

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: P332335-927

Luminaire Tested: **S123RDIP-S1000D365U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332335-927
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-S1000D365U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4044.8 lumens
Efficiency: N/A
Efficacy: 93.0 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

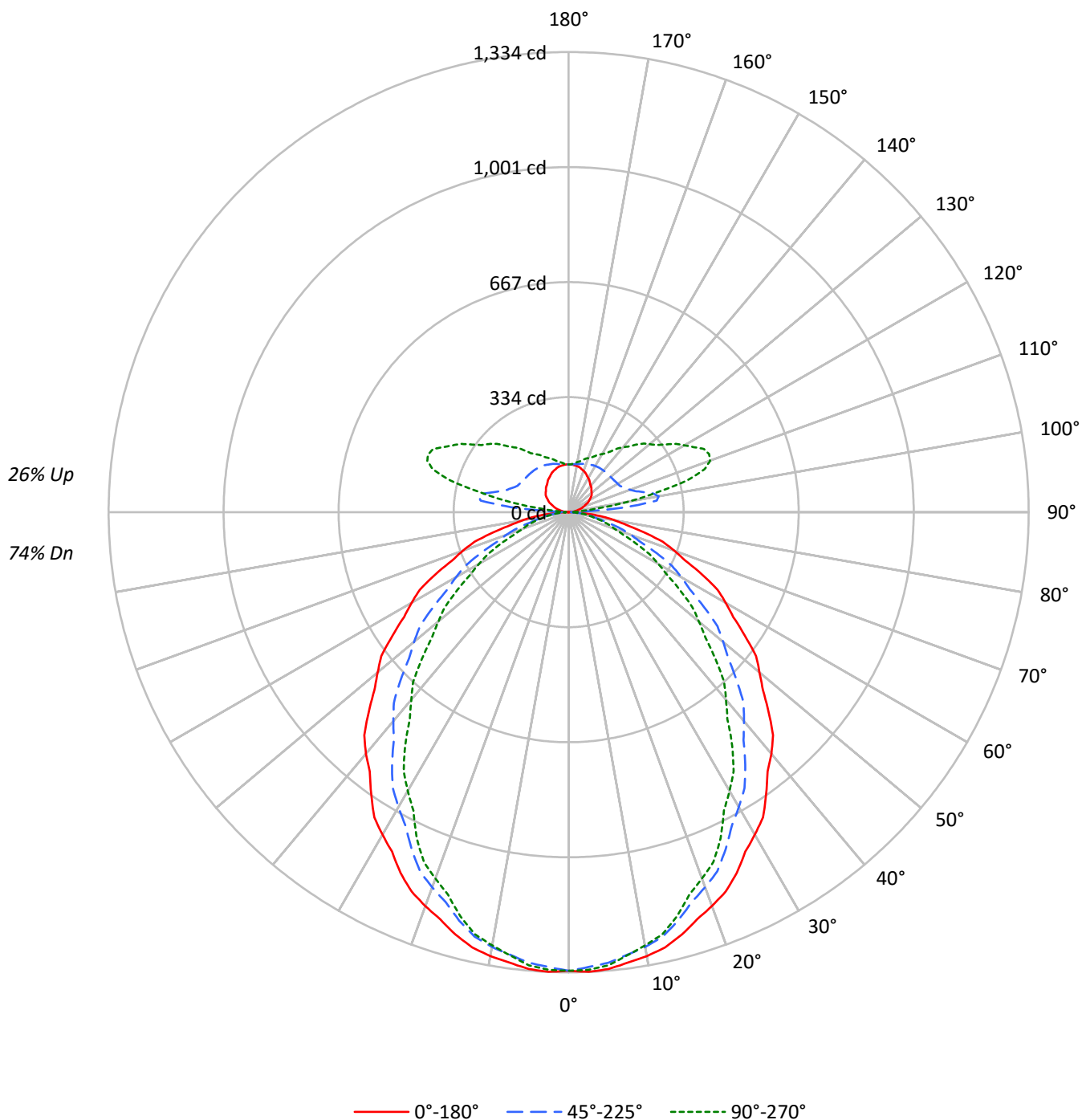
Input Watts (W): 43.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332335-927

