

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: P332702-940

Luminaire Tested: **S124DIP-S1195D1035U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332702-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D1035U940-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7632.4 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

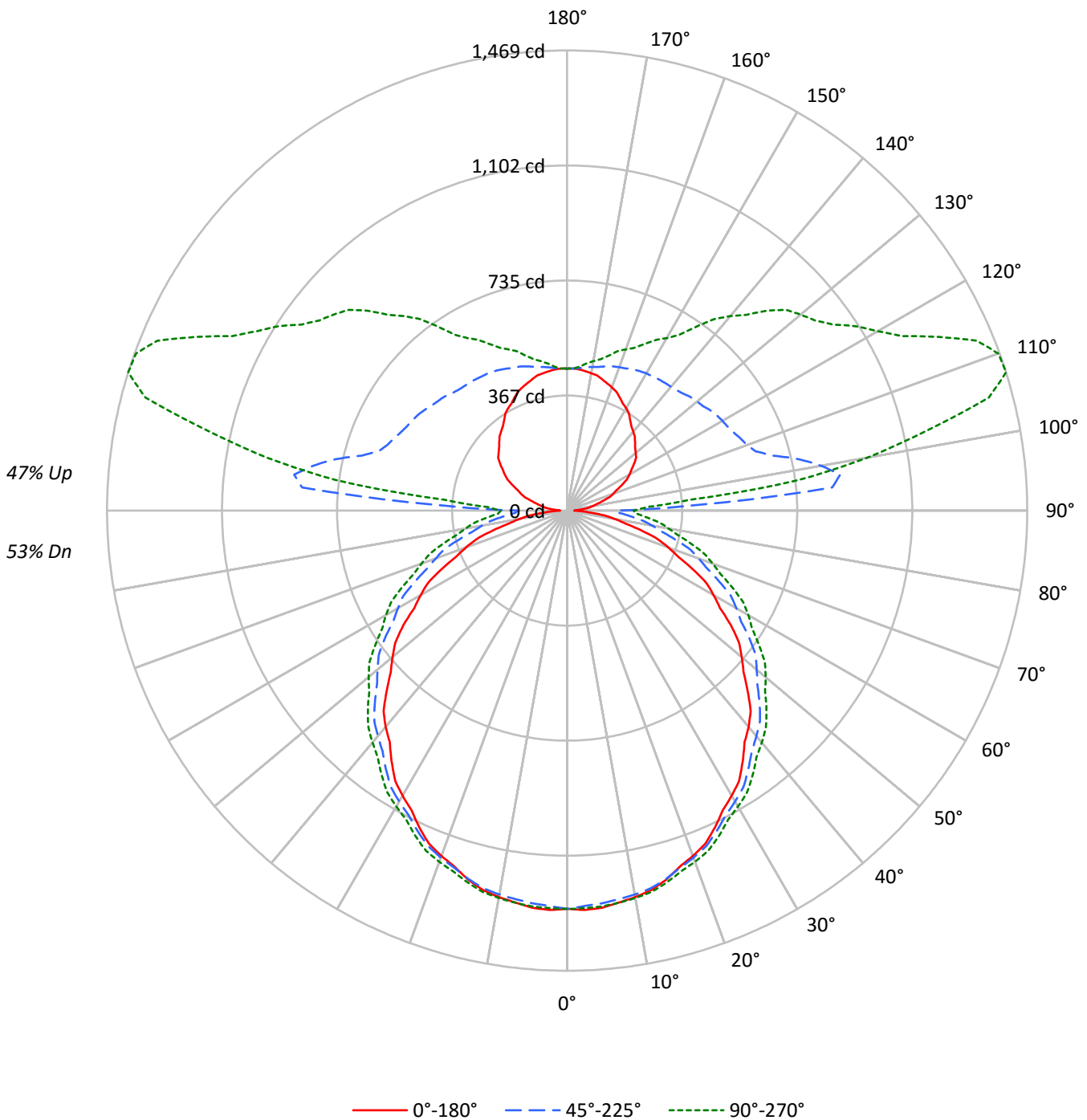
Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	53
1	97	92	88	84	90	86	82	78	73	70	67	61	59	57	50	49	47	42
2	88	80	74	68	81	74	68	64	63	59	55	53	50	47	43	41	39	34
3	80	70	62	56	74	65	58	53	55	50	46	46	42	39	38	35	33	29
4	73	62	53	47	67	57	50	44	49	43	39	41	37	33	34	31	28	24
5	67	55	46	40	62	51	43	38	44	38	33	37	32	28	30	27	24	21
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	24	21	18
7	57	44	36	30	52	41	34	29	35	29	25	30	25	22	25	21	19	16
8	53	40	32	27	49	37	30	25	32	26	22	27	23	19	23	19	17	14
9	49	37	29	24	45	34	27	22	30	24	20	25	21	17	21	18	15	13
10	46	34	26	21	42	31	25	20	27	22	18	23	19	16	20	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10266	10266	10266
5°	10297	10032	10061
10°	10234	9869	9861
15°	10142	9679	9625
20°	10004	9469	9396
25°	9848	9234	9144
30°	9679	9000	8885
35°	9488	8760	8658
40°	9335	8533	8422
45°	9109	8323	8219
50°	8917	8080	8004
55°	8719	7852	7753
60°	8410	7562	7524
65°	8071	7250	7242
70°	7660	6893	6914
75°	7091	6501	6617
80°	6453	6124	6326
85°	5641	5792	6154



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.4	1.6
10°-20°	345.0	4.5
20°-30°	521.7	6.8
30°-40°	631.2	8.3
40°-50°	667.3	8.7
50°-60°	628.0	8.2
60°-70°	521.0	6.8
70°-80°	366.0	4.8
80°-90°	209.4	2.7
90°-100°	450.1	5.9
100°-110°	772.1	10.1
110°-120°	671.1	8.8
120°-130°	547.6	7.2
130°-140°	442.8	5.8
140°-150°	329.9	4.3
150°-160°	229.8	3.0
160°-170°	135.2	1.8
170°-180°	44.0	0.6
0°-30°	987.1	12.9
0°-40°	1618.2	21.2
0°-60°	2913.5	38.2
0°-90°	4009.8	52.5
90°-120°	1893.3	24.8
90°-150°	3213.7	42.1
90°-180°	3623.0	47.5
0°-180°	7632.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1272	1272	1272	1272	1272	
