

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: P332067-927

Luminaire Tested: **S123DIP-S1165D805U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332067-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D805U927-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6028.2 lumens  
Efficiency: N/A  
Efficacy: 99.3 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

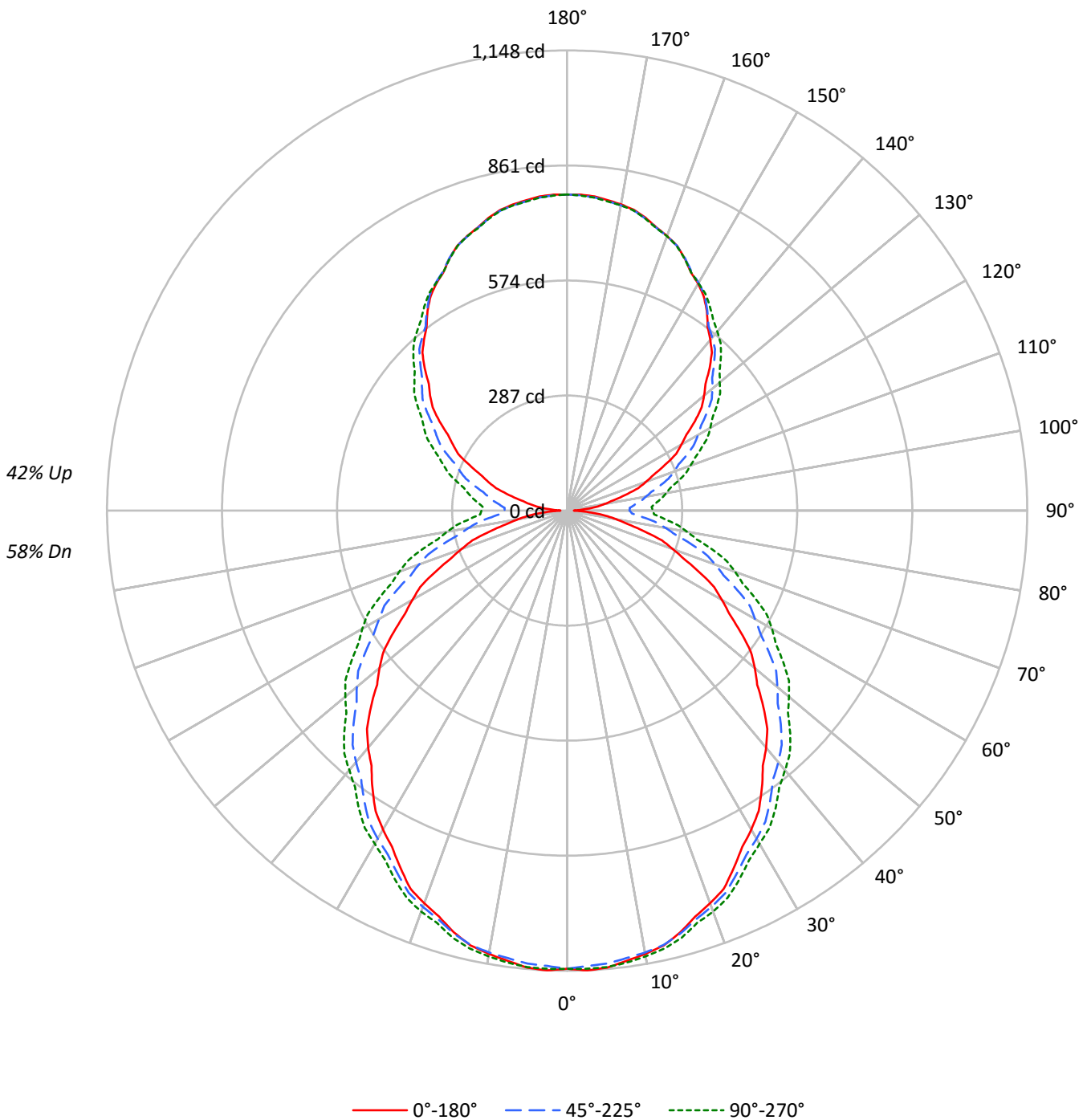
Input Watts (W): 60.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332067-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P332067-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-D1

**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	75	75	75	64	64	64	58
1	98	94	89	85	91	87	83	80	75	72	70	65	62	60	54	53	51	47
2	89	81	74	69	83	76	70	65	65	61	57	56	52	49	47	45	42	38
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	41	38	36	32
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30	27
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13

