

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: P332022-940

Luminaire Tested: **S123DIP-S1000D805U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332022-940  
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-S1000D805U940-4F0-1E-UDD-D1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 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: 6205.6 lumens  
Efficiency: N/A  
Efficacy: 114.1 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

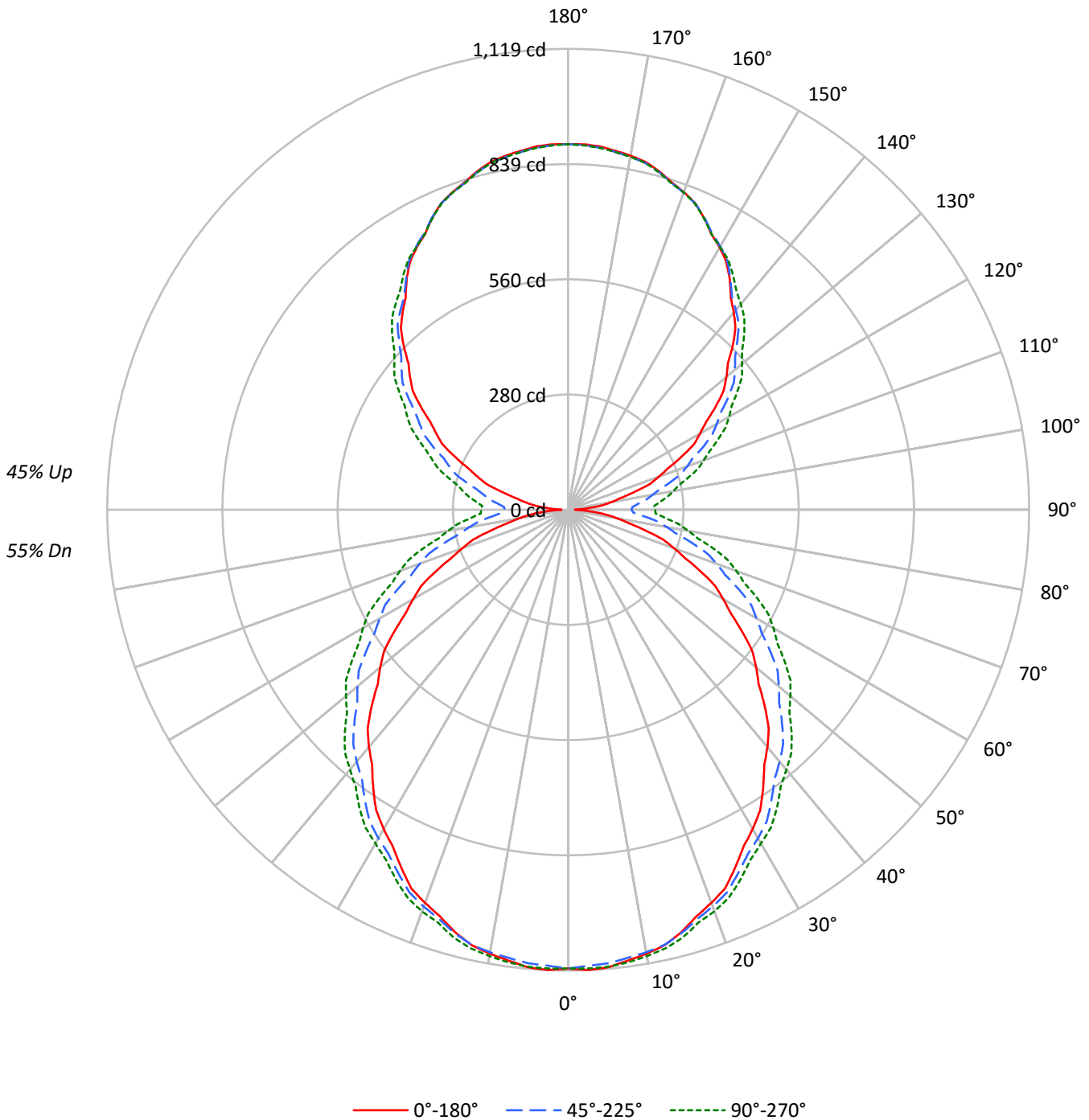
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20						20								20		
RC	80					70						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		101	101	101	101		86	86	86		73	73	73		61	61	61	55
1	98	93	89	85		91	86	83	79		74	71	68		63	60	59		52	51	49	44
2	89	81	74	68		82	75	69	64		64	60	56		54	51	48		45	43	41	36
3	81	70	63	56		74	65	59	53		56	51	46		48	44	40		40	37	34	30
4	74	62	54	47		68	58	50	45		50	44	39		42	38	34		35	32	29	25
5	67	55	47	40		62	51	44	38		44	38	34		38	33	29		32	28	25	22
6	62	49	41	35		57	46	39	33		40	34	29		34	29	26		29	25	22	19
7	57	45	36	30		53	42	34	29		36	30	26		31	26	23		26	22	19	17
8	53	40	32	27		49	38	31	26		33	27	23		28	24	20		24	20	17	15
9	50	37	29	24		46	35	28	23		30	24	20		26	21	18		22	18	16	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°	11992	11992	11992
5°	12030	11690	11697
10°	11922	11421	11364
15°	11768	11114	11000
20°	11548	10767	10600
25°	11278	10365	10179
30°	10999	10002	9754
35°	10689	9620	9413
40°	10391	9273	9048
45°	10062	8938	8757
50°	9737	8608	8436
55°	9378	8270	8147
60°	9028	7928	7850
65°	8670	7563	7499
70°	8127	7150	7138
75°	7448	6679	6770
80°	6658	6216	6350
85°	5935	5899	6108



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.6	1.7
10°-20°	301.1	4.9
20°-30°	450.3	7.3
30°-40°	537.8	8.7
40°-50°	562.6	9.1
50°-60°	528.0	8.5
60°-70°	441.0	7.1
70°-80°	315.5	5.1
80°-90°	190.8	3.1
90°-100°	175.9	2.8
100°-110°	259.8	4.2
110°-120°	352.3	5.7
120°-130°	420.3	6.8
130°-140°	450.0	7.3
140°-150°	430.9	6.9
150°-160°	360.1	5.8
160°-170°	239.7	3.9
170°-180°	83.9	1.4
0°-30°	857.0	13.8
0°-40°	1394.8	22.5
0°-60°	2485.4	40.1
0°-90°	3432.7	55.3
90°-120°	787.9	12.7
90°-150°	2089.1	33.7
90°-180°	2773.0	44.7
0°-180°	6205.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1114	1114	1114	1114	1114	
5°	1115	1113	1106	1115	1114	106
15°	1062	1065	1064	1076	1075	299
25°	959	970	975	989	990	442
35°	825	844	860	878	884	516
45°	675	704	734	757	767	520
