

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: P332023-930

Luminaire Tested: **S123DIP-S1000D805U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332023-930  
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-S1000D805U930-4F0-1E-UDD-D4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

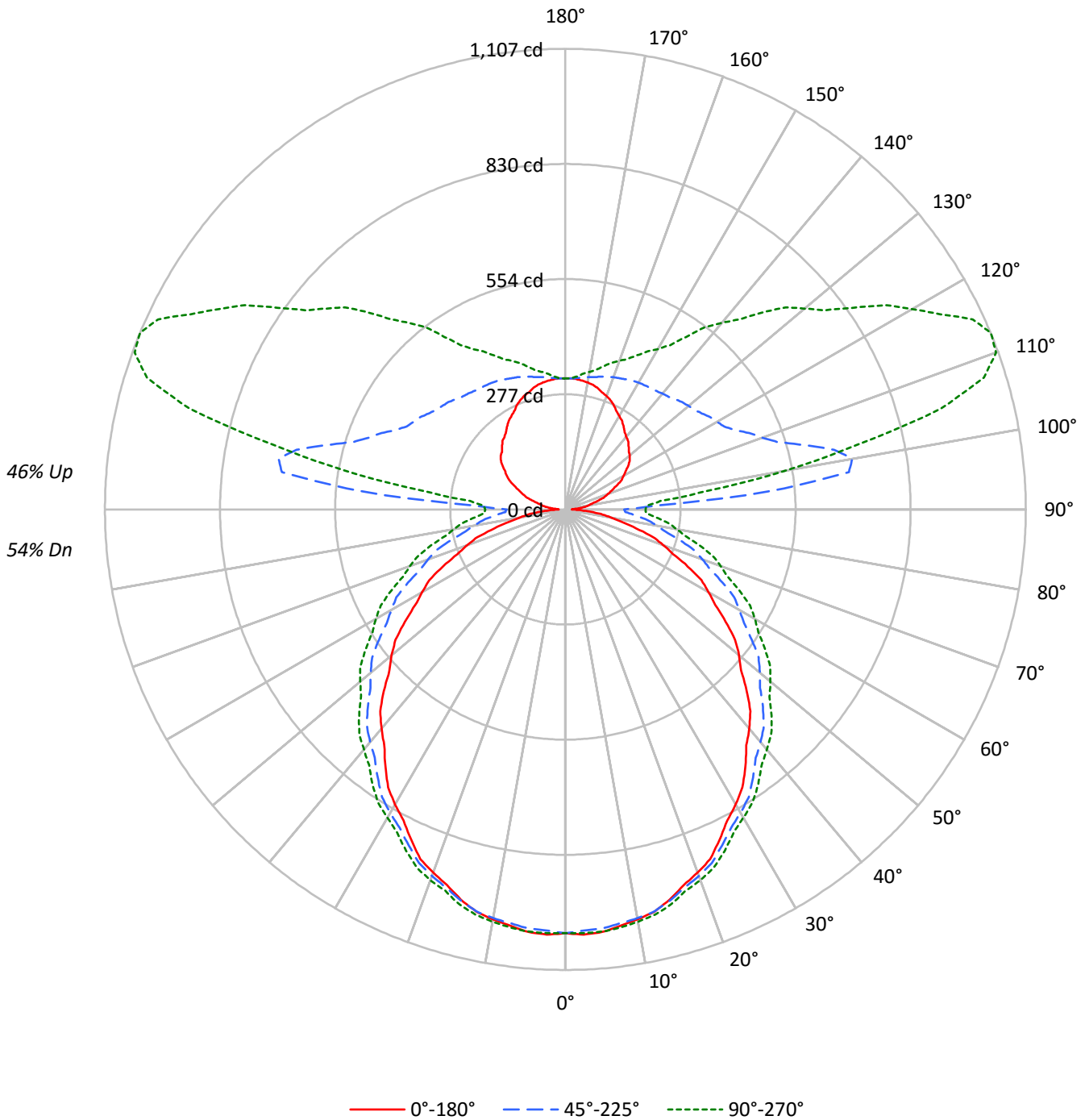
Lumens per Lamp: N/A  
Luminaire Lumens: 5794.6 lumens  
Efficiency: N/A  
Efficacy: 106.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (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: P332023-930  
CATALOG NUMBER: S123DIP-S1000D805U930-4F0-1E-UDD-D4