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

	0°	45°	90°
0°	12304	12304	12304
5°	12343	11994	12001
10°	12232	11718	11659
15°	12075	11405	11287
20°	11849	11047	10876
25°	11571	10634	10444
30°	11287	10264	10006
35°	10967	9871	9658
40°	10663	9514	9284
45°	10325	9172	8985
50°	9990	8832	8655
55°	9622	8486	8359
60°	9263	8134	8056
65°	8896	7758	7694
70°	8341	7336	7323
75°	7640	6853	6946
80°	6835	6380	6515
85°	6085	6053	6268



TEST NUMBER: P332067-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.4	1.8
10°-20°	308.9	5.1
20°-30°	462.0	7.7
30°-40°	551.8	9.2
40°-50°	577.3	9.6
50°-60°	541.7	9.0
60°-70°	452.5	7.5
70°-80°	323.7	5.4
80°-90°	195.4	3.2
90°-100°	172.5	2.9
100°-110°	242.7	4.0
110°-120°	320.9	5.3
120°-130°	377.9	6.3
130°-140°	401.8	6.7
140°-150°	383.3	6.4
150°-160°	319.9	5.3
160°-170°	212.9	3.5
170°-180°	74.6	1.2
0°-30°	879.3	14.6
0°-40°	1431.1	23.7
0°-60°	2550.1	42.3
0°-90°	3521.7	58.4
90°-120°	736.2	12.2
90°-150°	1899.1	31.5
90°-180°	2507.0	41.6
0°-180°	6028.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1143	1143	1143	1143	1143	
5°	1144	1142	1134	1144	1143	108
15°	1090	1093	1092	1104	1103	307
25°	984	996	1000	1015	1016	453
35°	847	866	883	901	906	529
45°	692	722	753	776	787	534
55°	528	569	614	646	658	473
65°	365	414	468	504	518	360
75°	198	257	319	358	375	212
85°	61	124	189	230	244	64
90°	17	84	156	199	214	13
95°	50	104	169	209	223	52
105°	149	182	240	273	287	159
115°	269	288	330	359	370	267
125°	389	393	426	448	456	347
135°	502	505	518	537	543	387
145°	608	608	609	618	621	379
155°	694	694	695	697	693	319
165°	756	754	754	758	754	213
175°	787	784	784	787	784	75
180°	788	788	788	788	788	



