

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: P332067-930

Luminaire Tested: **S123DIP-S1165D805U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332067-930
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-S1165D805U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 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: 6204.2 lumens
Efficiency: N/A
Efficacy: 102.2 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

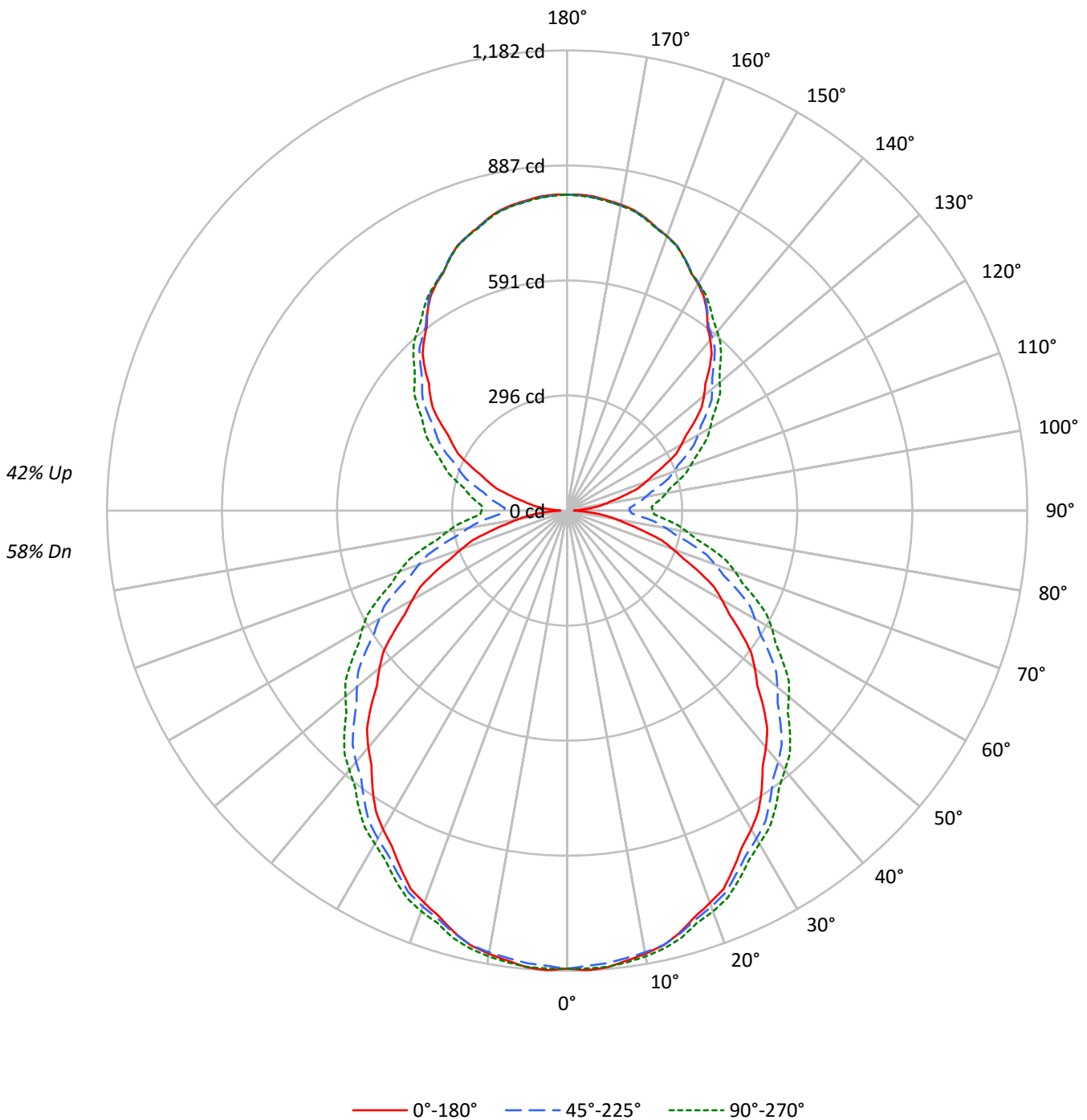
Input Watts (W): 60.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58				
1	98	94	89	85	91	87	83	80	75	72	70	65	62	60	54	53	51	47				
2	89	81	74	69	83	76	70	65	65	61	57	56	52	49	47	45	42	38				
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	41	38	36	32				
4	74	62	54	48	69	58	51	45	51	45	40	44	39	35	37	33	30	27				
5	68	56	47	41	63	52	44	38	45	39	34	39	34	30	33	29	26	23				
6	62	50	41	35	58	47	39	33	41	34	30	35	30	26	30	26	23	20				
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	27	23	20	18				
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16				
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	16	14				
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	21	18	15	13				

