

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: P331441-840

Luminaire Tested: **S122DIP-S1005D725U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331441-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S1005D725U840-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7002.2 lumens  
Efficiency: N/A  
Efficacy: 115.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

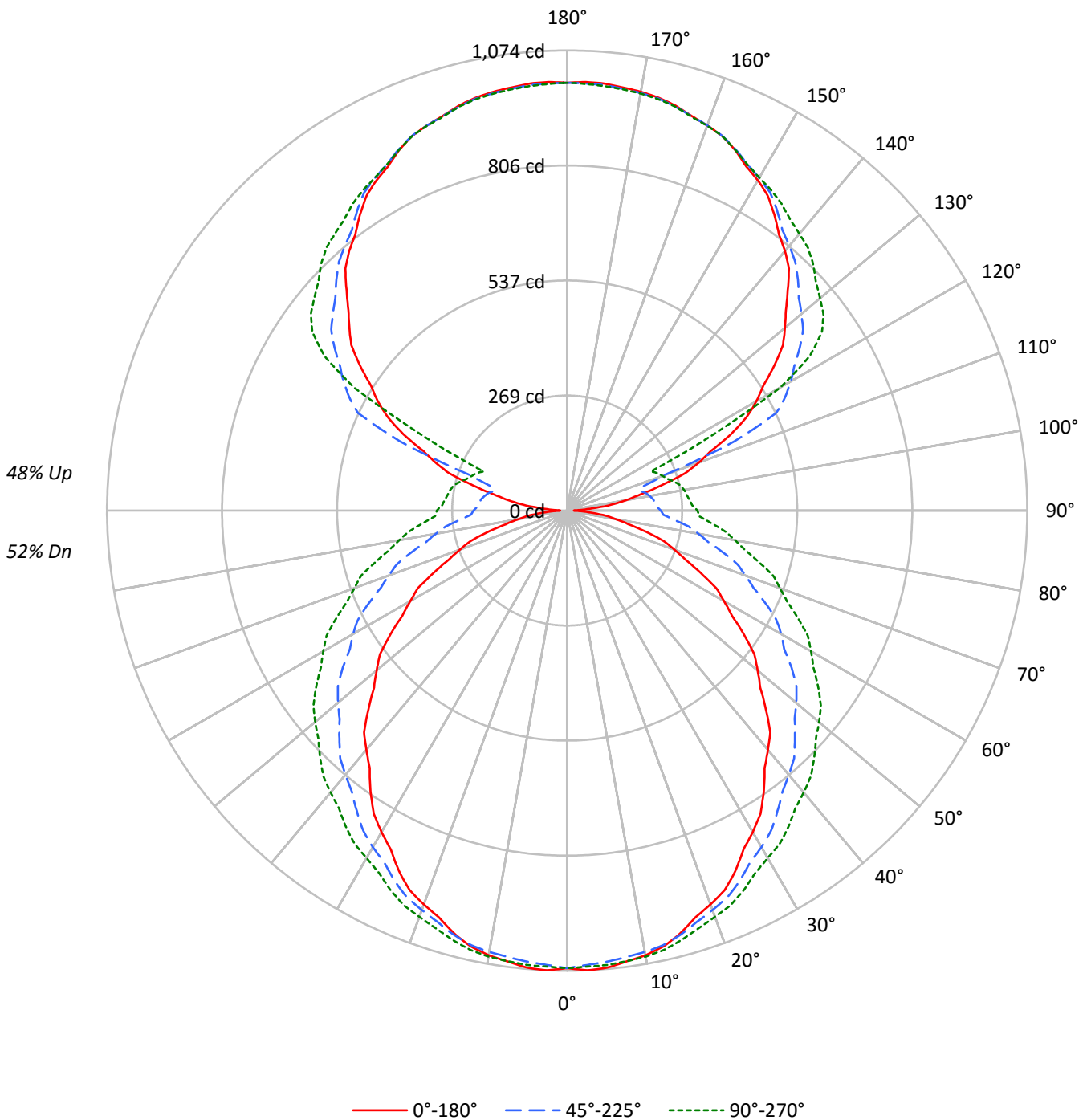
Input Watts (W): 60.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331441-840

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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	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	97	92	87	83	89	85	81	77	72	69	66	60	57	56	49	47	46	40
2	87	79	72	67	80	73	67	62	62	57	53	51	48	45	42	39	37	33
3	79	69	61	55	73	64	57	51	54	49	44	45	41	37	37	34	31	27
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	32	29	26	23
5	66	54	45	39	61	50	42	37	42	36	32	35	31	27	29	25	23	19
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17
7	56	43	35	29	52	40	33	28	34	28	24	29	24	21	24	20	17	15
8	52	39	31	26	48	37	29	24	31	26	21	26	22	18	22	18	16	13
9	49	36	28	23	45	33	26	22	29	23	19	24	20	16	20	17	14	12
10	45	33	25	20	42	31	24	19	26	21	17	22	18	15	19	15	13	11

