

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: P332026-927

Luminaire Tested: **S123DIP-S1000D805U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332026-927  
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: S123DIP-S1000D805U927-4F0-1E-UDD-F4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5567.1 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: General Diffuse

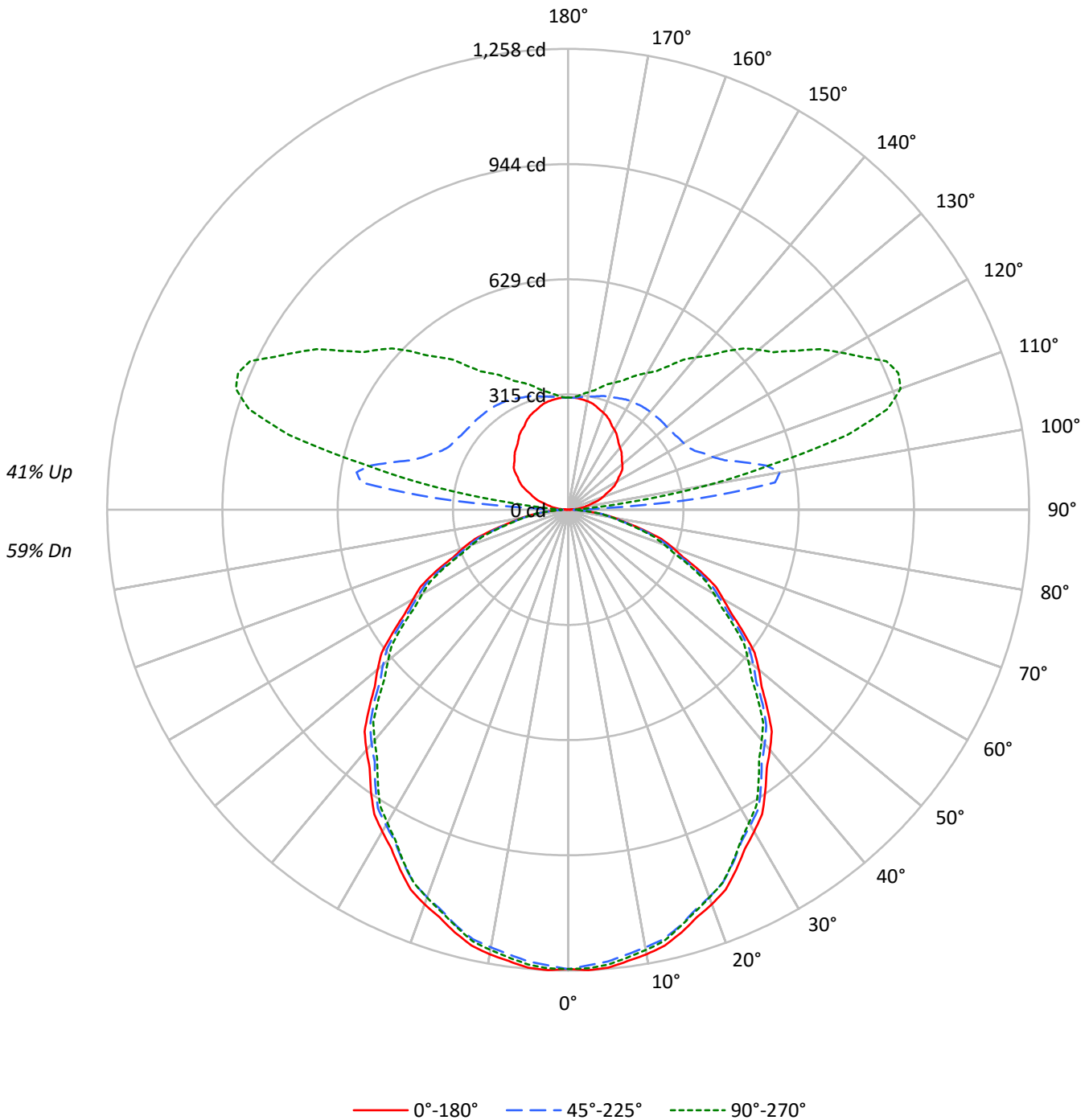
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	100	95	91	88	93	89	86	82	77	75	72	66	65	63	57	55	54	49
2	91	83	77	72	84	78	72	68	68	63	60	58	55	52	50	47	45	41
3	83	73	66	60	77	68	62	56	60	55	50	52	48	44	44	41	39	35
4	76	65	57	50	70	61	53	48	53	47	43	46	42	38	39	36	33	30
5	70	58	49	43	65	54	47	41	47	42	37	41	37	33	35	32	29	26
6	64	52	44	38	60	49	41	36	43	37	32	37	33	29	32	28	26	23
7	59	47	39	33	55	44	37	31	39	33	29	34	29	26	29	26	23	20
8	55	43	35	29	51	40	33	28	35	30	25	31	26	23	27	23	20	18
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	18	16
10	48	36	28	23	45	34	27	22	30	24	21	26	22	19	23	19	17	15

