

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: P331452-940

Luminaire Tested: **S122DIP-S1005D925U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331452-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIP-S1005D925U940-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

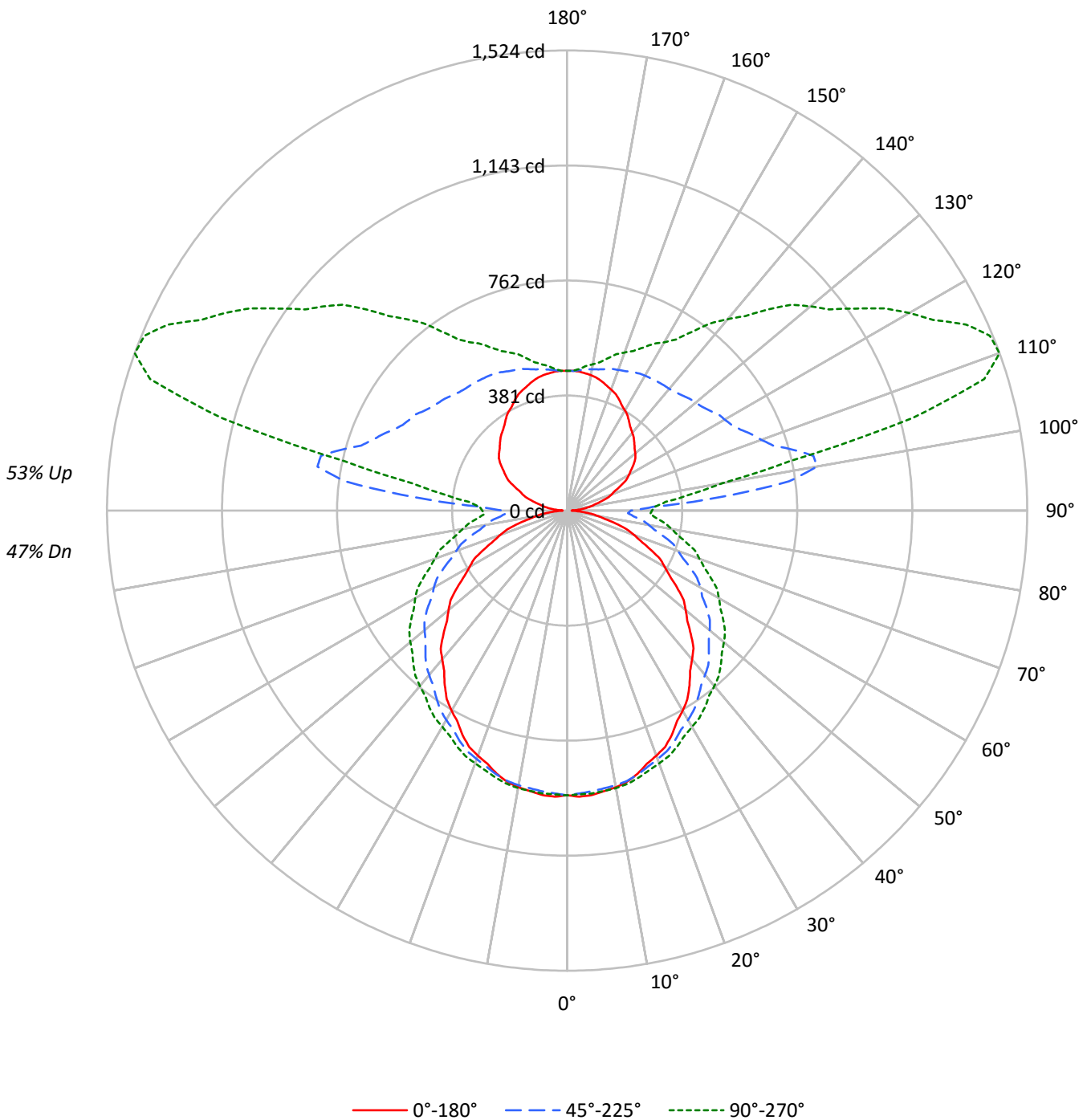
Lumens per Lamp: N/A  
Luminaire Lumens: 6821.8 lumens  
Efficiency: N/A  
Efficacy: 102.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 66.8  
Input Voltage (V): 120  
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: P331452-940