### Luminous Intensity Polar Plot





TEST NUMBER: P332023-930

CATALOG NUMBER: S123DIP-S1000D805U930-4F0-1E-UDD-D4

**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	86	86	86	72	72	72	60	60	60	54
1	98	93	88	84	90	86	82	79	73	71	68	62	60	58	51	50	48	43
2	88	80	74	68	82	75	69	64	64	59	55	54	50	47	44	42	40	35
3	80	70	62	56	74	65	58	53	56	50	46	47	43	40	39	36	33	29
4	73	62	54	47	68	58	50	44	49	44	39	42	37	34	35	31	29	25
5	67	55	47	40	62	51	44	38	44	38	33	37	33	29	31	28	25	21
6	62	49	41	35	57	46	38	33	40	34	29	34	29	25	28	24	22	19
7	57	44	36	30	53	41	34	29	36	30	25	31	26	22	26	22	19	16
8	53	40	32	27	49	38	30	25	33	27	23	28	23	20	24	20	17	15
9	49	37	29	24	46	34	27	23	30	24	20	26	21	18	22	18	15	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

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

	0°	45°	90°
0°	10964	10964	10964
5°	10999	10689	10694
10°	10900	10443	10390
15°	10759	10162	10058
20°	10559	9844	9692
25°	10311	9476	9308
30°	10057	9145	8918
35°	9773	8796	8606
40°	9500	8479	8272
45°	9199	8172	8007
50°	8904	7871	7713
55°	8574	7562	7449
60°	8255	7248	7178
65°	7926	6915	6856
70°	7430	6538	6527
75°	6807	6107	6190
80°	6087	5683	5807
85°	5426	5394	5585



TEST NUMBER: P332023-930

CATALOG NUMBER: S123DIP-S1000D805U930-4F0-1E-UDD-D4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.6	1.7
10°-20°	275.3	4.8
20°-30°	411.7	7.1
30°-40°	491.7	8.5
40°-50°	514.4	8.9
50°-60°	482.8	8.3
60°-70°	403.2	7.0
70°-80°	288.5	5.0
80°-90°	174.5	3.0
90°-100°	283.2	4.9
100°-110°	575.5	9.9
110°-120°	541.1	9.3
120°-130°	419.6	7.2
130°-140°	320.6	5.5
140°-150°	232.0	4.0
150°-160°	159.7	2.8
160°-170°	93.8	1.6
170°-180°	30.5	0.5
0°-30°	783.6	13.5
0°-40°	1275.2	22.0
0°-60°	2272.4	39.2
0°-90°	3138.6	54.2
90°-120°	1399.8	24.2
90°-150°	2372.0	40.9
90°-180°	2656.0	45.8
0°-180°	5794.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1020	1017	1011	1019	1019	97
15°	971	974	973	984	983	273
25°	877	887	891	905	906	404
35°	755	772	787	803	808	472
45°	617	644	671	692	701	476
55°	470	507	547	576	586	421
65°	325	369	417	449	462	321
75°	176	229	284	319	334	188
85°	54	110	169	205	218	57
90°	16	77	141	180	193	11
95°	34	127	488	253	229	33
105°	83	146	596	1009	935	88
115°	136	183	451	944	1080	135
125°	185	220	401	721	844	165
135°	215	256	374	578	669	166
145°	244	278	356	456	506	153
155°	276	298	345	392	408	127
165°	302	310	330	350	356	85
175°	314	315	317	321	321	30
180°	315	315	315	315	315	



