

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: P332021-830

Luminaire Tested: **S123DIP-S1000D805U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332021-830  
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: S123DIP-S1000D805U830-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6984.8 lumens  
Efficiency: N/A  
Efficacy: 128.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

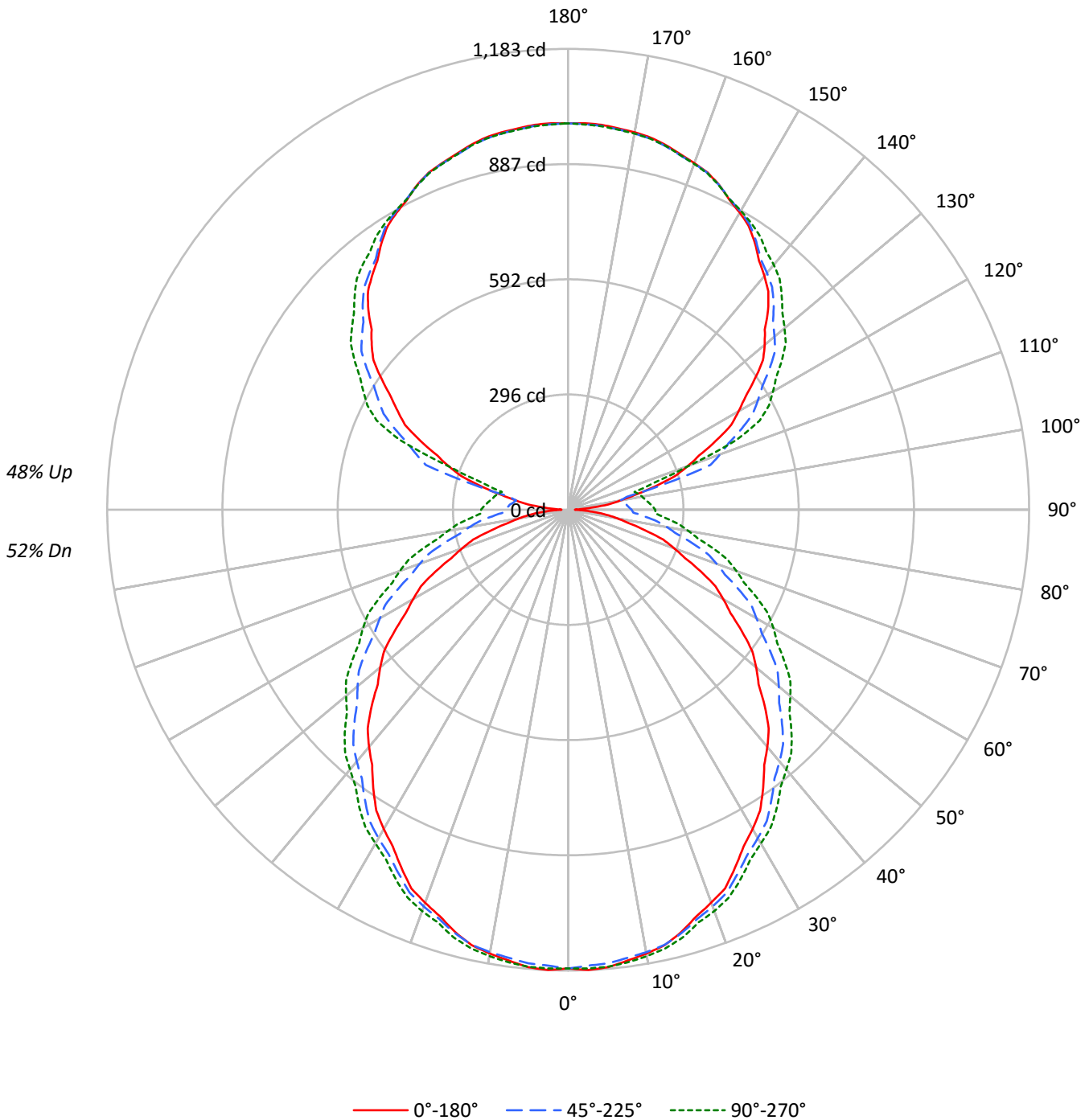
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332021-830

