

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: P332075-930

Luminaire Tested: **S123DIP-S1165D1025U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332075-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D1025U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

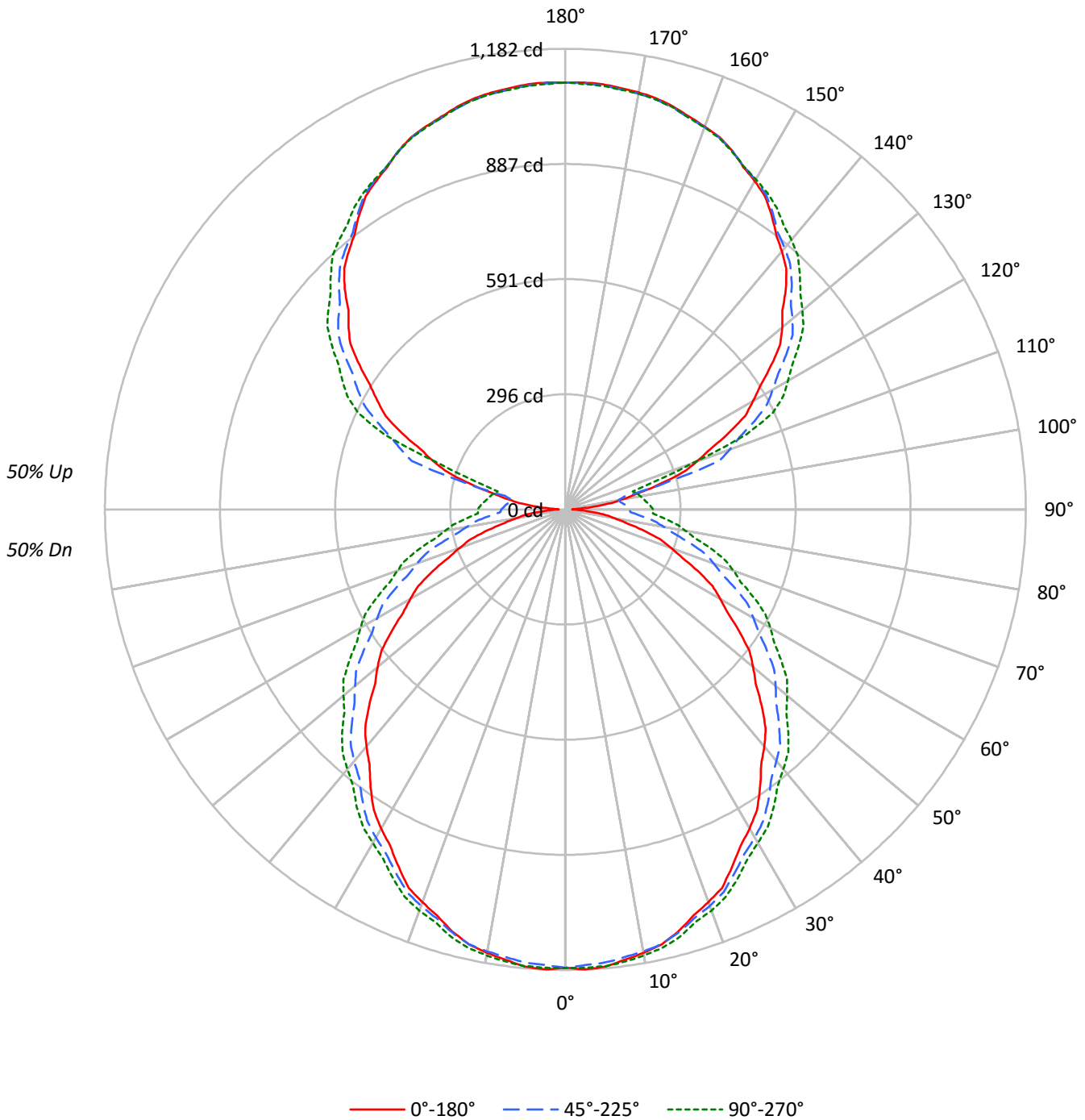
Lumens per Lamp: N/A
Luminaire Lumens: 7296.9 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 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



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Luminous Intensity Polar Plot





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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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40				
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37	32				
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27				
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23				
5	67	55	46	40	61	51	43	37	43	37	33	36	31	28	29	26	23	20				
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17				
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15				
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13				
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12				
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12664	12664	12664
5°	12703	12344	12352
10°	12589	12060	12000
15°	12427	11738	11616
20°	12195	11369	11194
25°	11908	10944	10750
30°	11616	10563	10299
35°	11287	10159	9939
40°	10973	9792	9555
45°	10626	9438	9247
50°	10281	9090	8908
55°	9903	8734	8603
60°	9533	8371	8291
65°	9155	7984	7918
70°	8585	7551	7537
75°	7860	7053	7148
80°	7035	6564	6706
85°	6264	6229	6450