55°	515	555	598	630	641	461
65°	356	403	456	491	505	351
75°	193	250	311	349	365	206
85°	60	120	184	224	238	62
90°	16	83	154	196	211	13
95°	54	107	172	211	224	57
105°	167	199	256	288	302	178
115°	302	320	361	390	400	299
125°	437	441	473	495	502	390
135°	565	569	581	599	604	435
145°	684	684	686	695	697	427
155°	782	782	782	785	780	360
165°	851	849	849	853	848	240
175°	885	883	883	886	882	84
180°	888	888	888	888	888	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1119.0	1118.4	1117.7	1117.0	1116.4	1115.2	1113.5	1111.8	1110.0	1108.3	1110.0
5°	1115.4	1114.8	1114.3	1113.7	1113.2	1112.1	1110.5	1108.8	1107.2	1105.6	1107.8
7.5°	1104.4	1104.6	1104.7	1104.7	1104.8	1104.1	1102.6	1101.0	1099.4	1097.9	1100.5
10°	1094.8	1095.3	1095.8	1096.4	1096.9	1096.4	1095.1	1093.8	1092.4	1091.1	1093.8
12.5°	1083.1	1083.8	1084.6	1085.3	1086.1	1086.0	1085.1	1084.1	1083.3	1082.4	1084.9
15°	1061.9	1062.7	1063.5	1064.3	1065.1	1065.4	1065.1	1064.9	1064.6	1064.3	1067.1
17.5°	1035.3	1036.9	1038.5	1040.1	1041.7	1042.5	1042.4	1042.2	1042.1	1042.1	1044.5
20°	1015.8	1017.4	1019.0	1020.7	1022.3	1023.4	1024.0	1024.5	1025.0	1025.6	1028.0
22.5°	995.4	997.0	998.7	1000.3	1001.9	1003.1	1003.9	1004.6	1005.4	1006.1	1009.1
25°	958.8	961.4	964.2	966.9	969.6	971.3	972.1	972.9	973.7	974.6	978.0
27.5°	921.9	925.0	928.0	931.1	934.2	936.6	938.3	940.0	941.7	943.5	946.6
30°	895.6	899.2	902.7	906.2	909.7	912.5	914.7	916.9	919.0	921.1	924.4
32.5°	866.6	870.5	874.4	878.3	882.3	885.6	888.5	891.3	894.1	896.9	900.4
35°	825.3	829.6	833.9	838.2	842.6	846.4	850.0	853.5	856.9	860.5	864.5
37.5°	781.6	786.5	791.3	796.1	801.0	805.6	809.9	814.2	818.5	822.9	827.4
40°	752.4	757.3	762.1	767.0	771.9	777.0	782.4	787.8	793.2	798.6	803.2
42.5°	720.4	726.4	732.3	738.2	744.1	749.9	755.5	761.2	766.8	772.4	777.4
45°	674.8	681.3	687.8	694.2	700.7	707.3	714.0	720.8	727.5	734.2	739.4
47.5°	627.0	634.3	641.7	649.0	656.3	663.9	671.5	679.3	687.0	694.7	700.4
50°	595.9	603.4	611.0	618.6	626.1	634.1	642.4	650.8	659.2	667.5	673.7
52.5°	562.8	570.9	578.9	586.8	594.9	603.4	612.7	621.9	631.1	640.3	646.8
55°	514.6	523.5	532.4	541.3	550.2	559.5	569.2	578.9	588.6	598.3	605.6
57.5°	467.5	476.8	486.1	495.3	504.6	514.6	525.2	535.8	546.4	557.1	564.4
60°	434.5	444.2	453.9	463.6	473.3	483.7	494.7	505.9	516.9	528.0	535.5
62.5°	403.4	413.3	423.3	433.2	443.1	454.0	465.7	477.3	489.0	500.8	508.3
65°	355.6	366.1	376.7	387.2	397.7	408.8	420.7	432.6	444.4	456.4	464.4
67.5°	307.0	318.3	329.4	340.5	351.7	363.4	375.4	387.5	399.6	411.7	420.5