5°	1273	1268	1259	1269	1269	121
15°	1220	1221	1218	1229	1229	344
25°	1116	1125	1129	1144	1146	514
35°	977	994	1008	1027	1032	611
45°	814	842	869	892	900	629
55°	638	668	710	738	748	568
65°	441	487	535	570	582	437
75°	245	298	357	396	410	260
85°	75	136	199	240	256	80
90°	24	87	157	198	212	17
95°	48	159	849	520	392	48
105°	117	194	678	1386	1394	126
115°	192	253	588	1098	1311	191
125°	261	310	558	917	1035	233
135°	306	365	526	791	902	237
145°	351	401	511	646	715	221
155°	398	430	497	563	587	184
165°	434	447	476	504	512	122
175°	452	453	457	463	461	43
180°	453	453	453	453	453	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6
2.5°	1276.1	1275.3	1274.6	1273.8	1273.1	1271.7	1269.6	1267.7	1265.6	1263.6	1265.3
5°	1272.9	1272.0	1271.0	1270.2	1269.2	1267.6	1265.3	1263.1	1261.0	1258.7	1261.2
7.5°	1262.1	1261.6	1261.0	1260.4	1259.9	1258.6	1256.9	1255.0	1253.1	1251.3	1254.2
10°	1253.0	1252.7	1252.4	1252.1	1251.8	1250.8	1249.2	1247.7	1246.1	1244.5	1247.3
12.5°	1240.5	1240.5	1240.4	1240.3	1240.3	1239.7	1238.6	1237.5	1236.4	1235.4	1238.0
15°	1220.3	1220.6	1220.9	1221.2	1221.6	1221.2	1220.3	1219.3	1218.3	1217.5	1220.3
17.5°	1192.7	1193.6	1194.5	1195.5	1196.4	1196.9	1196.7	1196.4	1196.2	1196.1	1199.0
20°	1173.3	1174.2	1175.2	1176.2	1177.1	1177.7	1178.0	1178.4	1178.7	1179.0	1182.1
22.5°	1151.6	1152.8	1154.1	1155.2	1156.5	1157.4	1157.9	1158.5	1159.0	1159.6	1162.8
25°	1116.3	1118.2	1120.2	1122.0	1123.9	1125.3	1126.3	1127.2	1128.2	1129.2	1132.7
27.5°	1077.0	1079.9	1082.6	1085.4	1088.2	1090.3	1091.7	1093.2	1094.7	1096.1	1099.3
30°	1050.8	1053.4	1055.9	1058.5	1061.0	1063.4	1065.5	1067.7	1070.0	1072.2	1075.7
32.5°	1022.3	1025.4	1028.4	1031.4	1034.5	1037.2	1039.7	1042.2	1044.6	1047.1	1051.1
35°	976.8	980.6	984.4	988.2	991.9	995.4	998.6	1001.7	1005.0	1008.1	1012.5
37.5°	930.9	935.3	939.7	944.1	948.4	952.5	956.4	960.4	964.3	968.2	972.8
40°	901.3	905.4	909.5	913.6	917.7	922.0	926.5	930.9	935.3	939.8	944.5
42.5°	867.2	871.7	876.4	881.0	885.6	890.6	895.7	900.9	906.1	911.3	916.6
45°	814.5	820.5	826.5	832.5	838.5	844.5	850.5	856.6	862.6	868.6	874.0