CATALOG NUMBER: S123RDIP-S1000D365U927-4F0-1E-UDD-F4

Luminous Intensity Polar Plot



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CATALOG NUMBER: S123RDIP-S1000D365U927-4F0-1E-UDD-F4

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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78
1	104	99	96	92	98	95	91	88	86	83	81	78	76	74	70	69	67
2	95	87	81	76	90	83	78	73	76	71	68	69	65	62	62	60	57
3	87	77	70	64	82	74	67	62	67	62	58	61	57	53	56	52	49
4	80	69	61	55	76	66	59	53	60	54	50	55	50	46	50	46	43
5	74	62	53	47	70	59	52	46	54	48	43	50	44	40	45	41	38
6	68	56	47	41	64	53	46	40	49	43	38	45	40	36	41	37	33
7	63	51	42	37	60	49	41	36	45	38	34	41	36	32	38	33	30
8	59	46	38	33	56	44	37	32	41	35	30	38	32	29	35	30	27
9	55	42	35	30	52	41	34	29	38	32	27	35	30	26	32	28	24
10	51	39	32	27	49	38	31	26	35	29	25	32	27	24	30	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14310	14310	14310
5°	14364	14166	14249
10°	14283	13988	13941
15°	14130	13661	13517
20°	13919	13252	12944
25°	13702	12792	12383
30°	13415	12263	11591
35°	13119	11730	10867
40°	12847	11105	9969
45°	12490	10488	9159
50°	12097	9786	8251
55°	11695	8983	7405
60°	11328	8125	6476
65°	10847	7195	5547
70°	10247	6039	4482
75°	9374	4754	4213
80°	8356	4209	3874
85°	7052	3730	3458

TEST NUMBER: P332335-927

CATALOG NUMBER: S123RDIP-S1000D365U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	3.1
10°-20°	347.3	8.6
20°-30°	500.2	12.4
30°-40°	563.4	13.9
40°-50°	539.0	13.3
50°-60°	441.4	10.9
60°-70°	297.8	7.4
70°-80°	149.8	3.7
80°-90°	40.7	1.0
90°-100°	77.0	1.9
100°-110°	217.9	5.4
110°-120°	214.4	5.3
120°-130°	171.0	4.2
130°-140°	134.8	3.3
140°-150°	100.6	2.5
150°-160°	70.1	1.7
160°-170°	41.2	1.0
170°-180°	13.4	0.3
0°-30°	972.3	24.0
0°-40°	1535.7	38.0
0°-60°	2516.0	62.2
0°-90°	3004.3	74.3
90°-120°	509.3	12.6
90°-150°	915.7	22.6
90°-180°	1040.0	25.7
0°-180°	4044.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1329	1329	1329	1329	1329	
5°	1329	1324	1311	1320	1319	126
15°	1268	1255	1226	1220	1213	357
25°	1154	1125	1077	1055	1043	530
35°	998	958	893	848	827	625
45°	820	770	689	629	602	633
55°	623	568	479	418	395	559
65°	426	365	282	232	218	421
75°	225	173	114	104	101	240
85°	57	34	30	28	28	64
90°	1	3	7	8	8	3
95°	10	31	166	48	32	10
105°	32	48	225	394	356	35
115°	57	72	172	378	433	57
125°	80	94	161	291	342	71
135°	94	112	158	240	277	72
145°	107	122	156	197	216	67
155°	121	131	152	172	179	56
165°	132	136	145	154	156	37
175°	138	138	139	141	141	13
180°	138	138	138	138	138	