TEST NUMBER: P332023-930

CATALOG NUMBER: S123DIP-S1000D805U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1023.1	1022.5	1021.9	1021.3	1020.8	1019.6	1018.1	1016.5	1014.9	1013.3	1014.9
5°	1019.8	1019.3	1018.8	1018.3	1017.8	1016.8	1015.4	1013.8	1012.4	1010.9	1012.8
7.5°	1009.7	1009.9	1010.0	1010.1	1010.2	1009.5	1008.1	1006.7	1005.2	1003.8	1006.2
10°	1000.9	1001.4	1001.9	1002.4	1002.9	1002.5	1001.3	1000.0	998.8	997.6	1000.0
12.5°	990.3	990.9	991.6	992.3	993.0	993.0	992.1	991.2	990.4	989.6	991.9
15°	970.9	971.7	972.4	973.1	973.9	974.1	973.9	973.6	973.4	973.1	975.7
17.5°	946.6	948.0	949.5	951.0	952.4	953.2	953.1	952.9	952.8	952.8	955.0
20°	928.8	930.3	931.7	933.2	934.7	935.7	936.2	936.7	937.2	937.7	939.9
22.5°	910.1	911.6	913.1	914.6	916.1	917.1	917.9	918.5	919.2	919.9	922.7
25°	876.6	879.1	881.6	884.0	886.5	888.1	888.8	889.6	890.3	891.0	894.2
27.5°	842.9	845.7	848.5	851.3	854.1	856.3	857.9	859.5	861.0	862.7	865.4
30°	818.9	822.1	825.3	828.5	831.8	834.3	836.3	838.3	840.2	842.2	845.2
32.5°	792.3	795.9	799.5	803.1	806.7	809.8	812.4	814.9	817.5	820.0	823.2
35°	754.6	758.5	762.5	766.4	770.4	773.9	777.1	780.3	783.5	786.8	790.4
37.5°	714.6	719.1	723.5	727.9	732.4	736.5	740.5	744.4	748.4	752.4	756.5
40°	687.9	692.4	696.8	701.3	705.7	710.5	715.3	720.3	725.2	730.2	734.3
42.5°	658.7	664.1	669.5	675.0	680.4	685.7	690.8	695.9	701.1	706.2	710.8
45°	616.9	622.9	628.8	634.7	640.7	646.7	652.8	659.0	665.2	671.3	676.0
47.5°	573.2	579.9	586.7	593.4	600.1	607.0	614.0	621.1	628.1	635.2	640.4
50°	544.9	551.7	558.6	565.6	572.4	579.8	587.3	595.0	602.7	610.3	616.0
52.5°	514.6	522.0	529.3	536.5	543.9	551.7	560.2	568.6	577.0	585.5	591.3
55°	470.5	478.7	486.7	494.9	503.0	511.5	520.4	529.3	538.2	547.1	553.8
57.5°	427.5	435.9	444.4	452.9	461.4	470.5	480.2	489.9	499.6	509.3	516.0
60°	397.3	406.1	415.0	423.9	432.8	442.2	452.3	462.5	472.6	482.7	489.6
62.5°	368.8	377.9	387.0	396.1	405.1	415.1	425.7	436.4	447.1	457.9	464.7
65°	325.1	334.8	344.4	354.0	363.6	373.8	384.7	395.5	406.3	417.3	424.6
67.5°	280.7	291.0	301.2	311.4	321.6	332.2	343.2	354.3	365.3	376.4	384.5
70°	249.6	260.2	270.8	281.5	292.1	303.3	315.1	327.0	338.8	350.7	358.6
72.5°	221.3	231.9	242.5	253.1	263.7	275.1	287.3	299.5	311.8	324.0	332.1
75°	176.4	188.0	199.6	211.2	222.8	234.7	247.1	259.4	271.7	284.1	292.2
77.5°	137.4	149.0	160.8	172.4	184.1	196.2	208.6	221.0	233.5	245.9	254.5
80°	109.8	122.0	134.0	146.1	158.2	170.6	183.4	196.3	209.1	221.9	230.3
82.5°	85.9	98.2	110.5	122.7	135.0	147.7	160.7	173.7	186.7	199.7	208.1
85°	54.4	66.7	79.0	91.4	103.7	116.4	129.5	142.5	155.6	168.7	177.1
87.5°	29.8	42.3	54.9	67.5	80.1	92.7	105.7	118.6	131.6	144.6	152.8
90°	15.7	29.0	42.4	56.4	69.8	83.4	97.8	112.3	126.9	141.3	149.0
92.5°	21.4	36.2	52.4	68.3	84.5	105.6	134.7	174.5	213.8	216.3	200.4
95°	33.9	45.4	62.0	82.5	108.7	144.4	210.7	317.7	434.3	487.9	424.1
97.5°	47.9	57.2	71.3	89.4	114.5	151.5	214.7	333.4	519.2	687.6	735.9
100°	57.2	65.7	78.0	94.8	118.1	152.5	208.5	314.1	493.2	700.2	832.9
102.5°	66.9	75.3	86.3	101.8	122.7	154.6	205.8	297.0	457.4	661.7	832.5
105°	82.8	90.7	100.4	114.0	132.0	160.0	205.0	281.3	412.4	595.7	785.5
107.5°	98.6	105.5	114.2	126.8	143.2	169.1	209.4	273.9	381.2	536.7	709.4
110°	109.9	116.3	123.9	135.3	150.6	175.6	214.2	272.5	367.8	503.2	661.9