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

	0°	45°	90°
0°	17241	17241	17241
5°	17327	16597	16534
10°	17217	16106	15925
15°	16980	15587	15284
20°	16681	15031	14669
25°	16384	14494	14107
30°	15966	13945	13546
35°	15544	13412	13150
40°	15099	12958	12754
45°	14678	12551	12415
50°	14226	12185	12082
55°	13750	11789	11742
60°	13168	11380	11382
65°	12566	10901	10957
70°	11886	10385	10497
75°	11021	9881	10071
80°	9646	9362	9643
85°	8334	8915	9308



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.2	1.4
10°-20°	290.2	4.1
20°-30°	439.7	6.3
30°-40°	535.6	7.6
40°-50°	576.2	8.2
50°-60°	559.5	8.0
60°-70°	488.6	7.0
70°-80°	376.1	5.4
80°-90°	254.9	3.6
90°-100°	207.2	3.0
100°-110°	249.1	3.6
110°-120°	410.3	5.9
120°-130°	585.7	8.4
130°-140°	592.7	8.5
140°-150°	536.1	7.7
150°-160°	428.3	6.1
160°-170°	276.0	3.9
170°-180°	95.0	1.4
0°-30°	831.1	11.9
0°-40°	1366.6	19.5
0°-60°	2502.3	35.7
0°-90°	3621.9	51.7
90°-120°	866.6	12.4
90°-150°	2581.1	36.9
90°-180°	3380.0	48.3
0°-180°	7002.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1068	1068	1068	1068	1068	
5°	1071	1066	1057	1066	1065	102
15°	1022	1024	1024	1038	1037	288
25°	929	940	953	971	976	427
35°	800	827	856	889	901	500
45°	656	699	752	798	816	506
55°	503	560	639	693	715	450
65°	344	420	511	572	594	341
75°	190	278	376	440	463	201
85°	56	152	251	313	337	60
90°	16	114	219	282	304	13
95°	59	111	206	266	286	67
105°	227	284	177	237	259	243
115°	422	454	539	265	216	414
125°	590	603	663	708	726	527
135°	728	740	762	800	812	563
145°	843	843	854	868	873	527
155°	928	923	930	934	929	428
165°	978	974	976	980	976	276
175°	1000	996	997	1001	995	95
180°	998	998	998	998	998	