CATALOG NUMBER: S123DIP-S1000D805U830-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332021-830

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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	108	108	108	108	100	100	100	100	84	84	84	71	71	71	58	58	58	52
1	97	92	88	84	90	85	82	78	72	70	67	60	58	57	49	48	47	41
2	88	80	73	68	81	74	68	63	63	58	55	52	49	46	43	41	39	34
3	80	70	62	56	74	65	58	52	55	50	45	46	42	39	38	35	32	28
4	73	62	53	47	67	57	50	44	49	43	38	41	36	33	33	30	28	24
5	67	55	46	40	61	51	43	38	43	38	33	36	32	28	30	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	24	21	18
7	57	44	36	30	52	41	34	29	35	29	25	30	25	22	25	21	18	16
8	53	40	32	27	49	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	37	29	24	45	34	27	22	29	24	20	25	21	17	21	17	15	13
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	19	16	13	11

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

	0°	45°	90°
0°	12676	12676	12676
5°	12715	12357	12363
10°	12602	12072	12012
15°	12439	11748	11627
20°	12206	11380	11204
25°	11920	10955	10760
30°	11627	10572	10310
35°	11297	10169	9950
40°	10983	9801	9564
45°	10635	9448	9257
50°	10293	9100	8917
55°	9912	8741	8611
60°	9543	8380	8298
65°	9165	7994	7927
70°	8591	7558	7545
75°	7872	7060	7157
80°	7040	6572	6712
85°	6274	6235	6458



TEST NUMBER: P332021-830

CATALOG NUMBER: S123DIP-S1000D805U830-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.6	1.6
10°-20°	318.2	4.6
20°-30°	476.0	6.8
30°-40°	568.4	8.1
40°-50°	594.7	8.5
50°-60°	558.1	8.0
60°-70°	466.1	6.7
70°-80°	333.5	4.8
80°-90°	201.7	2.9
90°-100°	160.8	2.3
100°-110°	263.6	3.8
110°-120°	474.1	6.8
120°-130°	560.7	8.0
130°-140°	577.4	8.3
140°-150°	528.6	7.6
150°-160°	423.7	6.1
160°-170°	273.4	3.9
170°-180°	94.2	1.3
0°-30°	905.9	13.0
0°-40°	1474.3	21.1
0°-60°	2627.1	37.6
0°-90°	3628.4	51.9
90°-120°	898.5	12.9
90°-150°	2565.1	36.7
90°-180°	3356.0	48.0
0°-180°	6984.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1179	1176	1169	1178	1178	112
15°	1122	1126	1125	1137	1137	316
25°	1013	1026	1030	1046	1047	467
35°	872	893	910	928	934	545
45°	713	744	776	800	811	550
55°	544	586	632	666	677	487
65°	376	426	482	519	534	371
75°	204	264	328	369	386	218
85°	63	127	195	237	252	66
90°	17	88	163	207	224	13
95°	59	82	150	193	208	67
105°	230	266	258	169	176	243
115°	418	440	491	528	542	413
125°	584	592	631	658	669	522
135°	726	729	746	770	775	558
145°	836	839	841	852	858	522
155°	919	918	918	921	917	423
165°	969	967	966	971	967	274
175°	992	988	989	993	988	94
180°	992	992	992	992	992	