TEST NUMBER: P332023-930

CATALOG NUMBER: S123DIP-S1000D805U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	121.2	126.7	133.5	144.2	158.7	182.5	218.7	273.0	357.8	478.5	619.2
115°	136.2	141.7	148.5	157.8	171.6	194.8	227.9	275.7	349.5	450.9	567.0
117.5°	152.2	156.9	161.9	169.7	183.6	204.6	236.9	279.9	343.4	430.8	532.1
120°	162.5	165.7	170.1	177.7	191.0	211.7	242.7	284.1	341.2	420.8	513.1
122.5°	172.2	174.8	178.6	186.1	198.4	219.5	249.6	288.0	340.8	412.8	496.8
125°	185.0	186.3	190.1	197.1	209.2	230.0	259.4	294.6	340.1	401.4	474.7
127.5°	195.6	197.2	201.7	208.6	221.8	241.8	269.2	300.4	340.7	392.4	454.5
130°	202.2	203.9	209.4	216.8	229.9	249.5	275.4	304.6	341.4	386.5	442.8
132.5°	206.4	208.8	215.0	224.1	237.4	256.1	280.5	308.3	341.0	381.5	431.5
135°	215.1	217.4	224.2	233.5	246.6	265.1	287.6	311.9	340.1	374.1	416.1
137.5°	223.3	225.8	232.4	242.5	255.5	272.1	292.7	314.9	339.1	367.4	402.8
140°	228.0	231.2	237.6	247.8	260.6	276.9	296.0	315.9	338.3	363.3	394.4
142.5°	234.2	236.6	243.3	252.3	264.8	279.7	297.8	316.7	336.9	358.7	386.4
145°	243.9	245.6	251.1	260.4	271.0	285.6	302.1	319.4	337.2	356.3	378.7
147.5°	252.8	254.0	259.6	267.8	278.3	290.8	306.0	321.4	337.2	353.9	371.9
150°	259.4	260.1	265.1	273.5	282.3	293.8	308.5	321.9	337.2	351.9	367.8
152.5°	266.0	266.2	271.3	278.6	286.4	297.4	310.1	322.9	335.7	349.3	363.7
155°	276.0	276.0	279.8	286.2	293.2	302.1	313.0	323.2	334.0	344.9	357.6
157.5°	283.9	284.4	287.5	293.1	299.1	306.0	314.6	323.8	331.8	340.9	350.7
160°	290.0	290.0	292.6	297.7	302.1	308.5	316.2	323.8	330.8	337.9	346.1
162.5°	294.6	294.6	296.7	300.8	304.7	310.1	316.7	323.3	328.8	334.8	341.5
165°	301.5	300.8	302.1	305.3	307.9	312.3	317.4	321.9	325.7	330.2	335.3
167.5°	306.7	306.0	306.6	309.0	310.8	313.6	317.3	320.9	322.7	325.6	329.3
170°	309.8	308.5	309.2	311.0	312.3	313.6	316.8	319.4	320.7	322.5	325.7
172.5°	311.9	311.0	311.2	312.6	313.3	314.1	316.8	318.9	319.1	320.0	322.1
175°	314.2	313.6	313.0	314.2	314.2	314.9	316.2	317.4	316.8	316.8	318.0
177.5°	315.4	314.9	314.4	314.9	314.9	314.9	315.4	316.4	315.4	314.9	315.4
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