TEST NUMBER: P332335-927

CATALOG NUMBER: S123RDIP-S1000D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4
2.5°	1333.7	1332.9	1332.2	1331.4	1330.6	1329.1	1326.8	1324.5	1322.2	1319.9	1322.0
5°	1329.4	1328.2	1327.0	1325.8	1324.6	1322.5	1319.7	1316.8	1314.0	1311.1	1313.2
7.5°	1317.1	1315.8	1314.5	1313.2	1311.9	1309.4	1305.7	1302.0	1298.2	1294.5	1295.7
10°	1306.8	1305.1	1303.4	1301.7	1300.1	1297.0	1292.8	1288.4	1284.1	1279.8	1280.1
12.5°	1292.1	1290.2	1288.4	1286.5	1284.6	1281.0	1275.8	1270.5	1265.3	1260.0	1259.8
15°	1268.0	1265.4	1262.7	1260.0	1257.4	1252.8	1246.0	1239.3	1232.6	1225.9	1224.7
17.5°	1237.5	1234.5	1231.4	1228.4	1225.3	1219.5	1210.9	1202.5	1193.9	1185.3	1182.8
20°	1215.1	1211.3	1207.4	1203.6	1199.8	1193.3	1184.2	1175.1	1166.0	1156.9	1153.8
22.5°	1190.1	1185.7	1181.3	1176.9	1172.5	1165.5	1155.7	1146.1	1136.4	1126.7	1122.8
25°	1153.7	1147.7	1141.7	1135.7	1129.7	1121.2	1110.2	1099.2	1088.1	1077.1	1072.1
27.5°	1109.5	1102.9	1096.2	1089.6	1083.0	1073.6	1061.3	1049.0	1036.7	1024.5	1017.5
30°	1079.3	1072.1	1064.9	1057.7	1050.5	1040.2	1026.8	1013.4	1000.0	986.6	978.4
32.5°	1049.1	1040.9	1032.8	1024.6	1016.5	1005.4	991.2	977.0	962.7	948.6	939.7
35°	998.4	989.8	981.1	972.6	963.9	952.1	937.3	922.4	907.6	892.7	882.4
37.5°	947.1	937.5	927.9	918.3	908.7	896.0	880.2	864.3	848.4	832.6	820.9
40°	914.3	903.8	893.2	882.6	872.1	858.3	841.4	824.3	807.3	790.3	777.8
42.5°	877.2	866.6	856.1	845.6	835.0	821.0	803.4	785.8	768.3	750.7	737.0
45°	820.5	809.7	798.9	788.1	777.4	762.8	744.3	725.9	707.4	689.0	675.3
47.5°	763.8	751.9	740.1	728.3	716.4	701.3	682.9	664.4	645.9	627.5	612.7
50°	722.4	711.1	699.9	688.6	677.3	662.0	642.6	623.2	603.8	584.4	569.5
52.5°	685.3	673.1	660.8	648.6	636.4	620.7	601.5	582.3	563.1	543.8	528.4
55°	623.2	611.5	599.7	588.0	576.2	560.2	539.8	519.4	499.1	478.7	464.9
57.5°	565.9	553.0	540.3	527.4	514.7	498.0	477.5	457.1	436.7	416.2	403.1
60°	526.2	513.0	499.8	486.6	473.4	456.9	437.0	417.2	397.3	377.4	364.4
62.5°	486.5	473.3	460.1	446.9	433.8	417.2	397.4	377.5	357.6	337.7	325.5
65°	425.9	412.7	399.5	386.3	373.2	357.3	338.6	319.9	301.2	282.5	270.8
67.5°	365.3	352.0	338.7	325.3	312.0	296.4	278.5	260.5	242.6	224.7	215.9
70°	325.6	312.7	299.8	286.8	273.9	259.0	242.2	225.5	208.7	191.9	183.5
72.5°	285.9	273.2	260.5	247.7	235.0	220.9	205.7	190.5	175.2	160.0	153.1
75°	225.4	213.8	202.3	190.8	179.4	167.0	153.8	140.6	127.5	114.3	111.9
77.5°	170.2	159.7	149.3	138.9	128.6	119.1	110.6	102.1	93.6	85.2	83.9
80°	134.8	124.9	115.1	105.3	95.5	88.1	83.0	78.0	73.0	67.9	67.2
82.5°	101.2	92.7	84.2	75.7	67.2	61.8	59.4	57.1	54.7	52.4	51.7
85°	57.1	51.9	46.6	41.4	36.0	33.0	32.3	31.6	30.9	30.2	29.7
87.5°	20.8	18.9	16.8	14.9	12.9	12.0	12.1	12.3	12.4	12.6	12.4
90°	0.6	1.1	1.7	2.5	3.1	3.6	4.5	5.3	6.2	7.0	6.7
92.5°	3.5	5.1	7.5	9.7	12.0	16.2	23.5	35.6	47.4	43.0	32.5
95°	9.5	10.4	13.5	18.2	25.5	36.4	60.2	101.9	147.8	166.0	134.7
97.5°	16.2	16.5	18.9	23.1	30.3	42.1	64.8	111.8	188.4	257.3	275.2
100°	20.8	21.0	23.0	26.9	33.6	44.5	64.1	105.5	179.2	265.1	320.3
102.5°	25.4	25.9	27.6	31.4	37.4	47.5	65.0	100.1	165.7	250.6	322.5
105°	32.5	33.4	35.0	38.3	43.6	52.4	67.5	96.3	149.2	225.1	305.4
107.5°	40.0	40.8	42.5	45.7	50.7	58.8	72.1	96.0	138.7	202.6	275.5
110°	45.3	46.2	47.6	50.7	55.5	63.3	75.9	97.1	134.7	189.8	256.7