CATALOG NUMBER: S122DIP-S1005D925U940-4F0-1E-UDD-D4

### Luminous Intensity Polar Plot





TEST NUMBER: P331452-940

CATALOG NUMBER: S122DIP-S1005D925U940-4F0-1E-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	106	106	106	106	98	98	98	98	82	82	82		67	67	67		53	53	53	47
1	96	91	86	82	88	83	80	76	69	67	64		57	55	53		45	43	42	37
2	87	78	72	66	79	72	66	61	60	56	52		49	46	43		39	36	34	30
3	79	68	61	54	72	63	56	51	52	47	43		43	39	36		34	31	29	24
4	72	60	52	46	65	55	48	42	46	41	36		38	34	30		30	27	24	21
5	66	53	45	39	60	49	42	36	41	35	31		34	29	26		27	24	21	18
6	60	48	39	33	55	44	37	31	37	31	27		30	26	22		24	21	18	15
7	56	43	35	29	51	40	32	27	33	28	23		28	23	20		22	19	16	13
8	52	39	31	26	47	36	29	24	30	25	21		25	21	17		20	17	14	12
9	48	35	28	23	44	33	26	21	28	22	18		23	19	16		19	15	13	11
10	45	32	25	20	41	30	23	19	26	20	16		21	17	14		17	14	12	10

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

	0°	45°	90°
0°	15224	15224	15224
5°	15300	14656	14600
10°	15203	14222	14063
15°	14994	13763	13496
20°	14728	13272	12952
25°	14466	12799	12457
30°	14098	12312	11962
35°	13725	11842	11611
40°	13332	11442	11262
45°	12960	11082	10962
50°	12561	10760	10668
55°	12143	10411	10368
60°	11628	10049	10051
65°	11095	9625	9675
70°	10498	9170	9268
75°	9730	8725	8894
80°	8523	8267	8514
85°	7361	7873	8218



TEST NUMBER: P331452-940

CATALOG NUMBER: S122DIP-S1005D925U940-4F0-1E-UDD-D4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.3	1.3
10°-20°	256.2	3.8
20°-30°	388.3	5.7
30°-40°	472.9	6.9
40°-50°	508.8	7.5
50°-60°	494.1	7.2
60°-70°	431.4	6.3
70°-80°	332.1	4.9
80°-90°	227.1	3.3
90°-100°	338.6	5.0
100°-110°	740.0	10.8
110°-120°	741.1	10.9
120°-130°	590.5	8.7
130°-140°	458.3	6.7
140°-150°	336.3	4.9
150°-160°	234.2	3.4
160°-170°	137.9	2.0
170°-180°	44.9	0.7
0°-30°	733.8	10.8
0°-40°	1206.7	17.7
0°-60°	2209.5	32.4
0°-90°	3200.1	46.9
90°-120°	1819.8	26.7
90°-150°	3204.8	47.0
90°-180°	3622.0	53.1
0°-180°	6821.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	946	941	933	941	940	90
15°	902	904	905	916	916	254
25°	820	830	842	858	862	377
35°	706	730	756	785	795	441
45°	579	617	664	705	720	447
55°	444	495	564	612	631	397
65°	303	371	451	505	525	301
75°	168	245	332	389	409	178
85°	49	134	221	277	298	53
90°	14	105	211	262	281	11
95°	42	153	506	339	327	42
105°	115	212	777	1342	1183	123
115°	197	265	634	1260	1458	195
125°	270	321	577	1004	1166	240
135°	315	376	539	818	942	243
145°	358	411	522	656	723	225
155°	407	439	506	573	595	187
165°	443	457	485	514	522	125
175°	462	462	466	472	471	44
180°	463	463	463	463	463	



