

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: P331980-940

Luminaire Tested: **S123DIP-S775D805U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331980-940  
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-S775D805U940-4F0-1E-UDD-F1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH 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: 5287.2 lumens  
Efficiency: N/A  
Efficacy: 115.2 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

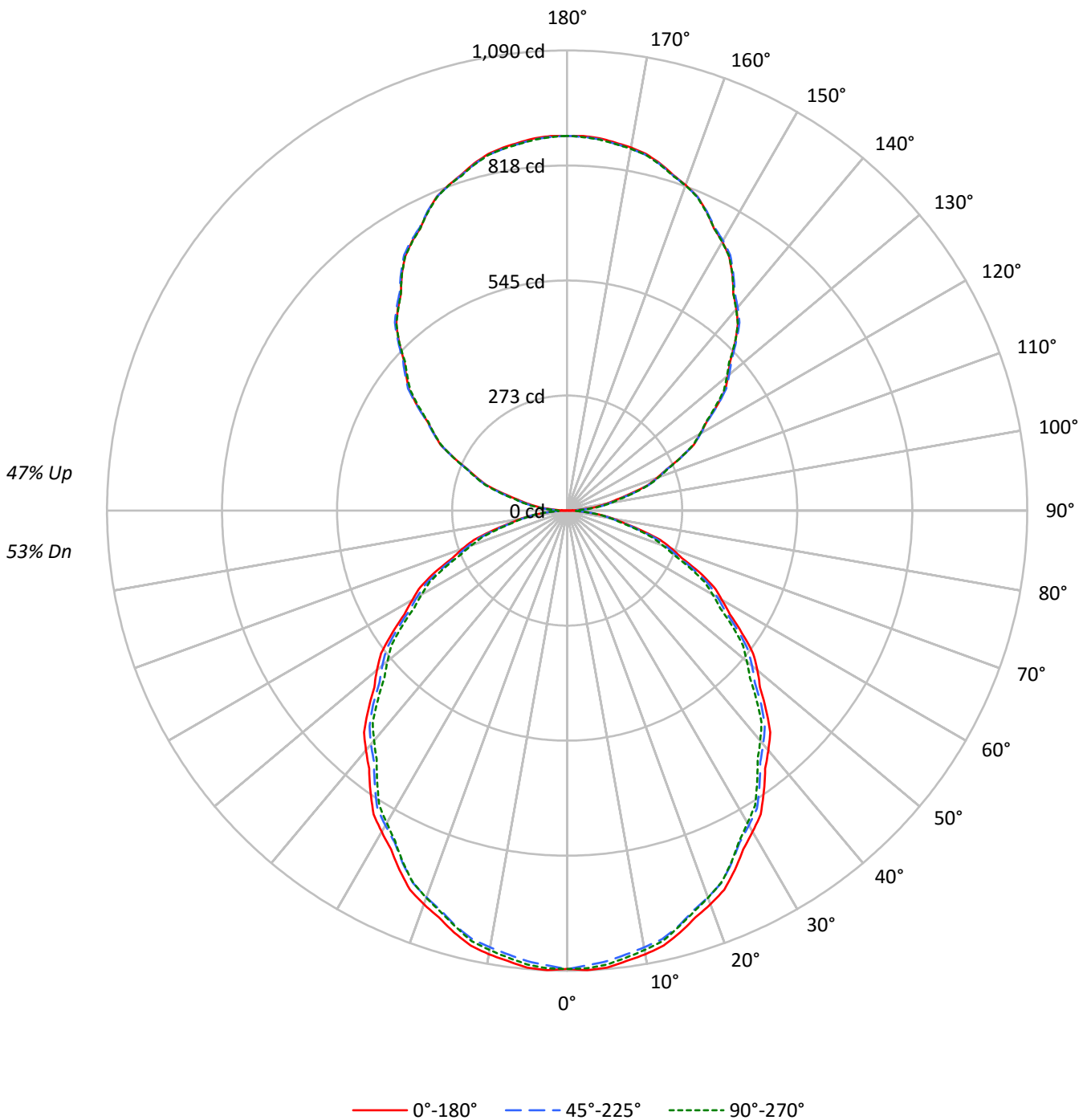
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331980-940