TEST NUMBER: P332067-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1148.1	1147.5	1146.8	1146.1	1145.4	1144.2	1142.5	1140.7	1138.9	1137.2	1138.9
5°	1144.4	1143.8	1143.3	1142.7	1142.2	1141.1	1139.4	1137.7	1136.1	1134.4	1136.6
7.5°	1133.1	1133.3	1133.4	1133.5	1133.6	1132.9	1131.2	1129.7	1128.1	1126.4	1129.2
10°	1123.2	1123.8	1124.3	1124.9	1125.5	1125.0	1123.6	1122.2	1120.9	1119.4	1122.2
12.5°	1111.3	1112.0	1112.8	1113.6	1114.4	1114.3	1113.3	1112.4	1111.4	1110.5	1113.0
15°	1089.6	1090.4	1091.2	1092.1	1092.9	1093.2	1092.9	1092.7	1092.3	1092.1	1094.9
17.5°	1062.2	1063.8	1065.5	1067.1	1068.8	1069.6	1069.5	1069.4	1069.3	1069.1	1071.7
20°	1042.3	1043.9	1045.6	1047.3	1048.9	1050.0	1050.6	1051.1	1051.7	1052.3	1054.7
22.5°	1021.4	1023.0	1024.7	1026.4	1028.0	1029.2	1030.0	1030.8	1031.5	1032.3	1035.5
25°	983.7	986.5	989.3	992.0	994.8	996.6	997.4	998.2	999.1	999.9	1003.5
27.5°	945.9	949.0	952.2	955.4	958.5	961.0	962.7	964.5	966.3	968.0	971.1
30°	919.0	922.6	926.1	929.8	933.3	936.3	938.5	940.7	942.9	945.2	948.5
32.5°	889.1	893.1	897.1	901.2	905.2	908.7	911.6	914.5	917.3	920.2	923.8
35°	846.8	851.2	855.6	860.1	864.5	868.5	872.1	875.7	879.2	882.9	887.0
37.5°	801.9	806.9	811.9	816.9	821.9	826.6	831.0	835.4	839.9	844.3	849.0
40°	772.1	777.1	782.0	787.0	791.9	797.3	802.8	808.3	813.8	819.4	824.1
42.5°	739.2	745.3	751.4	757.4	763.5	769.4	775.2	780.9	786.7	792.5	797.6
45°	692.4	699.0	705.6	712.3	718.9	725.7	732.6	739.5	746.5	753.4	758.6
47.5°	643.3	650.8	658.3	665.9	673.4	681.1	689.0	697.0	704.9	712.8	718.7
50°	611.4	619.2	626.9	634.6	642.4	650.5	659.2	667.7	676.3	684.8	691.3
52.5°	577.6	585.7	593.9	602.1	610.3	619.2	628.6	638.0	647.5	657.0	663.6
55°	528.0	537.1	546.2	555.4	564.5	574.0	584.0	594.0	604.0	613.9	621.4
57.5°	479.7	489.2	498.7	508.2	517.8	528.0	538.8	549.8	560.6	571.6	579.1
60°	445.8	455.7	465.7	475.7	485.6	496.3	507.6	519.0	530.4	541.7	549.5
62.5°	413.9	424.1	434.3	444.5	454.6	465.7	477.8	489.7	501.8	513.8	521.5
65°	364.9	375.7	386.4	397.2	408.1	419.5	431.7	443.9	456.1	468.2	476.5
67.5°	315.1	326.5	337.9	349.4	360.8	372.8	385.2	397.6	410.0	422.4	431.4
70°	280.2	292.1	304.0	315.8	327.8	340.4	353.6	366.9	380.2	393.5	402.3
72.5°	248.3	260.2	272.1	284.0	295.9	308.7	322.4	336.1	349.9	363.6	372.7
75°	198.0	211.0	224.0	237.0	250.0	263.4	277.3	291.1	304.9	318.8	327.9
77.5°	154.2	167.3	180.4	193.5	206.6	220.1	234.1	248.0	262.0	275.9	285.6
80°	123.3	136.8	150.4	164.0	177.5	191.5	205.9	220.3	234.6	249.1	258.5
82.5°	96.4	110.2	124.0	137.8	151.5	165.7	180.3	195.0	209.5	224.1	233.5
85°	61.0	74.9	88.7	102.5	116.4	130.6	145.3	159.9	174.6	189.3	198.7
87.5°	33.3	47.3	61.4	75.4	89.4	103.7	118.2	132.7	147.1	161.6	171.1
90°	16.8	31.8	46.7	61.6	76.5	92.0	107.9	123.7	139.7	155.6	165.6
92.5°	30.2	43.3	56.5	69.7	82.9	96.9	111.8	126.7	141.6	156.5	166.1
95°	50.2	62.0	73.8	85.5	97.3	110.5	125.2	139.8	154.5	169.1	178.2
97.5°	77.1	87.5	98.0	108.4	118.9	131.0	144.8	158.5	172.3	186.0	194.9
100°	95.5	105.1	114.8	124.5	134.2	145.7	159.1	172.5	185.9	199.4	207.8
102.5°	116.8	125.2	133.6	142.1	150.6	161.5	175.0	188.4	201.8	215.2	223.4
105°	149.3	156.2	163.2	170.1	177.0	187.0	200.2	213.3	226.4	239.6	247.3
107.5°	186.0	191.8	197.6	203.4	209.2	218.0	229.8	241.6	253.3	265.1	273.0
110°	208.7	214.0	219.3	224.5	229.8	238.1	249.5	260.8	272.1	283.4	291.2