TEST NUMBER: P332021-830

CATALOG NUMBER: S123DIP-S1000D805U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1182.8	1182.1	1181.4	1180.7	1180.1	1178.7	1177.0	1175.2	1173.3	1171.5	1173.3
5°	1178.9	1178.4	1177.8	1177.2	1176.7	1175.5	1173.8	1172.1	1170.4	1168.7	1170.9
7.5°	1167.3	1167.5	1167.6	1167.7	1167.8	1167.1	1165.5	1163.8	1162.1	1160.5	1163.3
10°	1157.2	1157.7	1158.3	1158.9	1159.4	1159.0	1157.5	1156.1	1154.7	1153.3	1156.1
12.5°	1144.8	1145.6	1146.4	1147.2	1148.0	1147.9	1147.0	1145.9	1145.0	1144.1	1146.7
15°	1122.5	1123.3	1124.2	1125.0	1125.9	1126.1	1125.9	1125.6	1125.3	1125.0	1127.9
17.5°	1094.3	1096.0	1097.7	1099.4	1101.1	1101.9	1101.8	1101.6	1101.5	1101.5	1104.0
20°	1073.7	1075.4	1077.1	1078.8	1080.5	1081.8	1082.3	1082.9	1083.5	1084.0	1086.6
22.5°	1052.2	1053.9	1055.6	1057.3	1059.0	1060.3	1061.1	1061.9	1062.7	1063.5	1066.7
25°	1013.4	1016.2	1019.2	1022.0	1024.8	1026.7	1027.6	1028.4	1029.3	1030.1	1033.8
27.5°	974.4	977.7	980.9	984.2	987.4	990.0	991.8	993.6	995.4	997.3	1000.5
30°	946.7	950.5	954.1	957.8	961.6	964.5	966.9	969.1	971.4	973.6	977.1
32.5°	916.0	920.1	924.3	928.4	932.6	936.1	939.1	942.1	945.1	948.0	951.7
35°	872.3	876.8	881.5	886.0	890.6	894.7	898.4	902.1	905.8	909.6	913.8
37.5°	826.1	831.3	836.4	841.5	846.7	851.5	856.1	860.6	865.2	869.8	874.6
40°	795.3	800.5	805.6	810.8	815.9	821.3	827.0	832.7	838.4	844.1	848.9
42.5°	761.5	767.8	774.0	780.3	786.6	792.7	798.6	804.6	810.5	816.4	821.7
45°	713.2	720.1	727.0	733.8	740.6	747.6	754.7	761.9	769.0	776.1	781.6
47.5°	662.7	670.4	678.3	686.0	693.7	701.7	709.8	718.0	726.1	734.3	740.4
50°	629.9	637.8	645.8	653.8	661.8	670.2	679.0	687.9	696.7	705.6	712.1
52.5°	594.9	603.4	611.9	620.3	628.8	637.8	647.6	657.3	667.0	676.8	683.6
55°	543.9	553.4	562.7	572.1	581.5	591.4	601.6	611.9	622.2	632.4	640.2
57.5°	494.2	504.0	513.8	523.6	533.4	543.9	555.2	566.4	577.6	588.8	596.5
60°	459.3	469.5	479.8	490.0	500.3	511.2	522.9	534.7	546.4	558.1	566.0
62.5°	426.4	436.9	447.4	457.9	468.3	479.8	492.2	504.5	516.9	529.3	537.2
65°	375.9	387.0	398.1	409.3	420.4	432.2	444.7	457.2	469.8	482.4	490.9
67.5°	324.5	336.4	348.2	360.0	371.7	384.1	396.8	409.6	422.4	435.2	444.5
70°	288.6	300.9	313.1	325.5	337.7	350.6	364.3	378.1	391.7	405.4	414.5
72.5°	255.8	268.1	280.3	292.6	304.8	318.0	332.2	346.3	360.4	374.6	383.9
75°	204.0	217.4	230.7	244.2	257.6	271.4	285.7	299.9	314.1	328.4	337.8
77.5°	158.8	172.3	185.9	199.3	212.8	226.8	241.2	255.5	269.9	284.3	294.2
80°	127.0	141.0	155.0	168.9	182.9	197.3	212.1	227.0	241.8	256.6	266.3
82.5°	99.2	113.5	127.7	141.9	156.1	170.7	185.8	200.8	215.8	230.9	240.6
85°	62.9	77.1	91.3	105.7	119.9	134.6	149.7	164.8	179.8	195.0	204.7
87.5°	34.3	48.8	63.3	77.9	92.4	107.1	122.1	137.0	152.0	166.9	176.8
90°	17.4	33.0	48.6	64.2	79.8	96.0	112.6	129.3	146.0	162.7	173.0
92.5°	29.3	41.5	53.6	65.8	77.9	92.0	107.8	123.8	139.7	155.6	166.2
95°	59.1	63.4	67.9	72.3	76.7	86.8	102.5	118.3	134.0	149.9	159.9
97.5°	102.9	109.9	117.0	123.9	131.0	135.3	136.9	138.4	140.0	141.5	151.3
100°	136.1	148.5	160.9	173.2	185.7	185.7	173.2	160.8	148.4	135.9	145.5
102.5°	174.0	184.5	195.1	205.7	216.2	214.1	199.0	184.0	169.0	153.9	157.9
105°	229.9	238.5	247.1	255.8	264.4	267.5	265.0	262.6	260.0	257.6	236.6
107.5°	287.6	294.8	302.1	309.3	316.6	327.2	341.1	355.1	369.1	383.0	369.4
110°	326.0	332.4	338.9	345.3	351.8	361.7	374.8	388.0	401.2	414.4	416.4