47.5°	764.0	770.3	776.5	782.7	788.9	795.5	802.5	809.4	816.4	823.3	828.8
50°	727.6	734.6	741.5	748.5	755.5	762.4	769.4	776.3	783.3	790.2	796.6
52.5°	691.2	698.1	705.1	712.0	719.0	726.5	734.4	742.4	750.4	758.4	764.7
55°	637.9	644.5	651.2	657.8	664.5	672.5	682.1	691.5	701.1	710.5	716.8
57.5°	578.4	586.7	594.9	603.1	611.3	620.1	629.5	639.0	648.5	657.8	665.4
60°	539.7	547.9	556.1	564.4	572.6	581.9	592.4	602.8	613.2	623.7	631.0
62.5°	502.0	511.0	520.0	529.1	538.0	547.7	558.2	568.6	579.1	589.5	596.7
65°	441.4	451.6	461.6	471.8	481.9	492.3	503.1	513.9	524.6	535.4	543.3
67.5°	383.0	393.8	404.6	415.3	426.1	437.2	448.7	460.2	471.7	483.3	491.3
70°	343.1	353.9	364.7	375.4	386.2	397.6	409.6	421.6	433.6	445.7	454.2
72.5°	304.4	315.4	326.5	337.4	348.5	360.3	373.2	385.9	398.7	411.5	419.8
75°	245.0	256.6	268.3	280.0	291.8	304.3	317.5	330.8	344.1	357.4	366.2
77.5°	189.4	201.8	214.2	226.6	239.0	252.2	266.1	280.0	293.9	307.8	316.8
80°	155.2	167.8	180.5	193.1	205.8	219.1	233.0	247.0	260.9	274.8	284.3
82.5°	121.0	134.2	147.4	160.5	173.7	187.3	201.2	215.1	229.0	242.9	252.6
85°	75.4	88.7	102.0	115.3	128.6	142.4	156.6	170.9	185.1	199.4	208.8
87.5°	42.4	55.6	69.0	82.1	95.2	108.6	123.5	137.4	151.6	165.8	174.8
90°	23.6	38.1	53.4	67.0	80.5	93.6	112.6	126.2	141.6	157.0	165.2
92.5°	31.8	47.8	67.6	89.8	114.2	145.3	204.0	286.8	367.7	416.5	378.3
95°	47.9	61.0	80.3	102.4	134.2	183.2	273.7	432.7	658.4	849.4	878.4
97.5°	69.5	78.5	95.1	114.8	142.1	184.4	256.9	390.2	614.6	879.2	1060.5
100°	83.3	91.6	106.0	124.9	150.1	188.9	253.7	366.6	560.5	823.9	1060.3
102.5°	97.6	106.2	119.0	136.1	159.5	196.3	255.8	356.4	523.1	757.7	1001.0
105°	117.0	126.0	136.8	153.7	176.1	211.0	265.4	351.0	487.3	678.0	895.1
107.5°	141.2	148.2	157.8	174.4	194.9	228.5	278.7	357.1	474.7	629.8	808.3
110°	156.5	162.7	171.6	186.7	207.1	239.0	289.2	362.6	471.5	611.7	764.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	171.0	176.7	185.8	199.7	219.6	250.9	299.3	368.5	470.6	599.6	736.1
115°	191.9	197.4	206.5	218.3	238.0	268.6	314.3	377.8	470.7	587.7	706.9