TEST NUMBER: P332067-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	233.5	237.8	242.1	246.3	250.6	258.0	268.7	279.4	290.1	300.8	308.4
115°	269.4	273.2	276.9	280.7	284.4	291.1	300.8	310.5	320.1	329.9	336.6
117.5°	306.7	309.0	311.2	313.5	315.9	321.5	330.6	339.5	348.6	357.5	364.1
120°	328.9	331.1	333.4	335.6	337.7	343.1	351.5	360.0	368.4	376.8	383.1
122.5°	353.2	354.5	355.8	357.2	358.5	363.3	371.6	380.0	388.3	396.6	402.4
125°	389.0	389.4	389.8	390.2	390.6	394.7	402.4	410.2	418.0	425.7	430.9
127.5°	423.2	423.7	424.4	425.0	425.6	429.0	435.4	441.7	448.1	454.4	459.1
130°	446.0	446.8	447.6	448.5	449.2	452.3	457.3	462.5	467.6	472.7	477.4
132.5°	467.8	468.8	469.8	470.9	471.9	474.5	478.6	482.8	486.9	491.0	495.4
135°	502.3	502.9	503.4	504.0	504.5	506.2	509.1	512.1	515.0	517.8	522.3
137.5°	534.2	534.7	535.2	535.7	536.1	537.4	539.5	541.5	543.6	545.7	549.5
140°	555.6	556.3	557.0	557.6	558.3	559.1	560.2	561.1	562.1	563.0	567.0
142.5°	575.9	576.4	576.8	577.3	577.7	578.2	578.6	579.0	579.4	579.9	583.4
145°	607.6	607.6	607.6	607.6	607.6	607.8	608.2	608.6	609.0	609.4	611.6
147.5°	634.1	634.6	635.1	635.6	636.1	636.5	636.9	637.3	637.7	638.1	638.7
150°	653.4	653.7	653.9	654.3	654.5	654.8	655.1	655.4	655.6	655.9	655.9
152.5°	669.3	669.6	670.0	670.4	670.8	671.1	671.3	671.5	671.6	671.8	672.0
155°	694.3	694.3	694.3	694.3	694.3	694.3	694.5	694.7	694.8	694.9	695.5
157.5°	715.6	715.4	715.3	715.1	714.9	714.9	715.0	715.2	715.3	715.3	716.0
160°	729.0	728.7	728.4	728.2	727.9	727.8	727.8	727.8	727.8	727.8	728.4
162.5°	740.8	740.5	740.1	739.7	739.3	739.2	739.3	739.4	739.5	739.7	740.3
165°	756.2	755.8	755.4	755.0	754.6	754.4	754.4	754.4	754.4	754.4	755.2
167.5°	768.5	767.9	767.4	766.8	766.3	766.1	766.2	766.3	766.4	766.5	767.4
170°	775.5	774.9	774.4	773.8	773.2	772.9	772.9	772.9	772.9	772.9	774.0
172.5°	780.9	780.4	779.8	779.3	778.7	778.4	778.4	778.4	778.4	778.4	779.3
175°	786.6	786.0	785.5	785.0	784.4	784.1	784.1	784.1	784.1	784.1	785.0
177.5°	788.9	788.5	788.1	787.6	787.2	787.0	787.0	787.0	787.0	787.0	787.6
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5



TEST NUMBER: P332067-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1	1143.1
2.5°	1140.7	1142.5	1144.2	1145.0	1144.8	1144.5	1144.3	1144.1
5°	1138.8	1141.1	1143.3	1144.2	1144.0	1143.7	1143.4	1143.1
7.5°	1131.9	1134.7	1137.5	1138.8	1138.4	1138.0	1137.7	1137.4
10°	1125.0	1127.8	1130.5	1131.6	1131.1	1130.5	1130.0	1129.4
12.5°	1115.6	1118.2	1120.7	1121.7	1121.1	1120.5	1120.0	1119.4
15°	1097.6	1100.3	1103.1	1104.4	1104.1	1103.8	1103.6	1103.3
17.5°	1074.1	1076.7	1079.1	1080.1	1079.8	1079.4	1079.0	1078.6
20°	1057.2	1059.7	1062.2	1063.6	1063.8	1064.1	1064.4	1064.7
22.5°	1038.6	1041.8	1044.9	1046.4	1046.2	1046.1	1045.9	1045.8
25°	1007.1	1010.7	1014.3	1016.1	1016.1	1016.1	1016.1	1016.1
27.5°	974.2	977.3	980.4	982.1	982.3	982.5	982.8	983.0
30°	951.8	955.1	958.4	960.0	960.0	960.0	960.0	960.0
32.5°	927.3	930.9	934.4	936.5	937.2	937.9	938.5	939.1
35°	891.2	895.3	899.4	902.1	903.2	904.4	905.5	906.5
37.5°	853.7	858.4	863.1	865.9	866.8	867.7	868.5	869.4
40°	828.8	833.5	838.2	841.1	842.2	843.3	844.4	845.5
42.5°	802.8	807.9	813.1	816.4	817.9	819.5	821.0	822.6
45°	763.9	769.1	774.4	778.2	780.4	782.6	784.8	787.0
47.5°	724.6	730.6	736.5	740.3	742.0	743.7	745.4	747.1
50°	697.6	704.0	710.3	714.5	716.4	718.4	720.3	722.2
52.5°	670.2	676.8	683.3	687.9	690.2	692.6	695.0	697.4
55°	628.8	636.3	643.8	648.6	650.9	653.1	655.3	657.5
57.5°	586.6	594.1	601.7	606.7	609.3	612.0	614.6	617.1
60°	557.1	564.9	572.7	578.1	581.1	584.2	587.2	590.3
62.5°	529.3	537.0	544.8	550.1	552.9	555.7	558.6	561.3
65°	484.8	493.1	501.5	506.9	509.7	512.5	515.2	518.0
67.5°	440.5	449.6	458.7	464.4	466.8	469.1	471.3	473.7
70°	411.2	420.1	428.9	434.7	437.5	440.3	443.0	445.8
72.5°	381.8	390.9	399.9	405.8	408.6	411.4	414.2	416.9
75°	337.1	346.2	355.3	361.6	364.9	368.2	371.5	374.8
77.5°	295.2	304.8	314.5	320.5	323.1	325.7	328.2	330.7
80°	267.8	277.3	286.7	292.8	295.6	298.3	301.1	303.8
82.5°	243.0	252.4	261.7	267.8	270.6	273.4	276.2	278.9
85°	208.1	217.5	226.9	233.0	235.8	238.5	241.3	244.1
87.5°	180.6	190.2	199.7	205.9	208.7	211.5	214.4	217.1
90°	175.5	185.4	195.4	201.9	204.9	208.0	211.0	214.0
92.5°	175.8	185.4	195.0	201.1	203.4	205.8	208.2	210.6
95°	187.4	196.5	205.7	211.6	214.4	217.1	219.9	222.7
97.5°	203.8	212.7	221.6	227.4	230.0	232.7	235.5	238.2
100°	216.3	224.7	233.1	238.8	241.9	244.9	248.0	251.0
102.5°	231.6	239.9	248.0	253.5	256.3	259.0	261.7	264.4
105°	255.1	262.8	270.5	275.8	278.6	281.3	284.1	286.8
107.5°	280.9	288.8	296.6	301.7	303.9	306.2	308.5	310.7
110°	299.0	306.7	314.4	319.2	321.2	323.1	325.1	327.0