TEST NUMBER: P332023-930

CATALOG NUMBER: S123DIP-S1000D805U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6	1018.6
2.5°	1016.5	1018.1	1019.6	1020.3	1020.1	1019.9	1019.8	1019.5
5°	1014.8	1016.8	1018.8	1019.6	1019.4	1019.1	1018.9	1018.6
7.5°	1008.7	1011.2	1013.7	1014.7	1014.5	1014.2	1013.8	1013.6
10°	1002.5	1004.9	1007.5	1008.4	1008.0	1007.5	1007.0	1006.5
12.5°	994.1	996.4	998.7	999.6	999.1	998.6	998.1	997.6
15°	978.1	980.6	983.0	984.1	983.9	983.7	983.4	983.2
17.5°	957.2	959.4	961.6	962.5	962.2	961.9	961.6	961.2
20°	942.1	944.3	946.6	947.8	948.0	948.3	948.5	948.8
22.5°	925.5	928.3	931.2	932.5	932.3	932.2	932.1	931.9
25°	897.5	900.7	903.8	905.5	905.5	905.5	905.5	905.5
27.5°	868.1	870.9	873.7	875.1	875.4	875.5	875.8	876.0
30°	848.2	851.1	854.0	855.6	855.6	855.6	855.6	855.6
32.5°	826.4	829.5	832.7	834.5	835.1	835.7	836.3	836.9
35°	794.1	797.9	801.5	803.9	804.9	805.8	806.8	807.8
37.5°	760.8	764.9	769.2	771.6	772.4	773.1	774.0	774.8
40°	738.5	742.7	746.9	749.5	750.5	751.5	752.4	753.4
42.5°	715.3	719.9	724.6	727.5	728.9	730.3	731.6	733.0
45°	680.7	685.4	690.1	693.4	695.4	697.3	699.4	701.3
47.5°	645.7	651.0	656.2	659.7	661.2	662.8	664.2	665.8
50°	621.7	627.3	633.0	636.7	638.5	640.2	641.9	643.6
52.5°	597.2	603.1	608.9	612.9	615.1	617.2	619.3	621.4
55°	560.4	567.0	573.7	578.0	580.0	582.0	583.9	585.9
57.5°	522.8	529.5	536.1	540.7	543.0	545.3	547.6	549.9
60°	496.5	503.4	510.3	515.1	517.9	520.6	523.3	525.9
62.5°	471.7	478.6	485.4	490.2	492.7	495.2	497.7	500.3
65°	432.0	439.4	446.8	451.8	454.2	456.6	459.2	461.6
67.5°	392.6	400.6	408.7	413.8	415.9	418.0	420.0	422.1
70°	366.4	374.3	382.2	387.4	389.9	392.3	394.8	397.3
72.5°	340.2	348.3	356.4	361.7	364.1	366.6	369.1	371.5
75°	300.4	308.5	316.6	322.2	325.1	328.1	331.0	334.0
77.5°	263.1	271.7	280.2	285.7	287.9	290.2	292.4	294.7
80°	238.7	247.1	255.4	260.9	263.3	265.8	268.3	270.8
82.5°	216.5	224.9	233.3	238.7	241.2	243.6	246.1	248.6
85°	185.4	193.8	202.2	207.7	210.1	212.5	215.0	217.5
87.5°	161.3	169.8	178.4	184.0	186.4	189.0	191.5	193.9
90°	158.1	167.1	176.1	182.9	184.7	187.8	190.9	192.7
92.5°	188.3	185.4	188.7	190.5	191.7	192.0	194.9	196.1
95°	354.7	288.3	262.2	244.3	234.6	231.4	229.3	229.3
97.5°	688.6	582.1	507.2	435.9	391.3	365.1	350.3	347.3
100°	862.3	817.9	750.5	664.7	602.8	558.8	536.4	539.5
102.5°	916.3	921.6	885.1	832.4	784.8	750.4	732.1	719.9
105°	925.7	996.3	1015.4	1003.3	976.2	954.2	936.0	935.1
107.5°	867.1	977.2	1039.7	1066.7	1069.4	1063.4	1058.7	1055.0
110°	814.3	938.0	1024.7	1073.6	1093.4	1100.4	1101.1	1101.9