117.5°	215.2	219.4	226.6	238.1	255.7	286.1	329.4	388.0	471.6	578.3	688.7
120°	229.7	232.4	239.6	250.3	266.4	296.4	339.4	394.8	472.6	572.6	677.7
122.5°	243.9	245.8	252.3	261.5	278.3	306.9	349.5	401.5	473.8	566.1	666.3
125°	261.2	264.4	269.5	278.9	295.5	324.2	364.2	413.0	477.1	557.9	649.4
127.5°	277.5	280.0	286.1	296.9	314.3	342.2	379.3	422.9	478.0	547.5	627.9
130°	285.6	288.8	295.6	308.6	325.3	353.5	388.8	428.6	479.0	541.1	614.4
132.5°	294.8	297.4	306.3	318.6	336.6	362.9	397.3	435.2	480.5	535.8	602.4
135°	306.4	310.0	318.9	334.0	352.7	376.9	408.6	442.8	481.5	526.5	583.2
137.5°	319.4	322.4	332.0	346.1	365.2	387.6	416.1	447.1	480.5	519.8	566.9
140°	328.7	331.0	340.5	355.3	373.7	395.0	422.0	450.8	481.4	515.6	558.0
142.5°	337.5	340.1	349.1	363.5	381.4	401.9	427.8	453.9	482.5	513.4	550.9
145°	351.2	353.7	362.2	374.3	390.9	410.4	433.5	457.5	483.4	511.0	541.4
147.5°	367.1	367.7	375.2	387.7	401.4	418.9	440.7	461.6	484.3	507.7	533.2
150°	377.1	377.6	384.5	394.8	407.9	424.6	444.3	463.8	484.3	505.6	527.9
152.5°	385.2	385.3	392.4	402.3	414.1	429.6	447.1	465.2	482.9	502.0	522.2
155°	397.9	398.8	404.1	413.0	422.8	436.2	451.3	466.5	480.7	496.8	513.6
157.5°	410.5	410.5	415.5	422.5	431.1	441.6	454.3	466.5	478.4	491.2	504.9
160°	418.4	418.4	422.0	428.2	435.3	445.1	455.8	466.5	476.3	487.0	498.6
162.5°	425.5	424.8	427.7	433.2	439.6	447.3	457.2	466.5	474.1	482.7	492.8
165°	433.5	433.5	435.3	439.8	444.3	449.5	457.5	464.7	470.0	476.3	483.4
167.5°	441.6	440.7	441.6	445.0	447.5	451.5	457.4	462.5	465.7	469.8	474.8
170°	445.1	444.3	445.1	447.8	449.5	452.2	456.6	461.1	462.9	465.6	469.1
172.5°	448.6	447.8	447.9	449.9	450.9	452.9	455.9	459.7	460.0	461.3	464.1
175°	452.2	451.3	451.3	452.2	453.1	453.1	454.9	457.5	456.6	456.6	458.4
177.5°	453.8	453.1	452.4	453.1	453.1	453.1	453.8	455.2	453.8	453.8	454.5
180°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6	1271.6
2.5°	1267.1	1268.9	1270.7	1271.4	1271.1	1270.9	1270.7	1270.4
5°	1263.8	1266.3	1268.8	1270.0	1269.6	1269.4	1269.0	1268.7