70°	273.0	284.6	296.2	307.9	319.5	331.7	344.6	357.7	370.6	383.5	392.2
72.5°	242.0	253.6	265.2	276.8	288.4	300.9	314.2	327.6	341.0	354.4	363.2
75°	193.0	205.6	218.3	231.0	243.7	256.7	270.3	283.7	297.2	310.7	319.6
77.5°	150.3	163.0	175.8	188.6	201.3	214.5	228.2	241.7	255.4	268.9	278.3
80°	120.1	133.4	146.6	159.8	173.0	186.6	200.6	214.7	228.7	242.7	251.9
82.5°	93.9	107.4	120.8	134.2	147.7	161.5	175.8	189.9	204.2	218.5	227.7
85°	59.5	72.9	86.4	100.0	113.4	127.3	141.6	155.9	170.1	184.5	193.7
87.5°	32.5	46.2	59.9	73.7	87.4	101.3	115.5	129.7	143.8	157.9	167.3
90°	16.5	31.2	46.0	60.7	75.5	90.8	106.6	122.3	138.1	153.9	163.6
92.5°	31.7	44.7	57.6	70.6	83.6	97.4	112.1	126.8	141.4	156.1	165.6
95°	54.5	66.1	77.7	89.3	100.9	114.0	128.4	142.9	157.3	171.7	180.7
97.5°	85.0	95.2	105.6	115.8	126.2	138.0	151.6	165.1	178.6	192.2	200.9
100°	105.8	115.3	124.8	134.4	144.0	155.3	168.5	181.7	194.9	208.0	216.3
102.5°	129.8	138.2	146.5	154.8	163.2	174.0	187.2	200.4	213.6	226.8	234.9
105°	166.6	173.3	180.1	186.9	193.7	203.6	216.6	229.6	242.5	255.6	263.1
107.5°	208.0	213.7	219.5	225.2	230.8	239.4	251.0	262.5	274.1	285.7	293.4
110°	233.9	239.1	244.2	249.3	254.5	262.7	273.8	284.8	296.0	307.0	314.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	261.7	265.9	270.1	274.3	278.5	285.8	296.1	306.6	317.0	327.4	335.0
115°	302.4	306.0	309.8	313.4	317.2	323.7	333.1	342.5	352.0	361.3	367.9
117.5°	344.2	346.5	348.8	351.2	353.5	359.0	367.7	376.4	385.1	393.8	400.2
120°	369.4	371.8	374.1	376.3	378.6	383.8	391.9	400.0	408.1	416.3	422.3
122.5°	396.8	398.1	399.6	400.9	402.3	407.1	415.1	423.2	431.2	439.3	444.9
125°	437.3	437.7	438.2	438.7	439.2	443.1	450.7	458.2	465.7	473.1	478.2
127.5°	475.7	476.5	477.2	478.0	478.7	482.1	488.2	494.4	500.5	506.6	511.1
130°	501.4	502.4	503.4	504.4	505.3	508.3	513.2	518.1	523.1	528.0	532.4
132.5°	526.1	527.3	528.5	529.7	530.8	533.4	537.4	541.4	545.4	549.3	553.5
135°	565.1	565.7	566.3	567.0	567.7	569.4	572.2	575.1	577.8	580.7	584.9
137.5°	601.1	601.6	602.2	602.7	603.3	604.6	606.7	608.8	610.8	612.9	616.5
140°	625.2	626.0	626.7	627.5	628.3	629.2	630.1	631.1	632.0	633.0	636.9
142.5°	648.1	648.6	649.2	649.7	650.3	650.8	651.2	651.7	652.1	652.6	656.0
145°	683.8	683.8	683.9	683.9	683.9	684.1	684.7	685.1	685.5	686.0	688.0
147.5°	713.8	714.3	714.9	715.4	716.0	716.5	716.9	717.4	717.8	718.3	718.9
150°	735.5	735.8	736.1	736.5	736.7	737.1	737.4	737.7	738.0	738.3	738.3