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	1.5
10°-20°	317.9	4.4
20°-30°	475.5	6.5
30°-40°	567.9	7.8
40°-50°	594.1	8.1
50°-60°	557.5	7.6
60°-70°	465.7	6.4
70°-80°	333.2	4.6
80°-90°	201.8	2.8
90°-100°	164.5	2.3
100°-110°	281.4	3.9
110°-120°	517.1	7.1
120°-130°	615.5	8.4
130°-140°	636.0	8.7
140°-150°	583.4	8.0
150°-160°	467.9	6.4
160°-170°	302.0	4.1
170°-180°	104.1	1.4
0°-30°	905.0	12.4
0°-40°	1472.8	20.2
0°-60°	2624.5	36.0
0°-90°	3625.1	49.7
90°-120°	963.0	13.2
90°-150°	2797.9	38.3
90°-180°	3672.0	50.3
0°-180°	7296.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1178	1175	1168	1177	1176	112
15°	1121	1125	1124	1136	1136	316
25°	1012	1025	1029	1045	1046	466
35°	872	892	909	927	933	545
45°	713	743	775	799	810	549
55°	543	586	632	665	677	486
65°	376	426	482	519	533	371
75°	204	264	328	369	386	218
85°	63	127	195	237	251	66
90°	17	89	164	209	226	14
95°	64	83	152	196	210	72
105°	253	289	274	173	179	267
115°	461	483	535	572	587	455
125°	645	654	692	720	731	576
135°	801	805	822	846	851	616
145°	922	927	928	940	946	577
155°	1015	1013	1014	1018	1013	467
165°	1070	1068	1067	1073	1068	302
175°	1095	1092	1092	1097	1091	104
180°	1095	1095	1095	1095	1095	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1181.6	1181.0	1180.2	1179.6	1178.8	1177.6	1175.8	1173.9	1172.2	1170.4	1172.2
5°	1177.8	1177.2	1176.6	1176.1	1175.5	1174.4	1172.6	1170.9	1169.2	1167.5	1169.8
7.5°	1166.2	1166.4	1166.4	1166.6	1166.7	1166.0	1164.2	1162.6	1161.0	1159.3	1162.1
10°	1156.0	1156.6	1157.2	1157.7	1158.3	1157.8	1156.4	1155.0	1153.6	1152.1	1155.0
12.5°	1143.7	1144.4	1145.3	1146.1	1146.9	1146.8	1145.8	1144.8	1143.9	1142.9	1145.5
15°	1121.4	1122.3	1123.1	1124.0	1124.8	1125.1	1124.8	1124.5	1124.2	1124.0	1126.8
17.5°	1093.2	1094.9	1096.6	1098.3	1100.0	1100.8	1100.7	1100.6	1100.5	1100.3	1102.9
20°	1072.7	1074.4	1076.1	1077.8	1079.5	1080.7	1081.2	1081.8	1082.4	1083.0	1085.5
22.5°	1051.2	1052.9	1054.6	1056.3	1058.0	1059.2	1060.1	1060.9	1061.6	1062.4	1065.7
25°	1012.4	1015.3	1018.1	1021.0	1023.9	1025.6	1026.5	1027.4	1028.3	1029.1	1032.8
27.5°	973.5	976.7	980.0	983.3	986.4	989.0	990.8	992.6	994.5	996.3	999.5
30°	945.8	949.5	953.2	956.9	960.6	963.6	965.9	968.2	970.5	972.7	976.2
32.5°	915.0	919.2	923.3	927.5	931.6	935.2	938.2	941.2	944.1	947.1	950.7
35°	871.5	876.0	880.6	885.2	889.7	893.8	897.6	901.2	904.9	908.7	912.9
37.5°	825.3	830.5	835.6	840.7	845.9	850.7	855.2	859.8	864.4	868.9	873.8
40°	794.6	799.7	804.9	809.9	815.1	820.5	826.2	831.8	837.6	843.3	848.2
42.5°	760.8	767.0	773.3	779.5	785.8	791.9	797.9	803.7	809.7	815.6	820.9
45°	712.6	719.4	726.2	733.0	739.9	746.9	754.0	761.1	768.3	775.3	780.7
47.5°	662.0	669.8	677.5	685.3	693.1	701.0	709.1	717.3	725.5	733.6	739.6
50°	629.2	637.2	645.2	653.1	661.1	669.5	678.4	687.2	696.0	704.8	711.4
52.5°	594.4	602.8	611.2	619.7	628.1	637.2	646.9	656.6	666.4	676.1	683.0
55°	543.4	552.8	562.1	571.6	581.0	590.8	601.0	611.3	621.6	631.9	639.5
57.5°	493.7	503.4	513.2	523.0	532.9	543.4	554.6	565.8	577.0	588.2	596.0
60°	458.8	469.0	479.3	489.6	499.8	510.8	522.4	534.1	545.8	557.5	565.5