TEST NUMBER: P331441-840

CATALOG NUMBER: S122DIP-S1005D725U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1074.1	1073.3	1072.4	1071.6	1070.8	1069.3	1067.4	1065.5	1063.6	1061.7	1063.1
5°	1071.0	1070.0	1068.9	1067.8	1066.8	1065.3	1063.3	1061.2	1059.1	1057.0	1059.1
7.5°	1061.4	1060.7	1060.0	1059.3	1058.6	1057.5	1055.9	1054.3	1052.8	1051.2	1053.6
10°	1054.0	1053.3	1052.6	1051.9	1051.2	1050.4	1049.4	1048.2	1047.2	1046.2	1048.9
12.5°	1041.6	1041.7	1041.9	1042.0	1042.1	1041.8	1041.1	1040.3	1039.6	1038.7	1041.6
15°	1021.5	1022.2	1022.8	1023.5	1024.2	1024.5	1024.5	1024.5	1024.5	1024.5	1027.6
17.5°	995.4	996.9	998.4	999.8	1001.2	1002.5	1003.6	1004.7	1005.8	1006.9	1010.2
20°	978.2	979.9	981.6	983.3	985.0	986.5	988.0	989.3	990.7	992.1	995.8
22.5°	959.6	961.5	963.5	965.5	967.6	969.5	971.4	973.3	975.2	977.1	981.0
25°	928.6	931.0	933.4	935.8	938.3	941.0	944.0	947.2	950.3	953.3	957.5
27.5°	891.4	895.3	899.3	903.2	907.2	910.9	914.5	918.2	921.8	925.5	930.7
30°	866.7	871.1	875.7	880.1	884.5	889.1	893.5	898.0	902.4	907.0	912.4
32.5°	839.4	844.4	849.5	854.5	859.5	864.6	870.0	875.3	880.6	885.9	892.2
35°	800.1	806.0	811.8	817.7	823.5	829.7	836.3	842.7	849.3	855.9	863.4
37.5°	757.4	764.2	770.9	777.6	784.4	791.9	800.4	808.9	817.4	825.9	834.2
40°	728.9	736.5	744.1	751.6	759.2	767.6	776.9	786.2	795.5	804.8	813.7
42.5°	701.8	709.2	716.8	724.4	732.0	741.0	751.7	762.4	773.1	783.8	793.5
45°	656.2	665.5	674.8	684.1	693.4	704.0	716.1	728.1	740.1	752.1	762.9
47.5°	611.4	621.5	631.6	641.7	651.8	663.9	678.0	692.1	706.2	720.2	731.4
50°	580.4	591.1	601.7	612.4	623.0	636.1	651.6	667.0	682.5	698.0	709.7
52.5°	550.7	561.9	573.1	584.3	595.5	609.3	625.5	641.9	658.1	674.5	686.4
55°	503.0	515.3	527.8	540.2	552.5	567.6	585.5	603.4	621.3	639.1	651.6
57.5°	456.0	469.9	483.8	497.9	511.8	527.9	546.1	564.3	582.6	600.8	614.1
60°	422.5	437.3	452.1	466.9	481.7	498.9	518.5	538.1	557.6	577.2	590.4
62.5°	392.8	408.1	423.4	438.8	454.1	471.6	491.2	510.8	530.5	550.1	563.9
65°	343.6	360.4	377.3	394.2	411.0	429.6	449.9	470.1	490.4	510.7	524.8
67.5°	298.4	316.0	333.6	351.2	368.8	388.0	408.8	429.6	450.3	471.1	485.3
70°	266.2	284.1	301.9	319.8	337.7	357.3	378.7	400.0	421.3	442.6	457.4
72.5°	236.5	254.9	273.4	291.8	310.2	330.2	351.8	373.4	395.1	416.7	431.1
75°	190.4	209.6	228.8	248.1	267.4	288.0	310.0	332.0	354.1	376.1	390.8
77.5°	145.8	165.9	186.1	206.2	226.4	247.6	270.0	292.4	314.7	337.1	351.8
80°	116.0	137.0	158.0	179.0	200.0	221.7	244.0	266.4	288.7	311.0	325.5
82.5°	91.3	112.0	132.7	153.4	174.1	195.8	218.4	241.1	263.7	286.3	300.7
85°	55.7	77.1	98.4	119.7	141.0	162.7	184.7	206.7	228.7	250.7	265.2
87.5°	30.5	51.3	72.2	93.0	113.9	135.4	157.7	180.0	202.3	224.5	238.7
90°	16.2	37.9	59.6	81.3	103.0	125.5	148.9	172.2	195.4	218.7	233.3
92.5°	28.8	47.3	65.6	84.0	102.5	122.6	144.4	166.2	188.0	210.0	223.8
95°	59.4	70.2	81.1	91.9	102.8	119.2	140.9	162.6	184.4	206.1	220.0
97.5°	104.0	103.5	102.9	102.4	101.8	112.7	135.1	157.5	180.0	202.4	215.7
100°	138.7	129.5	120.2	110.9	101.6	108.0	130.0	152.0	174.0	195.9	210.0
102.5°	175.6	182.6	189.6	196.5	203.5	204.9	200.8	196.6	192.6	188.4	202.6
105°	227.3	242.2	256.9	271.8	286.5	280.9	255.0	229.0	203.1	177.1	191.0
107.5°	288.1	300.0	311.8	323.8	335.6	323.9	288.4	253.0	217.5	182.1	191.9
110°	326.2	336.5	346.7	357.0	367.2	357.6	328.0	298.5	268.9	239.4	234.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	363.1	371.9	380.7	389.5	398.3	405.0	409.5	414.0	418.6	423.1	375.6
115°	421.5	428.1	434.5	441.1	447.6	460.6	480.1	499.6	519.1	538.6	474.5
117.5°	472.2	477.7	483.2	488.8	494.3	505.5	522.6	539.7	556.7	573.8	566.0
120°	510.3	514.1	517.9	521.7	525.4	535.6	552.3	569.0	585.6	602.3	613.8
122.5°	542.7	545.7	548.9	551.9	555.0	564.6	580.7	596.7	612.9	628.9	639.4
125°	590.4	592.5	594.6	596.6	598.7	606.8	620.9	634.9	648.9	663.1	673.5
127.5°	635.0	637.0	638.9	641.0	642.9	649.4	660.7	671.8	683.0	694.1	704.3