7.5°	1257.0	1259.9	1262.8	1264.0	1263.6	1263.4	1263.0	1262.8
10°	1250.2	1253.0	1255.9	1257.1	1256.9	1256.5	1256.2	1255.9
12.5°	1240.5	1243.1	1245.7	1247.1	1247.0	1246.9	1246.8	1246.8
15°	1223.2	1226.0	1228.8	1230.1	1229.8	1229.5	1229.1	1228.8
17.5°	1201.9	1204.8	1207.7	1209.1	1208.8	1208.5	1208.3	1208.0
20°	1185.4	1188.5	1191.7	1193.2	1193.2	1193.2	1193.2	1193.2
22.5°	1165.9	1169.1	1172.2	1174.1	1174.7	1175.1	1175.6	1176.2
25°	1136.1	1139.6	1143.1	1145.0	1145.3	1145.6	1145.9	1146.2
27.5°	1102.6	1105.8	1109.0	1110.8	1111.3	1111.6	1112.0	1112.3
30°	1079.1	1082.6	1086.1	1088.2	1088.8	1089.4	1090.0	1090.7
32.5°	1055.1	1059.1	1063.1	1065.4	1066.0	1066.7	1067.3	1067.9
35°	1017.0	1021.4	1025.8	1028.5	1029.5	1030.5	1031.4	1032.3
37.5°	977.2	981.7	986.2	989.0	990.0	991.0	992.0	993.0
40°	949.2	954.0	958.8	961.8	963.0	964.3	965.5	966.8
42.5°	921.8	927.0	932.3	935.4	936.5	937.5	938.4	939.5
45°	879.3	884.8	890.1	893.6	895.2	896.7	898.3	899.9
47.5°	834.5	840.0	845.6	849.3	851.2	853.1	855.0	856.9
50°	802.9	809.2	815.6	819.7	821.6	823.5	825.4	827.2
52.5°	771.1	777.4	783.6	787.8	789.7	791.6	793.4	795.4
55°	723.2	729.5	735.8	739.9	741.8	743.8	745.6	747.5
57.5°	672.9	680.5	688.0	692.6	694.4	696.2	697.9	699.7
60°	638.2	645.5	652.7	657.6	660.2	662.7	665.3	667.8
62.5°	604.0	611.4	618.6	623.5	626.1	628.6	631.1	633.6
65°	551.2	559.1	567.0	572.2	574.8	577.3	579.9	582.4
67.5°	499.4	507.4	515.4	520.7	523.2	525.6	528.1	530.6
70°	462.8	471.3	479.8	485.3	487.4	489.6	491.9	494.1
72.5°	428.1	436.4	444.7	450.0	452.5	455.0	457.4	459.9
75°	375.1	384.0	392.8	398.7	401.5	404.4	407.2	410.1
77.5°	325.8	334.8	343.8	349.8	352.8	355.9	358.9	361.9
80°	293.8	303.3	312.8	318.8	321.3	323.9	326.4	329.0
82.5°	262.4	272.2	281.9	288.2	291.0	293.7	296.5	299.3
85°	218.3	227.8	237.3	243.6	246.8	249.9	253.2	256.3
87.5°	184.1	193.5	202.9	208.8	211.8	214.8	217.4	220.2
90°	175.3	185.4	195.5	201.3	204.7	208.2	209.8	212.3
92.5°	326.8	292.5	274.5	262.4	254.5	252.2	251.7	254.2
95°	800.6	671.2	560.4	479.7	439.0	414.3	401.1	392.4