CATALOG NUMBER: S123DIP-S775D805U940-4F0-1E-UDD-F1

### Luminous Intensity Polar Plot





TEST NUMBER: P331980-940

CATALOG NUMBER: S123DIP-S775D805U940-4F0-1E-UDD-F1

**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	85	85	85	72	72	72	59	59	59	53
1	99	94	90	87	91	87	84	81	75	72	70	63	61	60	52	51	50	45
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42	38
3	82	72	65	59	75	67	61	55	58	53	49	49	45	42	41	38	36	32
4	75	64	56	50	69	60	52	47	51	46	41	44	39	36	36	33	31	27
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27	24
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	30	26	24	21
7	59	46	38	32	54	43	36	31	37	32	27	32	28	24	27	24	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	22	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	20	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15	13

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

	0°	45°	90°
0°	11689	11689	11689
5°	11743	11581	11662
10°	11664	11481	11552
15°	11529	11352	11373
20°	11369	11165	11176
25°	11156	10946	10923
30°	10920	10700	10618
35°	10674	10441	10306
40°	10418	10153	9997
45°	10135	9893	9651
50°	9851	9568	9302
55°	9481	9233	8955
60°	9104	8844	8564
65°	8777	8420	8155
70°	8286	7934	7582
75°	7573	7303	6991
80°	6831	6540	6484
85°	5990	5768	5545



TEST NUMBER: P331980-940

CATALOG NUMBER: S123DIP-S775D805U940-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.3	1.9
10°-20°	288.8	5.5
20°-30°	426.6	8.1
30°-40°	498.4	9.4
40°-50°	501.0	9.5
50°-60°	440.1	8.3
60°-70°	327.9	6.2
70°-80°	186.8	3.5
80°-90°	56.3	1.1
90°-100°	57.8	1.1
100°-110°	173.1	3.3
110°-120°	294.3	5.6
120°-130°	387.1	7.3
130°-140°	435.1	8.2
140°-150°	427.7	8.1
150°-160°	360.1	6.8
160°-170°	239.7	4.5
170°-180°	83.9	1.6
0°-30°	817.7	15.5
0°-40°	1316.1	24.9
0°-60°	2257.3	42.7
0°-90°	2828.2	53.5
90°-120°	525.2	9.9
90°-150°	1775.2	33.6
90°-180°	2459.0	46.5
0°-180°	5287.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1087	1082	1072	1081	1079	103
15°	1035	1030	1019	1025	1021	292
25°	939	933	922	922	920	432
35°	812	806	795	789	784	508
45°	666	662	650	639	634	514
55°	505	504	492	482	477	452
65°	345	340	331	323	320	340
75°	182	178	176	171	168	195
85°	48	47	47	45	45	53
90°	1	8	17	19	21	5
95°	41	46	52	54	54	46
105°	157	159	164	165	166	168
115°	296	298	297	298	297	293
125°	434	436	434	432	429	387
135°	563	567	566	563	562	433
145°	682	684	686	685	682	426
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	