TEST NUMBER: P332335-927

CATALOG NUMBER: S123RDIP-S1000D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	50.3	51.1	52.5	55.6	60.4	68.0	79.7	99.4	132.4	181.3	240.3
115°	57.4	58.5	60.2	63.0	67.7	75.3	86.0	103.0	131.6	172.1	220.6
117.5°	64.5	65.8	67.2	69.8	75.1	82.1	92.6	107.8	132.1	166.8	208.7
120°	69.4	70.3	71.7	74.5	79.8	86.7	96.9	111.4	133.0	164.3	202.4
122.5°	73.7	74.5	75.9	79.0	84.1	91.5	101.3	114.8	134.5	162.8	197.3
125°	79.8	80.3	82.0	85.1	90.4	98.0	107.8	120.1	136.9	160.7	190.7
127.5°	84.4	85.2	87.4	90.5	96.3	103.9	113.4	124.5	139.6	159.7	184.8
130°	87.4	88.2	90.7	94.0	100.0	107.5	116.8	127.4	141.4	159.0	181.6
132.5°	89.6	90.6	93.4	97.4	103.3	110.7	119.6	130.1	142.8	158.8	178.8
135°	93.5	94.6	97.7	101.9	107.8	115.3	124.0	133.6	144.7	158.4	175.0
137.5°	97.2	98.4	101.4	105.8	111.7	118.7	127.1	136.1	146.1	157.8	171.7
140°	99.7	101.1	103.9	108.4	113.9	121.0	129.0	137.4	146.9	157.6	169.6
142.5°	102.3	103.5	106.5	110.6	116.2	122.7	130.6	138.8	147.7	157.2	167.9
145°	106.6	107.5	110.0	114.2	119.0	125.4	132.7	140.2	148.1	156.5	165.4
147.5°	111.1	111.5	114.0	117.6	122.2	127.7	134.4	141.2	148.1	155.4	163.1
150°	113.9	114.2	116.5	120.1	124.0	129.0	135.5	141.4	148.1	154.6	161.5
152.5°	116.8	116.9	119.1	122.3	125.8	130.6	136.2	141.8	147.4	153.4	159.7
155°	121.2	121.2	122.9	125.7	128.8	132.7	137.4	142.0	146.7	151.5	157.0
157.5°	124.7	124.9	126.3	128.7	131.3	134.4	138.2	142.2	145.8	149.7	154.0
160°	127.4	127.4	128.5	130.7	132.7	135.5	138.9	142.2	145.3	148.4	152.0
162.5°	129.4	129.4	130.3	132.1	133.8	136.2	139.1	142.0	144.4	147.0	150.0
165°	132.4	132.1	132.7	134.1	135.2	137.2	139.4	141.4	143.1	145.0	147.3
167.5°	134.7	134.4	134.7	135.7	136.5	137.8	139.3	140.9	141.7	143.0	144.7
170°	136.0	135.5	135.8	136.6	137.2	137.8	139.1	140.2	140.9	141.6	143.1
172.5°	137.0	136.6	136.7	137.3	137.6	137.9	139.1	140.1	140.1	140.5	141.5
175°	138.0	137.8	137.4	138.0	138.0	138.3	138.9	139.4	139.1	139.1	139.7
177.5°	138.6	138.3	138.1	138.3	138.3	138.3	138.6	138.9	138.6	138.3	138.6
180°	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3

