205.0	211.1	218.1	226.4	237.1	247.9	258.5	269.7	280.9
152.5°	205.1	205.8	209.5	214.8	221.4	229.0	238.6	248.2	257.8	267.8	278.3
155°	212.5	213.0	215.7	220.9	226.0	232.9	240.8	248.7	256.7	264.6	273.4
157.5°	218.6	219.1	221.4	225.8	229.9	235.7	242.4	248.7	254.5	261.2	268.8
160°	222.7	223.1	225.0	228.8	232.4	237.6	243.2	248.7	253.4	259.0	265.5
162.5°	226.8	226.5	228.4	231.4	234.7	238.7	243.5	248.3	252.3	257.1	262.5
165°	231.5	231.1	232.0	234.8	237.1	239.9	244.1	247.4	250.1	253.4	257.6
167.5°	235.5	234.9	235.7	237.5	239.2	240.9	244.0	246.7	248.0	250.1	252.7
170°	238.1	237.1	237.6	239.0	239.9	241.3	243.6	246.0	246.9	248.3	250.1
172.5°	239.5	239.0	238.7	240.1	240.7	241.7	243.3	244.8	245.4	246.1	247.5
175°	241.3	240.8	240.4	241.3	241.3	241.7	242.7	243.6	243.2	243.6	244.1
177.5°	242.1	241.4	241.0	241.7	241.7	241.7	242.1	242.9	242.1	241.7	242.1
180°	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6	1380.6
2.5°	1374.1	1376.3	1378.6	1379.4	1379.0	1378.6	1378.1	1377.7
5°	1363.2	1365.7	1368.2	1369.0	1368.2	1367.3	1366.5	1365.7
7.5°	1341.1	1341.8	1342.6	1342.2	1340.8	1339.3	1337.9	1336.4
10°	1319.0	1318.2	1317.4	1316.1	1314.4	1312.8	1311.1	1309.5
12.5°	1293.7	1292.2	1290.7	1288.6	1285.8	1283.0	1280.3	1277.5
15°	1246.4	1241.1	1235.8	1231.8	1229.1	1226.3	1223.5	1220.7
17.5°	1192.9	1186.7	1180.4	1174.8	1170.1	1165.3	1160.5	1155.8
20°	1155.6	1148.7	1141.7	1135.2	1129.1	1123.0	1116.9	1110.8
22.5°	1114.7	1105.7	1096.7	1090.0	1085.5	1080.9	1076.4	1071.8
25°	1046.8	1035.4	1024.0	1016.3	1012.0	1007.9	1003.7	999.6
27.5°	982.0	968.7	955.4	945.5	938.9	932.3	925.7	919.1
30°	936.3	922.1	907.9	897.2	889.7	882.2	874.7	867.2
32.5°	890.3	874.2	857.9	846.4	839.4	832.3	825.2	818.2
35°	818.4	801.0	783.4	771.6	765.5	759.4	753.3	747.2
37.5°	748.4	729.1	709.8	696.7	689.7	682.7	675.7	668.7
40°	701.5	681.8	662.1	648.7	641.4	634.1	627.0	619.7
42.5°	654.2	633.8	613.4	599.7	592.7	585.7	578.8	571.8
45°	585.3	565.6	545.8	532.7	526.0	519.3	512.7	506.1
47.5°	518.3	498.7	479.1	466.3	460.2	454.2	448.1	442.1
50°	475.2	456.1	436.9	424.4	418.6	412.7	406.9	401.0
52.5°	434.6	416.0	397.6	385.6	380.3	374.9	369.5	364.1
55°	372.8	356.1	339.4	328.5	323.2	317.9	312.7	307.4
57.5°	316.6	301.3	286.0	276.1	271.7	267.3	262.9	258.4
60°	277.8	263.7	249.5	240.2	235.7	231.3	226.8	222.4
62.5°	244.2	230.6	217.2	209.0	206.4	203.7	201.1	198.4
65°	198.5	189.1	179.6	174.5	173.7	172.8	172.0	171.2
67.5°	160.3	156.0	151.6	149.0	148.1	147.2	146.3	145.4
70°	139.4	136.6	133.9	131.9	130.8	129.6	128.6	127.4
72.5°	121.3	119.0	116.6	115.1	114.5	113.8	113.1	112.4
75°	96.0	94.2	92.2	91.1	90.8	90.5	90.3	89.9
77.5°	72.7	71.7	70.5	69.7	69.3	68.9	68.4	68.0
80°	57.7	56.7	55.5	55.0	55.0	55.0	55.0	55.0
82.5°	43.6	43.0	42.3	42.0	42.0	42.0	42.0	42.0
85°	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7
87.5°	10.5	10.1	10.1	10.0	10.0	10.0	10.0	10.0
90°	14.8	13.9	14.8	15.3	15.3	15.3	15.3	15.3
92.5°	40.5	34.8	30.9	28.0	27.6	26.2	26.5	25.8
95°	121.8	93.4	73.9	63.7	57.6	54.0	52.5	53.0
97.5°	284.3	232.6	182.3	148.7	126.5	115.0	108.3	104.4
100°	424.5	366.9	303.1	246.9	208.3	188.3	174.8	166.5
102.5°	516.4	503.4	456.8	397.1	355.2	321.1	304.3	292.9
105°	564.9	617.4	623.5	608.1	579.4	550.5	530.5	524.0
107.5°	529.9	609.1	657.5	680.0	683.5	682.0	678.0	669.4
110°	499.9	583.0	642.5	680.7	700.7	709.6	713.7	713.2