152.5°	753.4	753.8	754.2	754.7	755.1	755.5	755.6	755.8	756.0	756.2	756.4
155°	781.5	781.5	781.5	781.5	781.5	781.6	781.8	781.9	782.1	782.2	782.8
157.5°	805.5	805.3	805.1	804.9	804.8	804.8	804.9	805.0	805.1	805.2	805.9
160°	820.6	820.3	819.9	819.7	819.3	819.2	819.2	819.2	819.2	819.2	819.9
162.5°	833.9	833.6	833.1	832.7	832.2	832.1	832.2	832.3	832.4	832.6	833.3
165°	851.2	850.8	850.3	849.9	849.4	849.2	849.2	849.2	849.2	849.2	850.1
167.5°	865.0	864.4	863.8	863.2	862.6	862.4	862.5	862.6	862.7	862.8	863.8
170°	872.9	872.3	871.6	871.0	870.4	870.0	870.0	870.0	870.0	870.0	871.2
172.5°	879.0	878.4	877.8	877.2	876.6	876.2	876.2	876.2	876.2	876.2	877.2
175°	885.4	884.8	884.2	883.6	883.0	882.6	882.6	882.6	882.6	882.6	883.6
177.5°	888.1	887.6	887.1	886.5	886.1	885.8	885.8	885.8	885.8	885.8	886.5
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1	1114.1
2.5°	1111.8	1113.5	1115.2	1116.0	1115.7	1115.5	1115.4	1115.1
5°	1109.9	1112.1	1114.3	1115.2	1114.9	1114.6	1114.4	1114.1
7.5°	1103.2	1106.0	1108.7	1109.8	1109.6	1109.2	1108.8	1108.6
10°	1096.4	1099.1	1101.9	1103.0	1102.4	1101.9	1101.4	1100.8
12.5°	1087.3	1089.8	1092.3	1093.2	1092.7	1092.2	1091.6	1091.1
15°	1069.8	1072.5	1075.1	1076.4	1076.1	1075.8	1075.6	1075.3
17.5°	1046.9	1049.4	1051.8	1052.8	1052.4	1052.0	1051.7	1051.2
20°	1030.4	1032.8	1035.3	1036.6	1036.9	1037.1	1037.4	1037.7
22.5°	1012.3	1015.3	1018.4	1019.8	1019.7	1019.6	1019.4	1019.2
25°	981.6	985.1	988.6	990.3	990.3	990.3	990.3	990.3
27.5°	949.5	952.5	955.6	957.2	957.4	957.6	957.9	958.1
30°	927.6	930.9	934.1	935.8	935.8	935.8	935.8	935.8
32.5°	903.8	907.2	910.7	912.8	913.4	914.0	914.7	915.3
35°	868.5	872.6	876.6	879.2	880.3	881.4	882.4	883.5
37.5°	832.1	836.6	841.2	843.9	844.8	845.6	846.5	847.4
40°	807.7	812.3	816.9	819.7	820.8	821.9	823.0	824.0
42.5°	782.4	787.4	792.5	795.7	797.2	798.7	800.2	801.7
45°	744.5	749.7	754.7	758.4	760.5	762.7	764.9	767.0
47.5°	706.2	712.0	717.7	721.5	723.2	724.9	726.5	728.2
50°	679.9	686.1	692.3	696.3	698.3	700.2	702.0	703.9
52.5°	653.2	659.6	666.0	670.4	672.7	675.0	677.3	679.7
55°	612.9	620.2	627.5	632.1	634.4	636.5	638.6	640.8
57.5°	571.8	579.1	586.4	591.4	593.9	596.4	599.0	601.5
60°	543.1	550.6	558.1	563.4	566.4	569.4	572.3	575.2
62.5°	515.9	523.4	530.9	536.1	538.9	541.6	544.4	547.2
65°	472.5	480.6	488.7	494.1	496.8	499.4	502.2	504.9
67.5°	429.4	438.2	447.0	452.6	454.9	457.2	459.4	461.6
70°	400.7	409.4	418.0	423.7	426.4	429.1	431.8	434.5
72.5°	372.1	380.9	389.8	395.6	398.2	400.9	403.7	406.4