TEST NUMBER: P332335-927

CATALOG NUMBER: S123RDIP-S1000D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4	1329.4
2.5°	1324.1	1326.3	1328.3	1329.2	1328.8	1328.5	1328.1	1327.7
5°	1315.4	1317.6	1319.7	1320.6	1320.1	1319.6	1319.1	1318.7
7.5°	1296.9	1298.1	1299.3	1299.5	1298.6	1297.8	1297.0	1296.2
10°	1280.3	1280.6	1280.8	1280.3	1279.1	1277.9	1276.7	1275.5
12.5°	1259.6	1259.6	1259.4	1258.6	1257.3	1255.8	1254.5	1253.1
15°	1223.5	1222.3	1221.1	1219.6	1218.0	1216.3	1214.7	1213.0
17.5°	1180.3	1177.7	1175.2	1172.7	1170.2	1167.7	1165.2	1162.7
20°	1150.6	1147.6	1144.5	1141.5	1138.6	1135.7	1132.8	1130.0
22.5°	1119.0	1115.1	1111.2	1107.9	1105.3	1102.6	1099.9	1097.2
25°	1067.1	1062.0	1057.0	1053.1	1050.5	1047.9	1045.3	1042.6
27.5°	1010.5	1003.5	996.5	991.0	987.0	982.9	978.9	974.9
30°	970.3	962.1	953.9	948.0	944.1	940.3	936.4	932.6
32.5°	930.7	921.9	912.9	906.5	902.5	898.4	894.4	890.3
35°	872.1	861.8	851.5	844.2	840.0	835.6	831.3	827.0
37.5°	809.2	797.5	785.8	777.3	772.0	766.7	761.4	756.1
40°	765.4	753.0	740.5	731.5	726.0	720.5	714.9	709.5
42.5°	723.4	709.8	696.2	686.9	682.0	677.1	672.1	667.2
45°	661.6	648.0	634.3	624.6	618.9	613.1	607.4	601.7
47.5°	597.8	583.0	568.1	558.1	552.9	547.9	542.7	537.6
50°	554.7	539.8	525.0	514.8	509.3	503.7	498.3	492.7
52.5°	513.0	497.6	482.1	471.9	467.0	462.1	457.2	452.2
55°	450.9	437.0	423.1	413.8	409.0	404.2	399.4	394.6
57.5°	389.9	376.8	363.7	355.1	351.0	346.9	342.9	338.7
60°	351.5	338.6	325.6	317.1	313.1	309.0	304.9	300.8
62.5°	313.3	301.2	289.0	280.7	276.6	272.3	268.0	263.7
65°	259.0	247.2	235.5	228.3	225.7	223.1	220.5	217.8
67.5°	207.2	198.4	189.6	183.8	181.0	178.2	175.3	172.5
70°	175.2	166.8	158.4	152.9	150.2	147.6	145.0	142.4
72.5°	146.3	139.4	132.6	128.7	127.5	126.4	125.3	124.2
75°	109.5	107.1	104.7	103.3	102.8	102.3	101.8	101.3
77.5°	82.6	81.3	80.0	79.1	78.7	78.2	77.7	77.2
80°	66.5	65.8	65.0	64.5	64.0	63.5	63.0	62.5
82.5°	50.9	50.2	49.5	49.1	49.0	49.0	48.8	48.7
85°	29.2	28.8	28.3	28.0	28.0	28.0	28.0	28.0
87.5°	12.2	12.1	12.0	11.9	11.6	11.5	11.3	11.1
90°	7.0	7.3	7.5	8.1	7.8	8.1	8.4	8.1
92.5°	23.6	18.7	16.5	15.1	14.6	13.7	14.0	13.5
95°	100.8	68.3	53.5	43.4	38.1	35.6	33.6	32.5
97.5°	251.2	201.2	165.1	131.7	111.0	98.4	90.8	88.4
100°	330.0	307.4	274.6	234.9	206.6	186.2	175.2	175.5
102.5°	356.2	355.5	336.4	311.2	289.2	273.1	264.0	257.5
105°	363.9	391.9	397.2	390.0	377.1	366.5	357.5	356.1
107.5°	341.8	387.3	411.9	421.8	422.1	418.4	415.4	412.9
110°	320.8	372.3	407.6	427.2	435.1	437.3	436.7	436.2