TEST NUMBER: P331746-930

CATALOG NUMBER: S122RDIP-S1005D530U930-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	472.3	552.2	615.8	659.5	687.3	702.1	710.0	712.5
115°	438.5	510.1	571.0	618.9	651.8	673.3	685.3	689.5
117.5°	412.9	475.8	531.1	576.0	609.7	632.3	645.0	648.5
120°	400.3	458.0	507.3	549.6	582.1	604.0	617.4	622.1
122.5°	390.3	443.1	489.8	528.0	557.2	578.7	590.7	594.6
125°	375.7	423.5	464.5	499.4	526.4	544.0	555.6	559.4
127.5°	361.3	404.6	443.2	475.4	498.9	515.4	525.5	528.5
130°	352.0	392.0	428.7	459.3	482.2	498.0	507.3	510.9
132.5°	343.1	380.1	413.8	442.6	465.0	480.9	489.4	492.8
135°	330.6	361.3	392.0	418.0	438.0	453.3	461.7	463.6
137.5°	320.7	346.3	370.6	393.4	411.6	424.8	432.1	434.9
140°	314.3	336.6	358.0	378.5	393.4	405.4	412.4	415.2
142.5°	309.1	328.1	346.5	363.6	377.7	388.7	394.9	395.5
145°	301.7	317.1	331.5	345.0	356.1	364.0	368.7	370.1
147.5°	296.1	308.2	319.4	329.3	338.5	344.8	348.0	348.8
150°	292.0	302.2	312.0	320.3	327.3	332.9	335.7	336.1
152.5°	287.9	297.4	305.7	312.9	318.4	323.3	325.3	325.4
155°	282.3	289.7	296.6	301.7	306.9	310.1	312.0	311.0
157.5°	275.7	281.8	287.7	291.7	295.3	298.1	298.9	298.9
160°	271.5	276.6	281.8	285.0	288.3	290.6	291.1	291.1
162.5°	267.4	271.8	276.2	278.7	281.9	283.6	284.0	283.6
165°	261.3	264.6	267.8	269.7	271.5	273.4	273.4	273.0
167.5°	255.4	258.0	260.2	261.9	262.7	263.7	263.7	263.1
170°	252.5	253.9	255.8	256.7	257.1	258.5	258.0	257.1
172.5°	249.2	250.1	251.6	252.2	252.7	253.3	252.8	252.3
175°	245.5	246.0	246.5	246.9	246.9	247.4	246.9	246.0
177.5°	242.9	242.9	243.3	243.3	243.3	243.3	242.9	242.1
180°	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7

(END OF REPORT)