TEST NUMBER: P331980-940

CATALOG NUMBER: S123DIP-S775D805U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1089.6	1089.0	1088.3	1087.6	1087.0	1085.7	1083.9	1082.1	1080.2	1078.4	1080.0
5°	1086.8	1085.7	1084.8	1083.7	1082.6	1081.0	1078.7	1076.5	1074.2	1071.8	1074.0
7.5°	1076.2	1075.1	1074.1	1073.1	1072.0	1070.3	1067.9	1065.6	1063.2	1060.9	1062.7
10°	1067.2	1066.1	1065.1	1064.1	1063.1	1061.2	1058.5	1055.8	1053.1	1050.4	1052.3
12.5°	1055.3	1054.4	1053.6	1052.7	1051.8	1050.1	1047.6	1045.0	1042.5	1039.9	1041.3
15°	1034.6	1033.7	1032.9	1032.1	1031.2	1029.5	1026.7	1024.0	1021.4	1018.7	1020.3
17.5°	1010.4	1009.3	1008.3	1007.2	1006.1	1004.2	1001.6	998.8	996.1	993.5	994.6
20°	992.5	991.2	990.1	988.8	987.6	985.5	982.8	980.2	977.5	974.7	975.6
22.5°	972.3	971.1	969.8	968.6	967.3	965.4	962.7	960.0	957.3	954.6	955.3
25°	939.3	938.1	936.8	935.6	934.3	932.4	929.6	926.9	924.3	921.6	921.8
27.5°	904.0	902.8	901.6	900.4	899.2	897.2	894.2	891.4	888.4	885.5	885.6
30°	878.6	877.5	876.6	875.5	874.4	872.4	869.6	866.7	863.8	860.9	860.9
32.5°	853.2	851.9	850.4	849.1	847.7	846.0	843.6	841.4	839.2	837.0	835.8
35°	812.3	811.1	809.9	808.6	807.4	805.4	802.6	800.0	797.3	794.6	793.4
37.5°	770.4	768.9	767.3	765.7	764.2	762.1	759.3	756.5	753.8	751.1	749.6
40°	741.4	740.1	738.9	737.6	736.4	734.3	731.4	728.5	725.6	722.6	721.0
42.5°	712.2	710.8	709.4	708.0	706.6	704.5	701.5	698.6	695.7	692.8	691.2
45°	665.8	664.9	664.1	663.3	662.4	660.7	657.9	655.2	652.6	649.9	647.4
47.5°	619.6	618.4	617.2	616.0	614.7	612.9	610.4	607.9	605.3	602.8	600.3
50°	588.3	587.2	586.1	585.1	584.1	582.2	579.5	576.8	574.1	571.4	569.2
52.5°	555.4	554.6	553.9	553.2	552.5	550.7	547.9	545.0	542.2	539.3	537.3
55°	505.2	504.9	504.7	504.5	504.3	502.8	500.2	497.5	494.7	492.0	489.8
57.5°	457.4	456.6	455.9	455.2	454.5	453.1	450.9	448.7	446.6	444.4	442.4
60°	422.9	422.8	422.6	422.3	422.1	420.8	418.3	415.8	413.3	410.8	408.9
62.5°	392.4	391.8	391.3	390.7	390.2	388.7	386.2	383.7	381.2	378.7	376.8
65°	344.6	343.5	342.4	341.4	340.4	338.9	336.7	334.7	332.6	330.6	328.9
67.5°	293.9	293.0	292.1	291.1	290.3	289.0	287.5	285.9	284.3	282.8	281.2
70°	263.3	262.1	260.8	259.6	258.3	257.1	255.8	254.6	253.3	252.1	250.7
72.5°	231.2	230.2	229.3	228.5	227.6	226.4	225.0	223.6	222.1	220.7	219.5
75°	182.1	181.2	180.4	179.6	178.8	178.0	177.4	176.7	176.1	175.6	174.5
77.5°	138.6	138.1	137.7	137.2	136.7	136.2	135.4	134.6	133.9	133.1	132.4
80°	110.2	109.6	109.0	108.3	107.7	107.2	106.7	106.4	105.9	105.5	105.3
82.5°	82.6	82.4	82.3	82.1	82.0	81.9	81.9	81.8	81.7	81.6	81.2
85°	48.5	48.2	47.7	47.3	46.9	46.7	46.7	46.7	46.7	46.7	46.3
87.5°	19.5	19.4	19.2	19.0	18.8	18.8	19.1	19.4	19.5	19.8	19.7
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	16.9	17.9	19.0	20.1	21.0	22.2	23.4	24.5	25.6	26.8	27.3
95°	41.1	42.2	43.3	44.4	45.5	46.6	47.9	49.1	50.4	51.6	52.3
97.5°	73.0	73.8	74.6	75.4	76.3	77.1	78.0	78.9	79.8	80.7	81.4
100°	94.8	95.8	96.7	97.6	98.5	99.4	100.1	100.9	101.7	102.5	103.0
102.5°	119.9	120.5	121.0	121.6	122.2	123.0	123.9	125.0	126.0	127.1	127.5
105°	156.9	157.2	157.5	157.8	158.1	159.0	160.3	161.8	163.2	164.5	164.5
107.5°	199.8	200.0	200.2	200.4	200.5	200.9	201.5	202.1	202.6	203.1	203.7
110°	226.6	226.9	227.2	227.5	227.8	228.1	228.5	228.7	229.1	229.3	230.0