TEST NUMBER: P332067-927

CATALOG NUMBER: S123DIP-S1165D805U927-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	316.1	323.7	331.3	336.3	338.7	341.1	343.5	345.9
115°	343.4	350.1	357.0	361.4	363.5	365.5	367.7	369.7
117.5°	370.7	377.2	383.8	387.9	389.8	391.5	393.2	395.1
120°	389.3	395.5	401.7	405.7	407.3	409.0	410.7	412.3
122.5°	408.2	414.0	419.8	423.4	425.0	426.6	428.1	429.7
125°	436.3	441.5	446.8	450.0	451.5	452.8	454.2	455.6
127.5°	463.8	468.5	473.2	476.3	477.4	478.7	480.0	481.3
130°	482.1	486.9	491.5	494.2	495.0	495.7	496.3	497.0
132.5°	499.8	504.1	508.5	511.3	512.4	513.6	514.7	515.9
135°	526.7	531.2	535.6	538.4	539.5	540.6	541.7	542.8
137.5°	553.3	557.1	560.9	563.2	564.0	564.9	565.8	566.6
140°	571.1	575.0	579.1	581.3	581.7	582.2	582.6	583.0
142.5°	587.0	590.6	594.1	596.3	596.9	597.5	598.2	598.8
145°	613.6	615.7	617.7	619.1	619.6	620.2	620.8	621.3
147.5°	639.4	640.1	640.7	641.1	641.3	641.5	641.7	641.8
150°	655.9	655.9	655.9	655.8	655.5	655.2	655.0	654.7
152.5°	672.2	672.4	672.6	672.5	671.8	671.2	670.7	670.0
155°	696.0	696.6	697.1	696.9	695.9	695.0	694.0	693.1
157.5°	716.5	717.1	717.6	717.6	716.8	716.1	715.3	714.5
160°	729.1	729.8	730.5	730.6	730.0	729.4	728.9	728.3
162.5°	741.0	741.7	742.4	742.3	741.4	740.5	739.7	738.8
165°	756.1	756.9	757.7	757.6	756.7	755.7	754.7	753.8
167.5°	768.3	769.1	769.9	769.9	769.1	768.3	767.4	766.5
170°	774.9	775.9	776.8	776.8	775.9	774.9	774.0	772.9
172.5°	780.1	781.0	781.8	781.8	780.8	779.8	778.9	777.9
175°	785.8	786.6	787.4	787.3	786.4	785.4	784.4	783.5
177.5°	788.3	788.9	789.6	789.6	788.8	788.0	787.3	786.5
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5

(END OF REPORT)