97.5°	1106.3	1063.3	984.4	897.1	835.8	785.0	761.0	745.2
100°	1198.9	1225.2	1190.2	1129.6	1054.4	1002.4	977.9	972.9
102.5°	1187.7	1284.3	1305.2	1283.2	1238.1	1201.2	1175.5	1172.3
105°	1106.8	1268.7	1364.8	1406.5	1410.8	1406.2	1396.3	1393.5
107.5°	996.7	1168.4	1300.3	1384.7	1431.0	1453.6	1464.7	1469.4
110°	929.9	1091.1	1227.4	1330.3	1396.1	1435.9	1454.6	1465.1



TEST NUMBER: P332702-940

CATALOG NUMBER: S124DIP-S1195D1035U940-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	878.8	1022.0	1151.0	1253.7	1327.9	1375.7	1400.7	1416.2
115°	825.1	941.5	1052.7	1142.6	1215.2	1270.9	1301.5	1310.9
117.5°	793.7	890.9	979.4	1056.4	1118.9	1166.3	1197.7	1205.8
120°	777.5	866.7	944.1	1011.8	1065.1	1106.8	1132.5	1144.8
122.5°	763.3	849.5	920.7	980.3	1025.6	1061.3	1083.2	1095.2
125°	740.9	823.5	890.9	943.9	981.3	1009.1	1027.9	1035.1
127.5°	713.9	792.8	859.7	910.2	948.1	973.2	989.6	997.1
130°	694.0	770.0	836.2	887.3	925.6	949.8	965.9	973.1
132.5°	674.0	745.5	810.0	860.9	898.6	925.6	941.0	948.2
135°	644.3	707.2	766.6	814.6	852.1	879.0	895.1	902.3
137.5°	618.1	671.7	722.1	765.4	800.3	826.5	839.8	847.8
140°	603.1	649.0	693.2	733.4	766.2	787.3	801.4	810.1
142.5°	589.8	630.3	668.2	703.1	732.0	751.5	763.8	770.2
145°	571.8	604.0	632.5	659.1	682.5	698.9	709.1	714.8
147.5°	556.9	581.1	602.8	623.0	640.4	654.4	662.2	664.8
150°	549.3	569.7	587.5	603.6	617.8	629.4	634.7	635.6
152.5°	541.4	559.0	575.4	588.6	600.7	610.1	613.3	614.2
155°	529.7	543.9	557.2	567.9	576.8	584.0	586.7	586.7
157.5°	517.0	529.0	540.2	548.8	555.4	560.8	562.4	562.4
160°	509.2	519.0	528.8	535.9	541.3	546.6	547.5	547.5
162.5°	501.3	509.7	517.4	523.8	527.7	533.1	534.0	533.2
165°	490.5	495.9	502.0	506.5	510.1	513.6	512.7	511.8
167.5°	480.0	484.1	489.1	491.8	493.6	495.9	495.7	495.0
170°	473.6	476.3	479.8	482.5	484.3	485.2	484.3	484.3
172.5°	467.9	469.8	472.0	473.9	475.0	475.9	475.0	473.6
175°	460.2	461.1	462.9	462.9	462.9	464.7	462.9	461.1
177.5°	455.2	455.9	455.9	456.6	455.9	456.6	455.2	453.8
180°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1

(END OF REPORT)