TEST NUMBER: P332335-927

CATALOG NUMBER: S123RDIP-S1000D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	300.0	352.6	392.1	417.3	431.7	438.6	440.8	440.8
115°	272.4	321.1	362.3	392.8	413.8	426.0	431.7	433.1
117.5°	252.4	294.5	331.4	362.3	384.3	398.4	406.4	408.3
120°	241.9	279.6	313.2	341.5	363.6	379.3	386.0	387.7
122.5°	233.6	267.8	298.9	325.2	344.8	358.9	366.3	368.4
125°	222.5	253.1	280.0	302.4	320.3	332.6	339.6	341.5
127.5°	212.9	240.1	264.4	284.8	300.7	311.2	317.6	319.3
130°	206.8	232.1	254.8	273.8	288.6	298.7	304.6	306.8
132.5°	201.3	224.4	245.6	263.7	277.7	287.7	292.9	294.5
135°	193.7	213.6	231.8	247.7	261.5	269.9	274.9	276.9
137.5°	186.8	203.1	218.8	232.7	244.2	252.7	256.9	258.3
140°	182.8	197.1	210.5	222.5	233.2	241.1	245.5	245.3
142.5°	179.0	191.2	202.9	213.3	222.4	229.4	233.4	233.1
145°	174.4	183.6	192.6	200.7	207.7	213.6	215.9	216.4
147.5°	170.6	178.0	185.2	191.0	196.3	200.3	202.4	202.6
150°	167.9	174.4	180.3	185.6	189.8	192.9	194.6	194.6
152.5°	165.5	171.0	176.3	180.7	183.9	186.8	187.8	187.8
155°	161.8	166.3	170.5	173.8	176.3	178.6	179.2	179.4
157.5°	157.9	161.6	164.9	167.5	169.7	171.3	171.8	171.7
160°	155.7	158.8	161.5	163.5	165.4	167.2	167.2	166.8
162.5°	153.0	155.6	158.2	159.9	161.2	162.6	162.6	162.4
165°	149.5	151.1	153.1	154.6	155.7	156.8	156.5	156.5
167.5°	146.5	147.7	148.9	149.9	150.4	151.1	150.9	150.9
170°	144.4	145.3	146.4	146.9	147.3	147.8	147.5	147.5
172.5°	142.7	143.3	144.2	144.5	144.6	145.1	144.7	144.4
175°	140.2	140.5	141.1	141.1	141.1	141.4	141.1	140.9
177.5°	138.7	138.9	139.2	139.2	138.9	139.2	138.7	138.7
180°	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3

(END OF REPORT)