130°	663.4	665.6	667.8	670.0	672.3	677.8	686.8	695.8	704.8	713.8	723.9
132.5°	692.3	694.1	695.9	697.8	699.6	704.2	711.6	718.9	726.2	733.6	743.1
135°	728.3	730.8	733.4	736.0	738.5	742.3	747.2	752.0	756.9	761.8	770.6
137.5°	766.3	768.0	769.7	771.4	773.2	775.7	778.8	781.9	785.1	788.2	796.2
140°	791.1	792.0	793.0	794.0	794.9	796.6	799.0	801.5	804.0	806.4	813.3
142.5°	811.9	812.7	813.5	814.4	815.2	816.7	818.8	821.0	823.1	825.3	831.0
145°	843.0	842.8	842.7	842.5	842.4	843.6	846.4	849.1	851.8	854.5	857.8
147.5°	871.5	870.9	870.3	869.7	869.1	870.1	872.8	875.5	878.2	880.9	882.0
150°	890.0	888.9	887.8	886.7	885.4	886.3	888.8	891.3	893.9	896.5	897.5
152.5°	905.5	904.3	903.1	901.8	900.6	901.2	903.6	906.1	908.5	910.9	911.9
155°	928.3	926.9	925.3	923.9	922.5	922.7	924.6	926.6	928.5	930.4	931.4
157.5°	946.0	944.8	943.6	942.4	941.2	941.2	942.6	943.9	945.2	946.6	947.8
160°	956.4	955.4	954.5	953.5	952.6	952.6	953.5	954.5	955.4	956.4	957.5
162.5°	965.7	964.7	963.8	962.8	961.8	961.8	962.6	963.4	964.3	965.1	966.2
165°	978.2	977.1	976.2	975.2	974.2	974.0	974.5	975.0	975.4	975.9	977.0
167.5°	987.3	986.4	985.4	984.5	983.5	983.2	983.7	984.1	984.6	985.0	986.1
170°	992.6	991.6	990.7	989.7	988.8	988.4	988.8	989.1	989.4	989.7	990.8
172.5°	996.0	995.0	994.1	993.1	992.2	991.9	992.2	992.5	992.8	993.1	994.3
175°	1000.5	999.4	998.3	997.1	996.0	995.6	995.9	996.2	996.5	996.9	998.0
177.5°	1001.3	1000.4	999.5	998.6	997.6	997.2	997.3	997.5	997.6	997.7	998.7
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8	1067.8
2.5°	1064.4	1065.8	1067.2	1067.6	1067.0	1066.5	1065.9	1065.4
5°	1061.2	1063.3	1065.3	1066.1	1065.8	1065.5	1065.1	1064.8
7.5°	1056.1	1058.6	1061.1	1062.2	1061.8	1061.5	1061.1	1060.8
10°	1051.7	1054.5	1057.2	1058.4	1058.0	1057.7	1057.4	1057.0
12.5°	1044.3	1047.0	1049.8	1051.0	1050.7	1050.3	1050.0	1049.7
15°	1030.8	1033.8	1036.9	1038.3	1037.9	1037.6	1037.2	1036.9
17.5°	1013.4	1016.6	1019.9	1021.5	1021.5	1021.5	1021.5	1021.5
20°	999.6	1003.4	1007.1	1009.1	1009.1	1009.1	1009.1	1009.1
22.5°	984.7	988.6	992.3	994.5	995.0	995.6	996.1	996.7
25°	961.6	965.7	969.9	972.4	973.5	974.5	975.5	976.5
27.5°	935.9	941.2	946.4	949.4	950.2	950.9	951.7	952.4
30°	918.0	923.4	929.0	932.2	933.2	934.2	935.3	936.3
32.5°	898.6	904.8	911.2	915.2	917.2	919.0	920.9	922.7
35°	871.0	878.6	886.2	891.1	893.5	896.0	898.4	900.7
37.5°	842.6	851.0	859.4	864.8	867.4	870.0	872.5	875.0
40°	822.6	831.6	840.5	846.6	849.7	852.7	855.9	859.0
42.5°	803.2	813.0	822.8	829.2	832.3	835.5	838.5	841.6
45°	773.5	784.2	794.8	801.8	805.3	808.7	812.1	815.6
47.5°	742.6	753.7	764.9	772.3	776.1	779.9	783.7	787.5
50°	721.3	733.1	744.8	752.6	756.3	760.0	763.9	767.6
52.5°	698.4	710.3	722.4	730.3	734.4	738.5	742.6	746.6
55°	664.0	676.3	688.7	697.1	701.6	706.1	710.5	715.0
57.5°	627.5	640.9	654.2	663.1	667.6	672.2	676.7	681.3
60°	603.4	616.5	629.5	638.5	643.3	648.1	653.0	657.7
62.5°	577.8	591.7	605.6	614.8	619.4	623.9	628.4	633.0
65°	539.0	553.0	567.1	576.4	580.9	585.3	589.9	594.3
67.5°	499.6	513.8	528.1	537.6	542.2	546.8	551.6	556.2
70°	472.2	487.0	501.8	511.2	515.3	519.5	523.6	527.8
72.5°	445.7	460.2	474.6	484.4	489.4	494.3	499.3	504.2
75°	405.7	420.4	435.3	444.8	449.3	453.8	458.3	462.7
77.5°	366.5	381.2	396.0	405.8	410.5	415.4	420.2	425.0
80°	339.9	354.5	368.9	378.5	383.3	388.1	392.9	397.8
82.5°	315.2	329.6	344.1	353.6	358.1	362.6	367.2	371.7
85°	279.6	294.1	308.5	318.1	323.0	327.8	332.5	337.4
87.5°	252.9	267.1	281.2	290.6	295.1	299.5	304.0	308.5
90°	247.8	262.5	277.0	286.5	290.9	295.4	299.8	304.3
92.5°	237.7	251.6	265.5	274.6	278.9	283.3	287.6	291.9
95°	233.9	247.7	261.7	270.5	274.5	278.5	282.5	286.4
97.5°	229.1	242.5	255.8	264.7	268.9	273.2	277.4	281.7
100°	224.0	237.9	252.0	261.1	265.1	269.2	273.4	277.4
102.5°	216.7	230.8	244.9	254.1	258.3	262.6	266.8	271.0
105°	204.8	218.5	232.4	241.5	245.9	250.3	254.8	259.2
107.5°	201.6	211.4	221.2	228.2	232.7	237.1	241.5	245.9
110°	229.3	224.3	219.2	218.9	223.3	227.7	232.2	236.6