62.5°	426.0	436.5	446.9	457.5	467.9	479.3	491.7	504.0	516.4	528.8	536.7
65°	375.5	386.6	397.7	408.8	420.0	431.8	444.3	456.8	469.4	481.8	490.4
67.5°	324.2	336.1	347.8	359.6	371.4	383.7	396.4	409.2	421.9	434.7	444.0
70°	288.4	300.6	312.8	325.1	337.4	350.3	363.9	377.6	391.3	405.0	414.1
72.5°	255.5	267.8	280.1	292.3	304.5	317.7	331.8	345.9	360.1	374.2	383.6
75°	203.7	217.2	230.6	243.9	257.3	271.1	285.4	299.6	313.8	328.1	337.5
77.5°	158.7	172.2	185.6	199.2	212.6	226.6	240.9	255.3	269.6	284.0	293.9
80°	126.9	140.8	154.8	168.8	182.7	197.1	211.9	226.7	241.5	256.3	266.0
82.5°	99.2	113.4	127.6	141.8	155.9	170.6	185.6	200.6	215.6	230.6	240.4
85°	62.8	77.0	91.3	105.5	119.8	134.4	149.5	164.6	179.7	194.8	204.5
87.5°	34.2	48.8	63.3	77.9	92.5	107.2	122.2	137.2	152.2	167.2	177.0
90°	17.4	33.3	49.0	64.7	80.6	96.9	113.7	130.6	147.5	164.4	174.7
92.5°	30.7	42.9	55.0	67.0	79.1	93.2	109.3	125.3	141.4	157.4	168.0
95°	63.8	67.4	71.1	74.8	78.5	88.3	104.3	120.2	136.2	152.1	162.2
97.5°	112.3	119.0	125.7	132.4	139.1	142.6	142.9	143.2	143.6	143.8	153.8
100°	149.0	161.8	174.6	187.3	200.0	198.8	183.7	168.6	153.4	138.4	148.1
102.5°	191.0	201.8	212.6	223.4	234.2	230.6	212.7	194.8	176.8	158.9	162.4
105°	252.7	261.5	270.4	279.2	288.0	290.5	286.4	282.4	278.3	274.3	250.3
107.5°	316.7	324.1	331.4	338.8	346.3	357.0	371.2	385.4	399.6	413.8	397.9
110°	359.2	365.8	372.4	379.0	385.6	395.5	408.9	422.2	435.7	449.1	450.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	400.9	406.4	412.0	417.4	423.0	432.2	445.2	458.0	471.0	483.9	491.2
115°	461.3	465.8	470.3	474.8	479.3	487.5	499.4	511.3	523.2	535.0	543.6
117.5°	520.8	524.2	527.7	531.2	534.6	541.5	552.0	562.5	572.9	583.3	591.6
120°	556.8	559.9	563.0	566.1	569.1	575.6	585.5	595.5	605.4	615.3	623.4
122.5°	594.6	596.7	598.8	600.9	602.9	608.8	618.4	628.0	637.7	647.3	654.7
125°	645.1	646.5	648.0	649.5	650.9	656.1	665.1	674.1	683.1	692.0	698.4
127.5°	695.2	696.4	697.6	698.7	699.9	704.3	712.0	719.7	727.4	735.2	741.4
130°	726.5	727.7	728.8	729.9	731.2	734.9	741.4	747.8	754.2	760.6	766.7
132.5°	755.4	756.8	758.2	759.6	761.0	764.3	769.4	774.5	779.7	784.8	790.7
135°	800.9	801.7	802.5	803.3	804.1	806.4	810.2	814.2	818.0	821.8	827.5
137.5°	839.7	840.8	842.0	843.1	844.2	846.0	848.1	850.3	852.4	854.6	860.0
140°	864.7	865.8	866.9	868.0	869.0	870.3	871.7	873.1	874.5	875.9	880.8
142.5°	888.8	889.7	890.6	891.4	892.3	893.0	893.7	894.5	895.1	895.9	900.3
145°	922.5	923.5	924.5	925.4	926.4	927.1	927.5	927.8	928.1	928.5	931.2
147.5°	952.9	953.8	954.6	955.4	956.3	956.8	957.2	957.6	958.0	958.3	959.4
150°	972.5	973.1	973.5	974.1	974.6	975.1	975.4	975.8	976.2	976.6	976.9
152.5°	990.0	990.3	990.6	990.8	991.1	991.3	991.5	991.7	992.0	992.1	992.8
155°	1014.8	1014.4	1014.1	1013.7	1013.3	1013.3	1013.4	1013.6	1013.8	1014.0	1014.9
157.5°	1034.0	1034.0	1034.0	1033.9	1033.9	1033.7	1033.6	1033.4	1033.2	1033.0	1034.1
160°	1045.7	1045.5	1045.4	1045.2	1045.0	1044.8	1044.6	1044.5	1044.2	1044.1	1045.2
162.5°	1056.8	1056.3	1055.8	1055.4	1054.9	1054.6	1054.4	1054.2	1054.0	1053.9	1055.1