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

	0°	45°	90°
0°	13497	13497	13497
5°	13560	13374	13467
10°	13470	13258	13340
15°	13312	13108	13133
20°	13128	12893	12906
25°	12883	12638	12613
30°	12609	12356	12261
35°	12326	12056	11901
40°	12029	11726	11545
45°	11702	11423	11144
50°	11375	11050	10742
55°	10946	10663	10340
60°	10514	10213	9888
65°	10132	9722	9419
70°	9567	9161	8752
75°	8742	8430	8072
80°	7885	7550	7482
85°	6928	6657	6385



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.1	2.1
10°-20°	333.5	6.0
20°-30°	492.7	8.8
30°-40°	575.5	10.3
40°-50°	578.6	10.4
50°-60°	508.2	9.1
60°-70°	378.6	6.8
70°-80°	215.7	3.9
80°-90°	64.3	1.2
90°-100°	170.3	3.1
100°-110°	482.1	8.7
110°-120°	474.3	8.5
120°-130°	378.3	6.8
130°-140°	298.3	5.4
140°-150°	222.6	4.0
150°-160°	155.2	2.8
160°-170°	91.2	1.6
170°-180°	29.7	0.5
0°-30°	944.3	17.0
0°-40°	1519.8	27.3
0°-60°	2606.6	46.8
0°-90°	3265.2	58.7
90°-120°	1126.7	20.2
90°-150°	2025.9	36.4
90°-180°	2302.0	41.4
0°-180°	5567.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1254	1254	1254	1254	1254	
5°	1255	1249	1238	1248	1246	119
15°	1195	1190	1176	1184	1178	337
25°	1085	1078	1064	1065	1062	499
35°	938	931	918	911	906	587
45°	769	764	750	738	732	593
55°	583	582	568	557	551	522
65°	398	392	382	373	370	392
75°	210	206	203	197	194	225
85°	56	54	54	52	52	62
90°	1	7	15	17	18	5
95°	21	68	367	107	72	23
105°	72	106	498	871	788	76
115°	127	158	381	835	958	126
125°	176	208	356	644	756	157
135°	207	247	350	530	612	160
145°	236	270	346	435	479	148
155°	268	289	335	381	397	123
165°	293	301	321	340	346	83
175°	305	306	308	312	312	29
180°	306	306	306	306	306	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1258.2	1257.5	1256.7	1255.9	1255.2	1253.7	1251.6	1249.5	1247.4	1245.3	1247.2
5°	1255.0	1253.8	1252.6	1251.4	1250.2	1248.3	1245.7	1243.0	1240.4	1237.8	1240.2
7.5°	1242.7	1241.5	1240.3	1239.1	1237.9	1236.0	1233.3	1230.5	1227.8	1225.0	1227.2
10°	1232.4	1231.2	1229.9	1228.8	1227.6	1225.4	1222.3	1219.2	1216.1	1213.0	1215.1
12.5°	1218.5	1217.6	1216.6	1215.5	1214.6	1212.6	1209.7	1206.7	1203.8	1200.9	1202.5
15°	1194.6	1193.7	1192.7	1191.8	1190.8	1188.7	1185.7	1182.6	1179.4	1176.3	1178.2
17.5°	1166.8	1165.5	1164.3	1163.1	1161.8	1159.7	1156.5	1153.4	1150.3	1147.2	1148.5
20°	1146.1	1144.7	1143.3	1141.8	1140.3	1138.0	1135.0	1131.9	1128.8	1125.6	1126.6
22.5°	1122.8	1121.4	1120.0	1118.5	1117.1	1114.8	1111.7	1108.6	1105.5	1102.3	1103.1
25°	1084.7	1083.2	1081.8	1080.4	1078.9	1076.7	1073.5	1070.4	1067.3	1064.1	1064.4
27.5°	1043.9	1042.5	1041.1	1039.7	1038.3	1035.9	1032.6	1029.3	1025.9	1022.5	1022.7
30°	1014.5	1013.4	1012.2	1011.0	1009.8	1007.5	1004.2	1000.8	997.4	994.1	994.1
32.5°	985.2	983.7	982.1	980.5	978.9	976.8	974.2	971.7	969.1	966.5	965.1
35°	938.0	936.6	935.2	933.7	932.2	930.0	926.9	923.8	920.7	917.5	916.1
37.5°	889.7	887.9	886.1	884.2	882.4	880.0	876.8	873.6	870.4	867.3	865.5
40°	856.1	854.6	853.2	851.8	850.3	848.0	844.5	841.2	837.9	834.5	832.6
42.5°	822.4	820.8	819.2	817.5	815.9	813.4	810.1	806.8	803.4	800.0	798.1
45°	768.7	767.8	766.8	765.9	764.9	762.9	759.8	756.6	753.5	750.4	747.6