TEST NUMBER: P331452-940

CATALOG NUMBER: S122DIP-S1005D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	948.4	947.7	946.9	946.2	945.5	944.2	942.5	940.8	939.1	937.5	938.7
5°	945.7	944.8	943.9	942.9	942.0	940.7	938.9	937.0	935.2	933.4	935.2
7.5°	937.2	936.6	935.9	935.4	934.8	933.8	932.4	930.9	929.6	928.2	930.3
10°	930.7	930.1	929.4	928.8	928.2	927.5	926.6	925.6	924.7	923.8	926.2
12.5°	919.7	919.8	920.0	920.1	920.2	919.9	919.3	918.6	917.9	917.2	919.7
15°	902.0	902.6	903.1	903.7	904.4	904.6	904.6	904.6	904.6	904.6	907.4
17.5°	879.0	880.3	881.5	882.8	884.0	885.2	886.2	887.2	888.1	889.1	892.0
20°	863.7	865.2	866.7	868.3	869.8	871.1	872.4	873.5	874.8	876.0	879.3
22.5°	847.3	849.0	850.8	852.6	854.3	856.0	857.7	859.4	861.1	862.8	866.2
25°	819.9	822.1	824.2	826.3	828.5	830.9	833.6	836.3	839.1	841.8	845.4
27.5°	787.1	790.6	794.1	797.5	801.0	804.3	807.5	810.7	814.0	817.3	821.8
30°	765.3	769.2	773.2	777.1	781.0	785.1	789.0	792.9	796.8	800.8	805.7
32.5°	741.2	745.6	750.1	754.6	758.9	763.5	768.2	772.8	777.6	782.2	787.8
35°	706.5	711.7	716.8	722.0	727.2	732.6	738.4	744.1	749.9	755.7	762.4
37.5°	668.8	674.8	680.7	686.6	692.6	699.3	706.8	714.3	721.8	729.2	736.6
40°	643.6	650.3	657.0	663.7	670.4	677.8	686.0	694.2	702.4	710.6	718.5
42.5°	619.6	626.2	632.9	639.6	646.3	654.3	663.8	673.2	682.6	692.1	700.6
45°	579.4	587.6	595.8	604.0	612.2	621.6	632.3	642.9	653.5	664.1	673.6
47.5°	539.8	548.8	557.7	566.6	575.5	586.2	598.7	611.1	623.6	636.0	645.9
50°	512.5	521.9	531.3	540.7	550.1	561.7	575.3	589.0	602.6	616.4	626.7
52.5°	486.2	496.1	506.0	515.9	525.8	538.0	552.3	566.8	581.1	595.6	606.1
55°	444.2	455.0	466.0	477.0	487.9	501.2	517.0	532.8	548.6	564.4	575.3
57.5°	402.6	414.9	427.2	439.6	451.9	466.1	482.2	498.3	514.4	530.5	542.2
60°	373.1	386.1	399.2	412.2	425.3	440.5	457.8	475.1	492.4	509.7	521.3
62.5°	346.9	360.3	373.9	387.4	401.0	416.4	433.7	451.0	468.4	485.7	497.9
65°	303.4	318.3	333.1	348.0	362.9	379.3	397.3	415.1	433.0	450.9	463.4
67.5°	263.5	279.0	294.5	310.1	325.7	342.6	361.0	379.3	397.6	416.0	428.6
70°	235.1	250.8	266.6	282.4	298.2	315.5	334.4	353.2	372.0	390.8	403.9
72.5°	208.8	225.1	241.4	257.6	273.9	291.6	310.7	329.8	348.8	367.9	380.7
75°	168.1	185.1	202.1	219.1	236.1	254.3	273.8	293.2	312.6	332.1	345.1
77.5°	128.8	146.5	164.3	182.1	199.9	218.6	238.4	258.2	277.9	297.7	310.7
80°	102.5	121.0	139.6	158.1	176.6	195.7	215.4	235.2	254.9	274.6	287.4
82.5°	80.6	98.9	117.2	135.5	153.7	172.9	192.9	212.9	232.8	252.8	265.6
85°	49.2	68.0	86.9	105.7	124.5	143.7	163.1	182.5	202.0	221.4	234.2
87.5°	26.9	45.6	64.4	82.8	101.3	120.6	141.0	161.7	182.1	201.7	213.9
90°	14.5	34.9	56.0	75.4	94.8	116.0	139.9	165.5	190.3	210.6	221.9
92.5°	23.5	44.7	67.4	87.7	110.2	136.2	175.0	221.9	265.9	286.2	280.2
95°	42.1	59.9	83.1	105.4	133.8	171.5	230.7	326.3	447.7	506.0	473.9
97.5°	60.3	77.8	100.0	124.8	153.8	193.1	262.0	387.4	576.5	740.9	781.4
100°	78.1	92.0	111.3	136.7	165.8	204.8	268.9	394.6	603.8	839.7	979.1
102.5°	93.4	105.6	123.9	148.4	177.2	215.4	275.6	388.6	583.1	835.6	1048.1
105°	115.4	127.8	142.9	165.0	193.3	230.6	288.2	383.2	545.8	776.9	1024.3
107.5°	140.8	150.7	163.7	183.1	209.6	245.7	301.4	385.6	522.1	715.2	934.6
110°	156.8	166.4	177.8	195.5	220.3	256.5	310.5	389.5	512.9	684.5	878.4