TEST NUMBER: P332023-930

CATALOG NUMBER: S123DIP-S1000D805U930-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	761.2	887.2	983.4	1045.0	1079.8	1097.8	1104.8	1107.3
115°	690.9	807.7	907.3	980.7	1030.5	1060.5	1075.2	1080.4
117.5°	637.5	739.1	829.1	903.5	955.3	989.3	1009.6	1015.9
120°	608.7	700.4	782.5	850.6	902.7	940.1	957.2	962.7
122.5°	585.0	668.4	744.7	808.1	854.6	888.4	906.9	913.5
125°	552.6	627.3	693.7	748.1	790.6	820.4	838.0	844.2
127.5°	523.4	590.3	650.4	700.0	738.1	763.7	779.8	785.5
130°	504.8	566.9	623.2	669.6	704.9	729.3	744.2	750.7
132.5°	487.2	544.5	597.0	641.5	674.9	699.5	713.1	718.3
135°	463.3	513.0	558.9	598.0	630.5	650.9	663.6	669.3
137.5°	441.2	482.2	521.8	555.9	583.3	604.0	614.9	619.1
140°	428.0	464.3	498.6	528.5	553.9	573.0	584.4	585.0
142.5°	415.1	446.3	476.1	502.2	524.1	541.1	551.5	552.1
145°	401.0	424.0	446.5	466.4	483.3	497.7	503.8	506.1
147.5°	389.7	407.1	424.1	438.0	450.9	460.9	466.6	468.0
150°	382.5	397.1	410.5	422.8	432.9	440.4	444.7	445.2
152.5°	376.8	389.5	401.3	411.4	419.1	425.7	428.0	428.1
155°	368.4	378.6	388.2	395.8	401.5	406.7	408.0	408.5
157.5°	359.5	368.0	375.4	381.4	386.4	390.2	391.3	391.1
160°	354.4	361.4	367.8	372.3	376.7	380.5	380.5	379.9
162.5°	348.3	354.2	360.1	364.1	367.0	370.3	370.3	369.7
165°	340.4	344.2	348.7	351.9	354.4	356.9	356.3	356.3
167.5°	333.5	336.4	339.0	341.3	342.4	344.2	343.6	343.6
170°	328.9	330.8	333.4	334.7	335.3	336.6	335.9	335.9
172.5°	324.8	326.2	328.2	329.1	329.1	330.4	329.3	328.8
175°	319.4	320.0	321.2	321.2	321.2	321.9	321.2	320.7
177.5°	315.9	316.4	316.9	316.9	316.4	316.9	315.9	315.9
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9

(END OF REPORT)