47.5°	715.5	714.1	712.7	711.3	710.0	707.7	704.9	702.0	699.0	696.1	693.2
50°	679.3	678.0	676.8	675.7	674.5	672.3	669.2	666.1	663.0	659.9	657.2
52.5°	641.3	640.5	639.7	638.9	638.0	636.0	632.7	629.4	626.1	622.7	620.5
55°	583.3	583.0	582.8	582.6	582.3	580.7	577.6	574.4	571.3	568.2	565.5
57.5°	528.1	527.3	526.5	525.7	524.8	523.2	520.7	518.2	515.7	513.3	510.9
60°	488.4	488.1	487.9	487.7	487.4	485.9	483.0	480.1	477.3	474.4	472.2
62.5°	453.0	452.4	451.8	451.1	450.6	448.9	445.9	443.1	440.2	437.3	435.1
65°	397.8	396.6	395.5	394.3	393.1	391.3	388.9	386.5	384.0	381.7	379.8
67.5°	339.5	338.3	337.3	336.3	335.2	333.7	331.9	330.1	328.3	326.5	324.8
70°	304.0	302.6	301.2	299.8	298.3	296.8	295.4	294.0	292.6	291.1	289.5
72.5°	267.0	265.9	264.8	263.8	262.8	261.4	259.8	258.2	256.5	254.8	253.4
75°	210.2	209.3	208.3	207.4	206.4	205.6	204.9	204.1	203.4	202.7	201.5
77.5°	160.0	159.5	158.9	158.4	157.9	157.2	156.4	155.5	154.6	153.8	153.0
80°	127.2	126.5	125.8	125.1	124.4	123.7	123.3	122.8	122.3	121.8	121.6
82.5°	95.3	95.1	95.1	94.9	94.7	94.6	94.5	94.4	94.3	94.3	93.8
85°	56.1	55.6	55.1	54.7	54.2	53.9	53.9	53.9	53.9	53.9	53.4
87.5°	22.7	22.3	22.0	21.8	21.5	21.4	21.5	21.7	21.9	22.1	21.8
90°	1.3	2.5	3.7	5.5	6.8	8.1	9.9	11.8	13.6	15.4	14.9
92.5°	7.7	11.4	16.6	21.5	26.6	35.8	52.0	78.7	104.8	95.2	71.9
95°	21.1	22.9	29.7	40.2	56.3	80.5	133.2	225.5	327.0	367.3	297.9
97.5°	35.9	36.5	41.9	51.0	66.9	93.0	143.3	247.4	416.7	569.2	609.0
100°	45.9	46.4	50.8	59.5	74.3	98.5	141.8	233.5	396.4	586.5	708.5
102.5°	56.2	57.4	61.2	69.4	82.8	104.9	143.8	221.6	366.6	554.3	713.5
105°	71.9	73.7	77.4	84.8	96.6	115.8	149.2	213.0	330.1	498.0	675.7
107.5°	88.4	90.3	93.9	101.2	112.3	130.1	159.4	212.5	306.8	448.1	609.6
110°	100.4	102.2	105.3	112.1	122.6	140.0	167.9	214.9	297.9	419.9	567.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.2	113.1	116.2	123.0	133.6	150.4	176.3	219.8	292.9	401.1	531.8
115°	127.0	129.4	133.2	139.3	149.9	166.6	190.1	227.9	291.1	380.9	488.1
117.5°	142.7	145.5	148.6	154.3	166.1	181.6	204.9	238.6	292.2	369.0	461.7
120°	153.6	155.4	158.5	164.8	176.5	192.0	214.3	246.5	294.2	363.5	447.8
122.5°	163.0	164.9	167.9	174.7	185.9	202.4	224.2	253.9	297.6	360.1	436.4
125°	176.5	177.8	181.5	188.3	200.0	216.7	238.4	265.7	302.9	355.5	421.8
127.5°	186.8	188.6	193.2	200.2	213.2	229.9	250.8	275.4	308.8	353.3	408.9
130°	193.2	195.1	200.7	208.1	221.1	237.8	258.3	281.8	312.8	351.8	402.0
132.5°	198.2	200.6	206.6	215.6	228.5	244.8	264.7	287.7	315.8	351.3	395.5
135°	206.8	209.4	216.2	225.5	238.4	255.2	274.3	295.4	320.2	350.5	387.1
137.5°	215.0	217.6	224.3	234.2	247.1	262.6	281.1	301.1	323.2	349.2	379.8
140°	220.5	223.6	229.8	239.7	252.1	267.5	285.5	304.1	325.2	348.7	375.3
142.5°	226.4	229.0	235.8	244.6	257.1	271.5	289.0	307.0	326.6	347.7	371.4
145°	236.0	237.8	243.4	252.7	263.2	277.5	293.6	310.3	327.6	346.2	366.1
147.5°	245.7	246.8	252.2	260.2	270.4	282.6	297.3	312.3	327.6	343.9	360.8
150°	252.1	252.7	257.6	265.7	274.3	285.5	299.8	312.8	327.6	341.9	357.4
152.5°	258.5	258.6	263.6	270.7	278.3	289.0	301.3	313.8	326.1	339.4	353.4
155°	268.2	268.2	271.9	278.1	284.9	293.6	304.1	314.0	324.6	335.1	347.5