165°	1070.2	1069.6	1069.0	1068.5	1068.0	1067.6	1067.4	1067.2	1067.1	1066.9	1068.3
167.5°	1080.5	1079.9	1079.1	1078.4	1077.7	1077.3	1077.3	1077.3	1077.3	1077.3	1078.7
170°	1086.4	1085.7	1085.0	1084.3	1083.5	1083.1	1083.1	1083.1	1083.1	1083.1	1084.6
172.5°	1090.3	1089.5	1088.6	1087.7	1086.9	1086.5	1086.6	1086.8	1086.9	1087.0	1088.5
175°	1095.4	1094.5	1093.6	1092.7	1091.8	1091.4	1091.5	1091.8	1091.9	1092.1	1093.4
177.5°	1096.7	1095.9	1095.2	1094.5	1093.8	1093.5	1093.6	1093.8	1093.9	1094.1	1095.2
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5	1176.5
2.5°	1173.9	1175.8	1177.6	1178.4	1178.2	1177.9	1177.7	1177.5
5°	1172.1	1174.4	1176.6	1177.6	1177.4	1177.0	1176.8	1176.5
7.5°	1165.0	1167.8	1170.7	1172.0	1171.6	1171.3	1170.9	1170.6
10°	1157.8	1160.7	1163.5	1164.7	1164.1	1163.5	1162.9	1162.4
12.5°	1148.2	1150.8	1153.4	1154.4	1153.8	1153.2	1152.7	1152.1
15°	1129.6	1132.5	1135.3	1136.6	1136.4	1136.0	1135.8	1135.5
17.5°	1105.5	1108.1	1110.6	1111.7	1111.3	1110.9	1110.5	1110.1
20°	1088.0	1090.6	1093.2	1094.6	1094.9	1095.2	1095.4	1095.8
22.5°	1068.9	1072.2	1075.4	1076.9	1076.8	1076.6	1076.4	1076.3
25°	1036.5	1040.2	1043.9	1045.8	1045.8	1045.8	1045.8	1045.8
27.5°	1002.7	1005.8	1009.0	1010.7	1011.0	1011.2	1011.5	1011.7
30°	979.6	983.0	986.3	988.1	988.1	988.1	988.1	988.1
32.5°	954.4	958.1	961.6	963.8	964.5	965.2	965.9	966.5
35°	917.2	921.5	925.7	928.5	929.6	930.7	931.9	932.9
37.5°	878.6	883.5	888.3	891.1	892.1	893.0	893.9	894.8
40°	853.0	857.8	862.7	865.6	866.7	867.9	869.0	870.2
42.5°	826.2	831.5	836.8	840.2	841.8	843.4	845.0	846.6
45°	786.2	791.6	797.0	800.9	803.2	805.4	807.7	809.9
47.5°	745.8	751.9	758.0	761.9	763.6	765.4	767.2	768.9
50°	718.0	724.6	731.1	735.3	737.4	739.3	741.4	743.3
52.5°	689.7	696.5	703.3	707.9	710.4	712.8	715.3	717.7
55°	647.2	654.8	662.6	667.6	669.8	672.1	674.4	676.7
57.5°	603.7	611.5	619.2	624.4	627.1	629.8	632.5	635.1
60°	573.4	581.4	589.4	594.9	598.1	601.2	604.3	607.5
62.5°	544.7	552.7	560.7	566.1	569.0	571.9	574.9	577.7
65°	499.0	507.5	516.1	521.7	524.6	527.4	530.3	533.1
67.5°	453.4	462.8	472.1	477.9	480.4	482.7	485.1	487.5
70°	423.2	432.4	441.4	447.4	450.3	453.1	455.9	458.8
72.5°	392.9	402.3	411.6	417.7	420.5	423.4	426.2	429.1
75°	346.9	356.3	365.7	372.1	375.5	379.0	382.4	385.7
77.5°	303.8	313.7	323.7	329.9	332.6	335.2	337.8	340.4
80°	275.7	285.4	295.1	301.3	304.2	307.0	309.9	312.7
82.5°	250.1	259.8	269.4	275.7	278.5	281.4	284.2	287.1
85°	214.2	223.9	233.5	239.8	242.6	245.5	248.3	251.2
87.5°	186.9	196.7	206.5	212.9	215.8	218.7	221.6	224.5
90°	185.2	195.6	205.9	212.8	216.0	219.2	222.4	225.6
92.5°	178.7	189.3	199.9	206.6	209.5	212.3	215.2	218.0
95°	172.3	182.4	192.5	198.9	201.8	204.6	207.5	210.3
97.5°	163.7	173.7	183.6	190.0	193.1	196.2	199.2	202.2
100°	157.8	167.5	177.2	183.5	186.5	189.6	192.7	195.7
102.5°	166.0	169.5	173.1	176.4	179.6	182.8	186.0	189.1
105°	226.2	202.2	178.2	167.6	170.6	173.5	176.4	179.4
107.5°	382.1	366.3	350.4	331.7	310.1	288.5	266.8	245.2
110°	451.9	453.4	454.8	443.7	420.1	396.6	373.0	349.4