TEST NUMBER: P332021-830

CATALOG NUMBER: S123DIP-S1000D805U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.7	369.2	374.6	379.9	385.3	394.5	407.2	419.9	432.6	445.4	452.7
115°	418.3	422.7	427.2	431.5	435.9	444.0	455.7	467.5	479.2	491.0	499.5
117.5°	472.1	475.5	478.8	482.1	485.4	492.3	502.7	513.1	523.5	533.9	542.0
120°	504.7	507.7	510.6	513.4	516.3	522.7	532.6	542.5	552.4	562.3	570.1
122.5°	538.9	540.8	542.8	544.8	546.8	552.5	562.0	571.7	581.3	590.8	598.0
125°	584.5	585.8	587.1	588.4	589.7	594.8	603.8	612.7	621.6	630.6	636.9
127.5°	629.9	630.9	632.0	633.0	634.0	638.3	645.9	653.6	661.2	668.8	675.0
130°	658.2	659.2	660.3	661.3	662.3	666.0	672.3	678.7	685.0	691.4	697.5
132.5°	684.3	685.5	686.8	688.1	689.3	692.5	697.6	702.7	707.8	712.8	718.7
135°	725.5	726.1	726.8	727.5	728.2	730.5	734.2	738.0	741.9	745.6	751.3
137.5°	760.5	761.6	762.6	763.6	764.6	766.2	768.4	770.4	772.6	774.7	780.0
140°	783.1	784.1	785.0	786.1	787.0	788.2	789.6	790.9	792.2	793.6	798.5
142.5°	804.9	805.7	806.4	807.2	807.9	808.6	809.3	809.9	810.6	811.3	815.7
145°	835.5	836.3	837.2	838.0	838.9	839.4	839.8	840.1	840.5	840.7	843.4
147.5°	862.9	863.7	864.4	865.2	865.9	866.5	866.8	867.0	867.4	867.7	868.7
150°	880.5	881.1	881.6	882.0	882.5	883.0	883.3	883.6	883.9	884.3	884.6
152.5°	896.5	896.7	896.9	897.2	897.4	897.6	897.8	898.0	898.2	898.4	899.0
155°	918.9	918.6	918.2	917.9	917.6	917.5	917.7	917.8	917.9	918.1	919.0
157.5°	936.2	936.2	936.2	936.1	936.1	936.0	935.9	935.8	935.6	935.4	936.4
160°	946.9	946.7	946.6	946.4	946.2	946.0	945.9	945.7	945.6	945.4	946.4
162.5°	956.9	956.5	956.0	955.6	955.2	954.9	954.7	954.6	954.4	954.2	955.4
165°	969.0	968.5	968.0	967.5	967.0	966.7	966.6	966.4	966.2	966.0	967.3
167.5°	978.5	977.8	977.1	976.5	975.8	975.4	975.4	975.4	975.4	975.4	976.8
170°	983.7	983.1	982.4	981.8	981.1	980.8	980.8	980.8	980.8	980.8	982.1
172.5°	987.2	986.5	985.7	984.9	984.1	983.8	983.9	984.0	984.2	984.3	985.6
175°	991.8	991.0	990.2	989.4	988.5	988.3	988.4	988.5	988.7	988.9	990.0
177.5°	993.0	992.4	991.7	991.1	990.4	990.1	990.2	990.4	990.5	990.6	991.7
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8