TEST NUMBER: P331452-940

CATALOG NUMBER: S122DIP-S1005D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.5	181.1	192.3	208.2	231.3	267.4	319.3	394.0	506.8	661.1	836.6
115°	196.8	204.6	213.3	227.3	248.4	281.0	332.9	400.8	500.9	633.7	783.5
117.5°	220.7	226.5	234.0	245.6	264.8	297.2	345.3	408.8	497.0	614.2	745.5
120°	236.4	241.1	247.7	256.9	276.0	307.6	354.4	414.6	495.3	602.6	724.2
122.5°	251.3	254.7	260.5	269.7	288.0	319.6	363.6	419.5	494.5	593.3	705.3
125°	269.7	272.4	277.8	288.4	306.2	336.0	377.7	427.5	492.4	576.8	676.7
127.5°	285.3	288.6	295.8	307.3	324.0	353.5	392.4	436.2	492.1	564.0	650.2
130°	294.6	297.9	306.5	318.6	336.2	364.1	401.6	441.8	492.7	556.1	632.8
132.5°	303.2	307.1	316.5	329.3	347.5	374.8	409.4	447.5	493.3	548.8	617.4
135°	314.6	318.2	328.9	342.2	362.7	389.1	420.6	454.9	493.5	539.2	596.3
137.5°	326.7	330.9	341.5	355.7	375.9	399.8	429.2	459.6	493.3	531.1	579.3
140°	336.0	339.2	349.6	363.6	382.8	406.1	433.5	461.6	492.5	526.0	569.2
142.5°	345.3	347.8	357.5	371.4	389.9	411.6	437.7	464.7	492.9	523.9	561.0
145°	357.8	361.3	370.2	383.6	401.4	421.0	445.0	469.9	494.8	521.5	551.8
147.5°	372.7	375.4	383.9	396.2	411.0	428.5	451.0	473.0	495.5	518.4	543.5
150°	382.7	385.3	392.4	404.0	417.4	433.4	453.9	474.3	494.8	516.2	537.5
152.5°	392.6	393.9	401.0	411.2	423.8	438.4	456.7	475.0	493.4	512.6	532.5
155°	406.7	407.6	413.0	422.8	432.5	445.9	461.0	476.1	491.2	506.4	523.3
157.5°	418.5	419.4	423.7	432.1	440.0	451.2	464.0	476.1	487.1	500.0	514.6
160°	426.3	427.2	430.7	437.8	445.0	454.8	465.5	476.1	485.0	495.7	508.2
162.5°	434.1	433.5	437.1	442.8	449.2	456.9	466.2	475.4	482.9	492.1	502.5
165°	443.2	442.3	444.1	449.4	453.9	459.2	467.3	473.5	478.8	485.0	493.0
167.5°	450.7	449.6	451.2	454.6	457.8	461.2	467.1	472.3	474.7	478.8	483.8
170°	455.7	453.9	454.8	457.4	459.2	461.9	466.4	470.8	472.6	475.2	478.8
172.5°	458.5	457.4	456.9	459.6	460.7	462.6	465.7	468.7	469.8	471.0	473.9
175°	461.9	461.0	460.1	461.9	461.9	462.8	464.6	466.4	465.5	466.4	467.3
177.5°	463.5	462.1	461.4	462.8	462.8	462.8	463.5	464.9	463.5	462.8	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8