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	1.8
10°-20°	317.9	5.1
20°-30°	475.5	7.7
30°-40°	567.9	9.2
40°-50°	594.1	9.6
50°-60°	557.5	9.0
60°-70°	465.7	7.5
70°-80°	333.2	5.4
80°-90°	201.1	3.2
90°-100°	177.5	2.9
100°-110°	249.8	4.0
110°-120°	330.3	5.3
120°-130°	388.9	6.3
130°-140°	413.5	6.7
140°-150°	394.4	6.4
150°-160°	329.3	5.3
160°-170°	219.2	3.5
170°-180°	76.7	1.2
0°-30°	905.0	14.6
0°-40°	1472.8	23.7
0°-60°	2624.5	42.3
0°-90°	3624.4	58.4
90°-120°	757.7	12.2
90°-150°	1954.6	31.5
90°-180°	2580.0	41.6
0°-180°	6204.2	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	87	160	204	220	14
95°	52	107	174	215	229	53
105°	154	187	246	281	295	164
115°	277	296	340	370	380	275
125°	400	404	438	462	469	357
135°	517	520	533	553	559	398
145°	625	625	627	636	639	390
155°	714	715	715	717	713	329
165°	778	776	776	780	776	219
175°	810	807	807	810	806	77
180°	812	812	812	812	812	



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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	48.7	63.2	77.6	92.0	106.7	121.6	136.6	151.4	166.3	176.1
90°	17.3	32.7	48.0	63.4	78.8	94.7	111.0	127.3	143.7	160.1	170.4
92.5°	31.1	44.6	58.1	71.7	85.3	99.7	115.0	130.4	145.8	161.1	171.0
95°	51.7	63.8	75.9	88.0	100.1	113.7	128.8	143.9	159.0	174.1	183.4
97.5°	79.3	90.1	100.9	111.6	122.4	134.9	149.0	163.1	177.3	191.4	200.6
100°	98.2	108.2	118.1	128.1	138.1	149.9	163.8	177.6	191.4	205.2	213.9
102.5°	120.2	128.9	137.5	146.3	155.0	166.2	180.1	193.9	207.7	221.5	229.9
105°	153.7	160.8	168.0	175.0	182.1	192.5	206.0	219.5	233.0	246.5	254.5
107.5°	191.4	197.4	203.3	209.4	215.3	224.4	236.5	248.7	260.7	272.9	281.0
110°	214.8	220.3	225.7	231.1	236.5	245.0	256.7	268.4	280.1	291.7	299.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	240.4	244.8	249.2	253.5	257.9	265.5	276.5	287.6	298.6	309.6	317.4
115°	277.3	281.2	285.0	288.9	292.7	299.6	309.6	319.5	329.5	339.5	346.4
117.5°	315.6	318.0	320.3	322.7	325.1	330.9	340.2	349.4	358.7	367.9	374.7
120°	338.5	340.8	343.1	345.4	347.6	353.1	361.7	370.5	379.1	387.8	394.3
122.5°	363.5	364.8	366.2	367.6	368.9	373.9	382.5	391.1	399.7	408.2	414.2
125°	400.3	400.7	401.2	401.6	402.0	406.3	414.2	422.2	430.2	438.1	443.5
127.5°	435.5	436.1	436.8	437.4	438.0	441.6	448.1	454.6	461.1	467.7	472.5
130°	459.0	459.8	460.6	461.5	462.4	465.5	470.7	476.0	481.3	486.5	491.4
132.5°	481.4	482.5	483.6	484.6	485.7	488.4	492.6	496.8	501.1	505.3	509.9
135°	517.0	517.6	518.1	518.7	519.3	521.0	524.0	527.0	530.0	533.0	537.5
137.5°	549.8	550.3	550.8	551.3	551.8	553.1	555.2	557.3	559.5	561.7	565.6
140°	571.8	572.5	573.2	573.9	574.6	575.4	576.5	577.5	578.5	579.4	583.6
142.5°	592.7	593.2	593.6	594.1	594.6	595.1	595.5	595.9	596.3	596.8	600.5
145°	625.3	625.3	625.3	625.3	625.3	625.5	626.0	626.4	626.8	627.2	629.4
147.5°	652.6	653.1	653.6	654.1	654.7	655.1	655.5	655.9	656.3	656.7	657.4
150°	672.5	672.8	673.0	673.4	673.6	673.9	674.2	674.5	674.7	675.1	675.1
152.5°	688.8	689.2	689.6	690.0	690.4	690.7	690.9	691.0	691.2	691.4	691.6
155°	714.5	714.5	714.5	714.5	714.5	714.6	714.8	714.9	715.1	715.2	715.8
157.5°	736.5	736.3	736.1	736.0	735.8	735.8	735.9	736.1	736.1	736.2	736.9
160°	750.2	750.0	749.7	749.4	749.1	749.0	749.0	749.0	749.0	749.0	749.7
162.5°	762.5	762.1	761.7	761.3	760.9	760.8	760.9	761.0	761.1	761.2	761.9
165°	778.3	777.9	777.5	777.1	776.6	776.4	776.4	776.4	776.4	776.4	777.2
167.5°	790.9	790.4	789.8	789.2	788.6	788.5	788.6	788.6	788.8	788.9	789.8
170°	798.1	797.5	797.0	796.4	795.8	795.5	795.5	795.5	795.5	795.5	796.5
172.5°	803.6	803.2	802.6	802.0	801.4	801.1	801.1	801.1	801.1	801.1	802.0
175°	809.5	808.9	808.5	807.9	807.3	807.0	807.0	807.0	807.0	807.0	807.9
177.5°	812.0	811.5	811.1	810.6	810.2	809.9	809.9	809.9	809.9	809.9	810.6
180°	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5