157.5°	275.8	276.3	279.3	284.8	290.6	297.3	305.7	314.7	322.4	331.2	340.8
160°	281.8	281.8	284.3	289.2	293.6	299.8	307.2	314.7	321.5	328.3	336.3
162.5°	286.3	286.3	288.3	292.2	296.0	301.3	307.7	314.1	319.5	325.3	331.8
165°	292.9	292.3	293.6	296.7	299.1	303.5	308.4	312.8	316.5	320.8	325.7
167.5°	298.0	297.3	297.9	300.2	302.0	304.8	308.3	311.8	313.5	316.4	320.0
170°	301.0	299.8	300.4	302.2	303.5	304.8	307.8	310.3	311.6	313.4	316.5
172.5°	303.0	302.2	302.4	303.7	304.4	305.2	307.8	309.8	310.1	310.9	313.0
175°	305.3	304.8	304.1	305.3	305.3	305.9	307.2	308.4	307.8	307.8	309.0
177.5°	306.4	305.9	305.5	305.9	305.9	305.9	306.4	307.4	306.4	305.9	306.4
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9	1253.9
2.5°	1249.1	1251.1	1253.0	1253.9	1253.6	1253.5	1253.2	1253.1
5°	1242.5	1244.9	1247.4	1248.3	1247.8	1247.4	1246.9	1246.4
7.5°	1229.4	1231.5	1233.7	1234.6	1234.3	1234.1	1233.7	1233.4
10°	1217.3	1219.4	1221.6	1222.4	1221.9	1221.5	1221.0	1220.5
12.5°	1204.0	1205.6	1207.2	1207.8	1207.6	1207.3	1207.0	1206.7
15°	1180.1	1182.0	1184.0	1184.2	1182.8	1181.3	1179.9	1178.5
17.5°	1149.9	1151.2	1152.5	1152.9	1152.5	1151.9	1151.4	1150.9
20°	1127.5	1128.5	1129.5	1129.6	1128.9	1128.1	1127.4	1126.7
22.5°	1103.9	1104.6	1105.4	1105.3	1104.5	1103.5	1102.6	1101.7
25°	1064.6	1064.9	1065.2	1064.9	1064.1	1063.4	1062.7	1062.0
27.5°	1022.9	1023.1	1023.3	1022.9	1022.1	1021.1	1020.3	1019.3
30°	994.1	994.1	994.1	993.2	991.6	989.9	988.2	986.5
32.5°	963.8	962.5	961.2	960.0	959.1	958.1	957.3	956.3
35°	914.7	913.2	911.8	910.5	909.3	908.1	906.9	905.7
37.5°	863.9	862.1	860.4	859.1	858.4	857.6	856.8	856.1
40°	830.7	828.8	826.9	825.4	824.4	823.5	822.5	821.6
42.5°	796.1	794.2	792.3	790.9	790.0	789.0	788.1	787.1
45°	744.7	741.8	738.9	736.9	735.7	734.5	733.3	732.1
47.5°	690.4	687.6	684.8	682.9	681.8	680.7	679.7	678.6
50°	654.6	652.0	649.3	647.3	645.9	644.4	642.9	641.5
52.5°	618.2	616.0	613.8	611.9	610.5	609.0	607.6	606.2
55°	562.9	560.3	557.7	555.7	554.5	553.3	552.2	551.0
57.5°	508.5	506.2	503.8	501.9	500.6	499.2	497.8	496.4
60°	470.1	467.9	465.8	464.1	462.9	461.7	460.5	459.3
62.5°	433.0	430.9	428.6	427.2	426.4	425.6	424.8	424.0
65°	377.9	375.9	374.0	372.7	372.0	371.3	370.5	369.8
67.5°	323.1	321.5	319.8	318.5	317.4	316.4	315.4	314.4
70°	287.7	286.1	284.4	283.0	281.8	280.6	279.4	278.1
72.5°	251.9	250.4	248.9	247.9	247.2	246.6	246.1	245.4
75°	200.3	199.1	197.9	196.9	196.2	195.5	194.8	194.1
77.5°	152.1	151.3	150.5	150.1	150.1	150.1	150.1	150.1
80°	121.4	121.1	120.9	120.7	120.7	120.7	120.7	120.7
82.5°	93.4	92.9	92.5	92.2	92.0	91.8	91.7	91.4
85°	52.9	52.4	52.0	51.7	51.7	51.7	51.7	51.7
87.5°	21.7	21.6	21.5	21.7	21.5	21.7	21.9	21.7
90°	15.4	16.1	16.7	18.0	17.3	18.0	18.6	18.0
92.5°	52.1	41.4	36.5	33.4	32.2	30.3	31.0	29.9
95°	223.0	151.1	118.3	96.0	84.2	78.7	74.3	71.9
97.5°	555.8	445.2	365.3	291.2	245.5	217.6	200.9	195.6
100°	730.2	680.0	607.6	519.6	457.1	411.9	387.7	388.3
102.5°	788.1	786.6	744.3	688.6	639.9	604.1	583.9	569.7
105°	805.2	867.0	878.8	862.8	834.2	810.7	790.9	787.8
107.5°	756.4	856.9	911.2	933.2	933.7	925.8	919.1	913.4
110°	709.8	823.7	901.7	945.2	962.4	967.4	966.1	965.0