TEST NUMBER: P331452-940

CATALOG NUMBER: S122DIP-S1005D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	942.9	942.9	942.9	942.9	942.9	942.9	942.9	942.9
2.5°	939.9	941.1	942.4	942.7	942.2	941.7	941.2	940.8
5°	937.0	938.9	940.7	941.4	941.1	940.8	940.5	940.2
7.5°	932.6	934.8	936.9	937.9	937.5	937.3	936.9	936.7
10°	928.6	931.1	933.5	934.6	934.2	934.0	933.7	933.4
12.5°	922.1	924.5	926.9	928.0	927.7	927.4	927.1	926.8
15°	910.2	912.8	915.6	916.9	916.5	916.2	915.9	915.6
17.5°	894.8	897.7	900.5	902.0	902.0	902.0	902.0	902.0
20°	882.6	886.0	889.3	891.0	891.0	891.0	891.0	891.0
22.5°	869.5	872.9	876.2	878.2	878.6	879.1	879.6	880.1
25°	849.1	852.7	856.4	858.6	859.6	860.5	861.4	862.3
27.5°	826.4	831.1	835.7	838.3	839.0	839.6	840.3	841.0
30°	810.6	815.4	820.3	823.1	824.0	824.9	825.9	826.8
32.5°	793.4	799.0	804.6	808.2	809.9	811.5	813.2	814.8
35°	769.1	775.8	782.5	786.8	789.0	791.1	793.3	795.3
37.5°	744.0	751.4	758.8	763.7	765.9	768.2	770.4	772.7
40°	726.4	734.3	742.2	747.5	750.3	753.0	755.7	758.5
42.5°	709.3	717.9	726.6	732.2	734.9	737.7	740.4	743.2
45°	683.0	692.4	701.8	708.0	711.1	714.1	717.1	720.1
47.5°	655.7	665.5	675.4	682.0	685.3	688.7	692.0	695.4
50°	636.9	647.3	657.6	664.5	667.8	671.1	674.5	677.8
52.5°	616.7	627.2	637.8	644.9	648.5	652.1	655.7	659.2
55°	586.3	597.2	608.1	615.5	619.5	623.5	627.4	631.3
57.5°	554.1	565.9	577.7	585.5	589.5	593.5	597.5	601.5
60°	532.8	544.4	555.9	563.8	568.0	572.3	576.6	580.8
62.5°	510.2	522.5	534.8	542.9	546.9	550.9	554.9	558.9
65°	475.9	488.3	500.8	509.0	512.9	516.8	520.8	524.8
67.5°	441.1	453.7	466.3	474.7	478.8	482.9	487.1	491.2
70°	417.0	430.0	443.1	451.4	455.0	458.7	462.4	466.0
72.5°	393.5	406.4	419.1	427.8	432.1	436.5	440.9	445.2
75°	358.2	371.2	384.3	392.8	396.7	400.7	404.7	408.6
77.5°	323.6	336.6	349.6	358.3	362.5	366.8	371.0	375.2
80°	300.1	313.0	325.7	334.2	338.5	342.7	347.0	351.2
82.5°	278.3	291.1	303.8	312.2	316.2	320.2	324.2	328.2
85°	246.9	259.7	272.4	280.9	285.2	289.4	293.6	297.9
87.5°	226.1	238.2	250.9	259.3	263.1	267.1	270.9	274.8
90°	233.2	243.5	257.4	266.3	269.9	273.5	277.1	280.8
92.5°	272.0	272.9	277.2	279.6	282.4	283.2	287.6	289.8
95°	413.4	370.7	344.8	332.9	324.9	321.5	322.4	326.9
97.5°	712.0	624.3	539.2	482.3	443.4	425.1	415.7	411.8
100°	971.7	872.5	761.9	661.5	590.9	556.0	533.5	520.8
102.5°	1139.3	1125.4	1047.2	940.3	863.4	801.5	772.6	754.2
105°	1220.0	1331.2	1353.4	1331.1	1279.2	1227.4	1192.5	1183.4
107.5°	1141.1	1302.8	1405.5	1455.4	1465.6	1466.0	1461.7	1448.4
110°	1075.9	1244.9	1368.5	1448.0	1489.7	1509.9	1521.3	1523.7