TEST NUMBER: P332021-830

CATALOG NUMBER: S123DIP-S1000D805U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6	1177.6
2.5°	1175.2	1177.0	1178.7	1179.6	1179.3	1179.1	1178.9	1178.6
5°	1173.2	1175.5	1177.8	1178.7	1178.5	1178.2	1177.9	1177.6
7.5°	1166.1	1169.0	1171.9	1173.1	1172.8	1172.4	1172.1	1171.8
10°	1159.0	1161.8	1164.7	1165.8	1165.3	1164.7	1164.1	1163.6
12.5°	1149.2	1151.9	1154.5	1155.6	1155.0	1154.4	1153.9	1153.3
15°	1130.8	1133.6	1136.4	1137.7	1137.5	1137.2	1136.9	1136.6
17.5°	1106.5	1109.2	1111.7	1112.8	1112.4	1112.0	1111.6	1111.2
20°	1089.1	1091.7	1094.3	1095.7	1096.0	1096.3	1096.6	1096.8
22.5°	1070.0	1073.2	1076.5	1078.0	1077.8	1077.7	1077.5	1077.3
25°	1037.6	1041.2	1044.9	1046.8	1046.8	1046.8	1046.8	1046.8
27.5°	1003.6	1006.8	1010.0	1011.7	1012.0	1012.2	1012.5	1012.7
30°	980.5	983.9	987.3	989.1	989.1	989.1	989.1	989.1
32.5°	955.4	958.9	962.6	964.8	965.4	966.1	966.9	967.5
35°	918.0	922.4	926.6	929.3	930.5	931.6	932.7	933.9
37.5°	879.5	884.3	889.2	892.0	893.0	893.8	894.8	895.7
40°	853.8	858.7	863.5	866.5	867.6	868.7	869.9	871.0
42.5°	827.0	832.3	837.6	841.0	842.6	844.2	845.8	847.4
45°	786.9	792.4	797.8	801.6	803.9	806.2	808.5	810.8
47.5°	746.5	752.6	758.7	762.6	764.4	766.2	767.9	769.7
50°	718.7	725.2	731.8	736.0	738.1	740.1	742.1	744.0
52.5°	690.4	697.2	704.0	708.6	711.1	713.5	716.0	718.4
55°	647.8	655.5	663.3	668.2	670.5	672.8	675.0	677.3
57.5°	604.4	612.1	619.8	625.1	627.7	630.4	633.1	635.7
60°	574.0	582.0	589.9	595.5	598.7	601.8	604.9	608.0
62.5°	545.3	553.3	561.2	566.7	569.6	572.5	575.4	578.3
65°	499.5	508.0	516.5	522.3	525.1	527.9	530.8	533.7
67.5°	453.8	463.2	472.5	478.4	480.8	483.2	485.6	488.0
70°	423.6	432.7	441.9	447.9	450.7	453.6	456.4	459.3
72.5°	393.3	402.7	412.0	418.1	420.9	423.8	426.7	429.5
75°	347.2	356.7	366.0	372.5	375.9	379.3	382.7	386.2
77.5°	304.2	314.1	324.0	330.3	332.8	335.5	338.1	340.7
80°	276.0	285.7	295.3	301.6	304.4	307.3	310.2	313.0
82.5°	250.3	260.0	269.7	276.0	278.8	281.6	284.5	287.4
85°	214.3	224.0	233.8	240.1	242.9	245.7	248.5	251.5
87.5°	186.6	196.4	206.2	212.6	215.6	218.5	221.4	224.3
90°	183.3	193.7	204.1	210.8	214.0	217.2	220.4	223.5
92.5°	176.6	187.2	197.7	204.3	207.2	210.0	212.8	215.7
95°	169.8	179.8	189.7	196.2	199.1	201.9	204.7	207.6
97.5°	161.1	170.9	180.7	187.1	190.1	193.1	196.1	199.2
100°	155.0	164.7	174.3	180.5	183.5	186.5	189.5	192.6
102.5°	161.9	165.9	169.8	173.4	176.5	179.7	182.9	186.0
105°	215.6	194.5	173.6	164.6	167.4	170.3	173.2	176.1
107.5°	355.8	342.1	328.6	312.1	292.8	273.4	254.1	234.7
110°	418.5	420.5	422.4	412.9	391.7	370.6	349.5	328.4