TEST NUMBER: P332026-927

CATALOG NUMBER: S123DIP-S1000D805U927-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	663.7	780.1	867.6	923.3	955.1	970.4	975.1	975.3
115°	602.6	710.3	801.5	868.9	915.4	942.6	955.1	958.1
117.5°	558.4	651.4	733.2	801.7	850.1	881.3	899.1	903.4
120°	535.1	618.7	693.1	755.6	804.5	839.2	854.1	857.8
122.5°	516.8	592.5	661.3	719.5	762.9	794.1	810.5	815.2
125°	492.3	559.9	619.3	668.9	708.5	735.8	751.2	755.6
127.5°	471.1	531.2	584.9	630.0	665.3	688.6	702.6	706.5
130°	457.7	513.4	563.6	605.7	638.6	660.8	673.8	678.8
132.5°	445.3	496.6	543.3	583.4	614.3	636.6	648.1	651.6
135°	428.6	472.5	512.8	548.1	578.5	597.1	608.2	612.5
137.5°	413.4	449.4	484.1	514.7	540.2	559.0	568.5	571.3
140°	404.4	436.0	465.7	492.3	515.9	533.2	543.2	542.6
142.5°	396.0	423.1	448.9	472.1	492.1	507.5	516.4	515.8
145°	385.9	406.3	426.1	444.1	459.5	472.5	477.5	478.7
147.5°	377.6	393.8	409.8	422.6	434.3	443.1	447.8	448.3
150°	371.6	385.9	398.9	410.6	419.9	426.7	430.5	430.5
152.5°	366.1	378.4	389.9	399.7	407.0	413.4	415.6	415.6
155°	358.0	367.9	377.2	384.6	390.1	395.1	396.4	397.0
157.5°	349.3	357.6	364.8	370.6	375.4	379.1	380.2	380.0
160°	344.4	351.2	357.4	361.7	366.1	369.7	369.7	369.2
162.5°	338.4	344.2	349.9	353.8	356.6	359.8	359.8	359.3
165°	330.7	334.5	338.8	341.9	344.4	346.8	346.2	346.2
167.5°	324.0	326.9	329.4	331.6	332.7	334.5	333.8	333.8
170°	319.6	321.5	323.9	325.2	325.7	327.0	326.4	326.4
172.5°	315.6	317.0	318.9	319.7	319.8	321.1	320.0	319.5
175°	310.3	310.9	312.1	312.1	312.1	312.8	312.1	311.6
177.5°	307.0	307.4	307.9	307.9	307.4	307.9	307.0	307.0
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9

(END OF REPORT)