TEST NUMBER: P332075-930

CATALOG NUMBER: S123DIP-S1165D1025U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	498.5	505.7	513.1	515.2	512.3	509.3	506.4	503.4
115°	552.4	561.0	569.6	575.4	578.5	581.5	584.4	587.4
117.5°	599.8	608.1	616.3	621.6	623.9	626.3	628.7	631.0
120°	631.4	639.4	647.3	652.3	654.3	656.3	658.3	660.3
122.5°	662.0	669.4	676.7	681.4	683.5	685.7	687.8	690.0
125°	704.7	711.1	717.4	721.8	724.1	726.4	728.8	731.2
127.5°	747.5	753.7	760.0	763.9	765.5	767.0	768.7	770.2
130°	772.9	779.0	785.1	788.9	790.3	791.6	793.0	794.3
132.5°	796.5	802.5	808.4	812.0	813.5	814.9	816.4	817.8
135°	833.2	838.9	844.5	847.8	848.6	849.5	850.4	851.3
137.5°	865.4	870.7	876.0	879.3	880.4	881.4	882.5	883.5
140°	885.9	890.9	895.9	898.9	899.9	901.0	902.0	903.1
142.5°	904.7	909.1	913.5	916.1	917.0	917.9	918.8	919.7
145°	933.8	936.5	939.1	941.0	942.2	943.3	944.4	945.5
147.5°	960.4	961.5	962.5	963.1	963.3	963.5	963.7	963.9
150°	977.3	977.6	978.0	978.2	978.2	978.3	978.3	978.3
152.5°	993.4	994.1	994.7	994.7	994.0	993.3	992.6	991.9
155°	1015.8	1016.7	1017.6	1017.5	1016.4	1015.4	1014.2	1013.2
157.5°	1035.2	1036.2	1037.4	1037.2	1035.8	1034.4	1033.0	1031.6
160°	1046.3	1047.3	1048.4	1048.3	1047.1	1045.8	1044.6	1043.3
162.5°	1056.3	1057.5	1058.7	1058.8	1057.7	1056.5	1055.5	1054.3
165°	1069.8	1071.2	1072.7	1072.8	1071.5	1070.2	1068.9	1067.7
167.5°	1080.2	1081.7	1083.0	1083.0	1081.7	1080.2	1078.7	1077.3
170°	1086.1	1087.5	1088.9	1088.9	1087.5	1086.1	1084.6	1083.1
172.5°	1090.0	1091.4	1092.8	1092.7	1091.2	1089.6	1088.0	1086.4
175°	1094.6	1095.9	1097.1	1097.1	1095.6	1094.2	1092.7	1091.3
177.5°	1096.3	1097.6	1098.7	1098.5	1097.1	1095.7	1094.2	1092.7
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4

(END OF REPORT)