TEST NUMBER: P331441-840

CATALOG NUMBER: S122DIP-S1005D725U840-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	328.1	280.5	233.0	211.4	215.6	219.9	224.2	228.5
115°	410.5	346.6	282.6	246.6	238.8	231.1	223.3	215.5
117.5°	558.3	550.5	542.7	521.5	487.1	452.5	418.1	383.6
120°	625.4	636.9	648.4	645.3	627.4	609.6	591.7	573.8
122.5°	649.9	660.5	671.0	675.7	674.8	673.8	672.8	671.9
125°	683.9	694.3	704.7	711.7	715.3	718.8	722.4	726.0
127.5°	714.4	724.6	734.8	741.4	744.5	747.6	750.7	753.9
130°	733.9	743.9	753.9	760.2	762.8	765.4	768.0	770.5
132.5°	752.6	762.0	771.5	777.5	780.1	782.7	785.3	787.9
135°	779.4	788.3	797.1	802.7	805.2	807.6	810.0	812.4
137.5°	804.1	811.9	819.8	824.7	826.5	828.3	830.1	831.8
140°	820.3	827.3	834.1	838.3	839.5	840.8	842.0	843.3
142.5°	836.8	842.4	848.2	851.5	852.5	853.5	854.4	855.5
145°	861.0	864.1	867.4	869.4	870.3	871.2	872.1	873.0
147.5°	883.1	884.2	885.3	886.0	886.1	886.3	886.4	886.6
150°	898.4	899.4	900.3	900.4	899.6	898.8	898.0	897.2
152.5°	912.8	913.8	914.8	914.7	913.7	912.6	911.6	910.5
155°	932.4	933.3	934.3	934.1	932.8	931.6	930.3	929.0
157.5°	948.8	949.9	951.0	950.9	949.7	948.4	947.2	945.9
160°	958.4	959.4	960.3	960.2	959.1	958.0	956.8	955.7
162.5°	967.2	968.4	969.5	969.4	968.0	966.5	965.2	963.8
165°	978.2	979.4	980.5	980.5	979.4	978.2	977.0	975.9
167.5°	987.3	988.5	989.6	989.4	988.0	986.5	985.0	983.6
170°	991.9	993.0	994.2	994.0	992.6	991.1	989.7	988.3
172.5°	995.4	996.5	997.6	997.4	996.0	994.6	993.1	991.7
175°	999.2	1000.3	1001.4	1001.2	999.6	997.9	996.3	994.7
177.5°	999.6	1000.5	1001.4	1001.3	1000.1	999.0	997.7	996.6
180°	998.4	998.4	998.4	998.4	998.4	998.4	998.4	998.4

(END OF REPORT)