75°	328.5	337.4	346.3	352.4	355.6	358.8	362.0	365.3
77.5°	287.8	297.1	306.5	312.5	314.9	317.4	319.9	322.4
80°	261.1	270.3	279.4	285.3	288.0	290.7	293.5	296.1
82.5°	236.8	245.9	255.1	261.1	263.8	266.4	269.1	271.9
85°	202.8	212.0	221.1	227.1	229.8	232.5	235.1	237.9
87.5°	176.6	185.8	195.1	201.2	203.9	206.7	209.5	212.2
90°	173.4	183.2	193.1	199.5	202.4	205.5	208.5	211.4
92.5°	175.0	184.5	193.9	199.8	202.2	204.4	206.7	209.0
95°	189.7	198.7	207.7	213.5	216.2	218.9	221.6	224.3
97.5°	209.6	218.4	227.1	232.8	235.5	238.1	240.8	243.3
100°	224.6	232.9	241.2	246.8	249.9	252.9	255.9	258.9
102.5°	242.9	251.0	259.0	264.4	267.1	269.7	272.3	275.0
105°	270.6	278.2	285.8	290.9	293.6	296.4	299.1	301.8
107.5°	301.1	308.9	316.6	321.6	323.7	325.9	328.1	330.3
110°	322.4	329.9	337.6	342.3	344.2	346.0	347.9	349.7





TEST NUMBER: P332022-940

CATALOG NUMBER: S123DIP-S1000D805U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.5	350.1	357.6	362.5	364.8	367.1	369.4	371.8
115°	374.6	381.2	387.8	392.2	394.1	396.2	398.1	400.2
117.5°	406.6	413.0	419.4	423.4	425.1	426.8	428.4	430.1
120°	428.4	434.4	440.5	444.3	445.9	447.5	449.1	450.6
122.5°	450.5	456.1	461.6	465.2	466.6	468.1	469.6	471.0
125°	483.3	488.3	493.4	496.5	497.8	499.1	500.3	501.6
127.5°	515.6	520.0	524.5	527.3	528.4	529.5	530.7	531.8
130°	537.0	541.4	546.0	548.5	549.0	549.6	550.1	550.6
132.5°	557.7	561.9	566.0	568.6	569.5	570.6	571.6	572.6
135°	589.2	593.3	597.6	600.2	601.3	602.4	603.3	604.4
137.5°	620.1	623.8	627.3	629.5	630.3	631.1	631.8	632.6
140°	640.8	644.7	648.5	650.7	650.9	651.2	651.5	651.8
142.5°	659.5	662.9	666.4	668.3	668.9	669.4	669.9	670.4
145°	690.0	692.1	694.0	695.3	695.7	696.2	696.6	697.1
147.5°	719.5	720.1	720.9	721.1	721.2	721.2	721.3	721.3
150°	738.3	738.3	738.3	738.2	737.7	737.4	736.9	736.6
152.5°	756.6	756.9	757.2	756.9	756.3	755.5	754.8	754.1
155°	783.5	784.1	784.7	784.4	783.4	782.3	781.2	780.2
157.5°	806.6	807.2	807.8	807.7	806.9	806.0	805.1	804.2
160°	820.7	821.5	822.2	822.3	821.7	821.1	820.5	819.8
162.5°	834.1	834.9	835.7	835.5	834.6	833.6	832.6	831.6
165°	851.0	851.9	852.9	852.8	851.8	850.6	849.5	848.5
167.5°	864.8	865.7	866.7	866.7	865.7	864.8	863.8	862.8
170°	872.3	873.3	874.4	874.4	873.3	872.3	871.2	870.0
172.5°	878.2	879.1	880.0	880.0	878.9	877.8	876.7	875.7
175°	884.5	885.4	886.4	886.3	885.2	884.1	883.0	881.9
177.5°	887.3	888.1	888.8	888.8	887.9	887.0	886.2	885.3
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5

(END OF REPORT)