TEST NUMBER: P331452-940

CATALOG NUMBER: S122DIP-S1005D925U940-4F0-1E-UDD-D4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1015.6	1178.1	1309.7	1399.8	1456.3	1488.0	1506.5	1514.7
115°	939.4	1085.6	1211.3	1309.2	1375.7	1420.0	1446.4	1457.9
117.5°	879.2	1008.5	1123.3	1215.2	1282.8	1329.2	1356.6	1366.5
120°	847.5	966.3	1069.2	1156.1	1221.7	1266.9	1296.0	1308.3
122.5°	821.2	930.6	1028.1	1106.9	1165.6	1209.6	1235.5	1245.7
125°	781.9	881.8	968.3	1040.5	1094.8	1131.4	1156.5	1166.3
127.5°	743.2	833.7	915.1	981.8	1029.5	1063.8	1085.7	1094.0
130°	718.4	802.2	879.8	943.3	989.4	1022.1	1042.3	1051.9
132.5°	694.2	772.1	843.7	903.7	949.0	981.7	1000.5	1009.3
135°	660.6	725.7	790.8	845.0	885.7	917.5	935.9	941.9
137.5°	632.0	686.7	739.0	786.2	823.1	850.5	866.6	874.0
140°	614.0	661.6	707.4	749.9	780.2	805.2	820.4	827.5
142.5°	599.9	640.2	679.3	714.8	743.4	766.0	779.5	782.1
145°	581.2	612.4	641.9	669.3	692.1	708.8	719.3	723.4
147.5°	567.2	590.6	612.3	631.7	650.1	662.9	669.7	672.0
150°	558.9	578.5	597.2	613.1	626.5	637.2	642.6	643.5
152.5°	551.1	569.2	585.1	599.0	609.4	618.7	622.6	622.8
155°	540.2	554.5	567.8	577.6	587.4	593.6	597.2	595.4
157.5°	527.5	539.5	550.7	558.4	565.3	570.4	572.0	572.0
160°	519.7	529.5	539.3	545.5	551.8	556.2	557.1	557.1
162.5°	511.9	520.2	528.6	533.4	539.7	542.7	543.6	542.9
165°	500.2	506.4	512.6	516.2	519.7	523.3	523.3	522.4
167.5°	488.9	493.7	498.0	501.2	502.8	504.8	504.6	503.5
170°	483.2	485.9	489.5	491.2	492.1	494.8	493.9	492.1
172.5°	476.8	478.8	481.6	482.7	483.6	484.8	483.9	482.9
175°	469.9	470.8	471.7	472.6	472.6	473.5	472.6	470.8
177.5°	464.9	464.9	465.7	465.7	465.7	465.7	464.9	463.5
180°	462.8	462.8	462.8	462.8	462.8	462.8	462.8	462.8

(END OF REPORT)