TEST NUMBER: P332021-830

CATALOG NUMBER: S123DIP-S1000D805U830-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	460.0	467.2	474.6	476.9	474.6	472.1	469.7	467.2
115°	507.9	516.4	524.9	530.6	533.5	536.5	539.4	542.3
117.5°	550.1	558.2	566.2	571.5	573.8	576.2	578.5	580.9
120°	578.1	585.9	593.8	598.7	600.7	602.8	604.7	606.7
122.5°	605.3	612.6	619.8	624.4	626.6	628.7	630.8	633.0
125°	643.2	649.5	655.8	660.2	662.4	664.8	667.1	669.4
127.5°	681.2	687.3	693.5	697.4	699.0	700.6	702.2	703.8
130°	703.5	709.6	715.7	719.4	720.8	722.2	723.6	724.9
132.5°	724.5	730.4	736.2	739.8	741.3	742.8	744.3	745.7
135°	756.9	762.5	768.2	771.4	772.3	773.3	774.2	775.1
137.5°	785.3	790.6	795.9	799.1	800.1	801.3	802.4	803.4
140°	803.4	808.4	813.3	816.3	817.5	818.5	819.6	820.7
142.5°	820.0	824.3	828.7	831.3	832.3	833.3	834.2	835.2
145°	846.0	848.6	851.2	853.1	854.2	855.4	856.5	857.6
147.5°	869.8	870.8	871.8	872.4	872.7	873.0	873.3	873.5
150°	884.9	885.2	885.5	885.8	885.8	885.9	886.0	886.1
152.5°	899.6	900.1	900.8	900.7	900.1	899.5	898.8	898.1
155°	919.8	920.6	921.4	921.3	920.4	919.4	918.4	917.4
157.5°	937.4	938.3	939.3	939.1	937.9	936.6	935.4	934.1
160°	947.3	948.4	949.3	949.2	948.1	947.0	945.8	944.7
162.5°	956.5	957.6	958.7	958.8	957.7	956.7	955.7	954.7
165°	968.7	970.0	971.3	971.4	970.3	969.0	967.9	966.8
167.5°	978.1	979.4	980.7	980.7	979.4	978.1	976.8	975.4
170°	983.4	984.7	986.0	986.0	984.7	983.4	982.1	980.8
172.5°	986.9	988.3	989.6	989.5	988.1	986.7	985.1	983.7
175°	991.2	992.3	993.4	993.3	992.1	990.8	989.5	988.2
177.5°	992.8	993.8	994.9	994.8	993.4	992.1	990.8	989.5
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8

(END OF REPORT)