TEST NUMBER: P331980-940

CATALOG NUMBER: S123DIP-S775D805U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.5	254.7	254.9	255.0	255.2	255.3	255.4	255.5	255.6	255.6	256.4
115°	296.3	296.8	297.2	297.7	298.2	298.3	297.9	297.7	297.3	297.0	297.1
117.5°	338.4	338.8	339.0	339.3	339.7	339.6	339.2	338.8	338.4	338.0	338.0
120°	364.6	365.5	366.5	367.4	368.4	368.5	367.7	366.8	366.1	365.3	365.2
122.5°	392.0	392.6	393.3	394.0	394.7	394.8	394.4	394.0	393.6	393.2	392.8
125°	433.6	434.1	434.5	435.1	435.5	435.6	435.2	435.0	434.6	434.4	433.7
127.5°	472.2	473.1	474.1	475.1	476.1	476.4	476.1	475.7	475.4	475.0	474.2
130°	497.8	499.0	500.2	501.5	502.7	503.1	502.7	502.2	501.8	501.2	500.6
132.5°	523.4	524.7	525.9	527.2	528.4	528.9	528.5	528.2	527.8	527.4	526.7
135°	562.6	563.6	564.5	565.4	566.3	566.8	566.6	566.4	566.2	566.1	565.5
137.5°	598.9	599.7	600.4	601.2	602.0	602.5	603.0	603.3	603.8	604.1	603.5
140°	623.9	624.7	625.5	626.3	627.1	627.5	627.7	627.9	628.0	628.1	628.0
142.5°	646.8	647.6	648.4	649.2	650.0	650.5	650.8	651.0	651.3	651.6	651.4
145°	682.5	682.9	683.1	683.5	683.8	684.1	684.7	685.1	685.5	686.0	685.9
147.5°	713.8	714.3	714.9	715.4	716.0	716.5	716.9	717.4	717.8	718.3	718.3
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