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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°	185.9	195.8	205.5	211.9	214.7	217.7	220.6	223.5
90°	180.6	190.9	201.1	207.8	210.9	214.1	217.2	220.3
92.5°	180.9	190.8	200.7	206.9	209.4	211.8	214.3	216.7
95°	192.8	202.2	211.7	217.8	220.6	223.5	226.3	229.2
97.5°	209.8	218.9	228.0	234.0	236.8	239.5	242.4	245.2
100°	222.6	231.2	239.9	245.8	249.0	252.1	255.3	258.4
102.5°	238.4	246.9	255.3	260.9	263.7	266.5	269.3	272.1
105°	262.5	270.5	278.4	283.9	286.7	289.5	292.4	295.2
107.5°	289.1	297.2	305.2	310.5	312.7	315.1	317.5	319.8
110°	307.7	315.7	323.6	328.6	330.6	332.6	334.6	336.6



TEST NUMBER: P332067-930

CATALOG NUMBER: S123DIP-S1165D805U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	325.3	333.1	341.0	346.1	348.6	351.1	353.5	356.0
115°	353.4	360.4	367.4	371.9	374.1	376.2	378.4	380.5
117.5°	381.5	388.2	395.0	399.3	401.1	402.9	404.7	406.6
120°	400.6	407.1	413.4	417.5	419.2	420.9	422.7	424.4
122.5°	420.1	426.1	432.0	435.8	437.4	439.0	440.6	442.2
125°	449.0	454.4	459.8	463.2	464.6	466.0	467.5	468.9
127.5°	477.4	482.2	487.1	490.2	491.4	492.7	494.0	495.3
130°	496.2	501.1	505.9	508.7	509.4	510.1	510.8	511.5
132.5°	514.4	518.9	523.3	526.2	527.3	528.6	529.7	530.9
135°	542.1	546.7	551.2	554.1	555.2	556.4	557.5	558.6
137.5°	569.4	573.3	577.2	579.7	580.5	581.4	582.3	583.2
140°	587.7	591.8	596.0	598.3	598.7	599.2	599.6	600.0
142.5°	604.1	607.8	611.5	613.7	614.3	615.0	615.6	616.3
145°	631.5	633.7	635.8	637.2	637.7	638.3	638.9	639.4
147.5°	658.0	658.8	659.4	659.8	660.0	660.2	660.4	660.6
150°	675.1	675.1	675.1	674.9	674.7	674.3	674.1	673.8
152.5°	691.8	692.0	692.3	692.1	691.5	690.8	690.2	689.6
155°	716.3	716.9	717.5	717.2	716.2	715.3	714.3	713.3
157.5°	737.4	738.0	738.6	738.5	737.8	736.9	736.1	735.3
160°	750.4	751.1	751.8	751.9	751.3	750.7	750.2	749.6
162.5°	762.6	763.4	764.1	763.9	763.0	762.1	761.2	760.3
165°	778.1	778.9	779.8	779.8	778.8	777.7	776.7	775.8
167.5°	790.7	791.5	792.4	792.4	791.5	790.7	789.8	788.9
170°	797.5	798.5	799.5	799.5	798.5	797.5	796.5	795.5
172.5°	802.9	803.8	804.6	804.6	803.6	802.6	801.6	800.6
175°	808.7	809.5	810.4	810.3	809.3	808.4	807.3	806.3
177.5°	811.3	812.0	812.6	812.6	811.8	811.0	810.2	809.4
180°	811.5	811.5	811.5	811.5	811.5	811.5	811.5	811.5

(END OF REPORT)