TEST NUMBER: P331980-940

CATALOG NUMBER: S123DIP-S775D805U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1081.7	1083.4	1085.0	1085.8	1085.7	1085.5	1085.3	1085.1
5°	1076.0	1078.1	1080.2	1081.0	1080.6	1080.2	1079.8	1079.3
7.5°	1064.6	1066.5	1068.4	1069.2	1068.9	1068.6	1068.4	1068.2
10°	1054.2	1056.0	1057.8	1058.6	1058.2	1057.7	1057.4	1056.9
12.5°	1042.7	1044.0	1045.4	1046.0	1045.7	1045.4	1045.3	1045.0
15°	1022.0	1023.6	1025.3	1025.5	1024.2	1023.0	1021.8	1020.6
17.5°	995.8	996.9	998.1	998.4	998.0	997.6	997.1	996.7
20°	976.4	977.2	978.1	978.2	977.6	977.0	976.3	975.7
22.5°	955.9	956.6	957.3	957.2	956.4	955.6	954.8	954.0
25°	921.9	922.2	922.4	922.2	921.6	921.0	920.3	919.7
27.5°	885.8	886.0	886.2	885.8	885.1	884.3	883.5	882.7
30°	860.9	860.9	860.9	860.1	858.7	857.2	855.8	854.3
32.5°	834.6	833.5	832.3	831.3	830.5	829.7	828.9	828.2
35°	792.1	790.9	789.6	788.5	787.4	786.4	785.3	784.3
37.5°	748.1	746.5	745.1	744.0	743.3	742.7	742.0	741.4
40°	719.3	717.7	716.0	714.8	714.0	713.1	712.3	711.5
42.5°	689.5	687.8	686.2	684.9	684.1	683.2	682.4	681.6
45°	644.9	642.4	639.9	638.1	637.1	636.1	635.0	634.0
47.5°	597.9	595.5	593.0	591.3	590.4	589.5	588.6	587.6
50°	566.9	564.5	562.3	560.5	559.3	558.0	556.8	555.5
52.5°	535.4	533.4	531.5	529.9	528.7	527.4	526.2	525.0
55°	487.5	485.2	483.0	481.3	480.2	479.2	478.1	477.2
57.5°	440.3	438.4	436.3	434.7	433.5	432.3	431.1	429.9
60°	407.1	405.2	403.3	401.9	400.8	399.8	398.8	397.8
62.5°	375.0	373.1	371.2	370.0	369.3	368.5	367.8	367.1
65°	327.2	325.6	323.9	322.7	322.1	321.5	320.8	320.2
67.5°	279.8	278.4	276.9	275.7	274.9	274.0	273.1	272.2
70°	249.2	247.7	246.3	245.0	244.0	243.0	241.9	240.9
72.5°	218.1	216.9	215.6	214.6	214.1	213.6	213.0	212.5
75°	173.4	172.5	171.4	170.6	170.0	169.3	168.7	168.1
77.5°	131.7	131.0	130.3	130.0	130.0	130.0	130.0	130.0
80°	105.1	104.9	104.7	104.6	104.6	104.6	104.6	104.6
82.5°	80.9	80.5	80.1	79.8	79.7	79.5	79.4	79.2
85°	45.8	45.5	45.0	44.9	44.9	44.9	44.9	44.9
87.5°	19.7	19.6	19.6	19.6	19.7	19.7	19.8	19.9
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	27.7	28.3	28.7	28.9	28.7	28.5	28.4	28.2
95°	52.8	53.4	54.0	54.4	54.4	54.4	54.4	54.4
97.5°	82.1	82.8	83.6	83.9	83.8	83.8	83.7	83.6
100°	103.4	103.9	104.3	104.8	105.0	105.3	105.7	105.9
102.5°	128.0	128.4	128.9	129.1	129.0	128.9	128.9	128.9
105°	164.5	164.5	164.5	164.7	165.0	165.3	165.6	165.9
107.5°	204.1	204.6	205.2	205.3	205.1	204.9	204.7	204.6
110°	230.6	231.2	231.8	232.0	231.7	231.4	231.0	230.8





TEST NUMBER: P331980-940

CATALOG NUMBER: S123DIP-S775D805U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.1	257.8	258.6	258.9	258.9	258.8	258.7	258.7
115°	297.3	297.5	297.7	297.7	297.5	297.3	297.1	297.0
117.5°	338.0	337.9	337.9	337.6	337.2	336.8	336.4	335.9
120°	365.0	364.9	364.7	364.4	364.2	363.8	363.6	363.2
122.5°	392.4	392.0	391.6	391.2	390.7	390.3	389.9	389.4
125°	433.1	432.5	431.9	431.2	430.6	430.0	429.4	428.7
127.5°	473.3	472.4	471.6	470.8	470.1	469.4	468.7	468.0
130°	500.1	499.4	498.8	497.9	496.9	495.8	494.7	493.6
132.5°	526.0	525.2	524.5	523.7	522.9	522.0	521.2	520.4
135°	564.9	564.3	563.7	563.2	562.8	562.6	562.2	562.0
137.5°	602.9	602.3	601.5	600.9	600.4	599.8	599.2	598.6
140°	627.9	627.7	627.5	627.0	625.8	624.7	623.7	622.6
142.5°	651.3	651.1	650.9	650.5	649.6	648.8	647.9	647.1
145°	685.7	685.5	685.4	685.0	684.4	683.8	683.1	682.5
147.5°	718.3	718.3	718.3	717.7	716.8	715.9	715.0	714.1
150°	738.3	738.3	738.3	737.9	736.9	736.0	735.0	734.1
152.5°	756.6	756.9	757.2	756.9	756.1	755.3	754.5	753.7
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)