

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: P332692-940

Luminaire Tested: **SA4XXDIP-C1195D810U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332692-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C1195D810U940-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

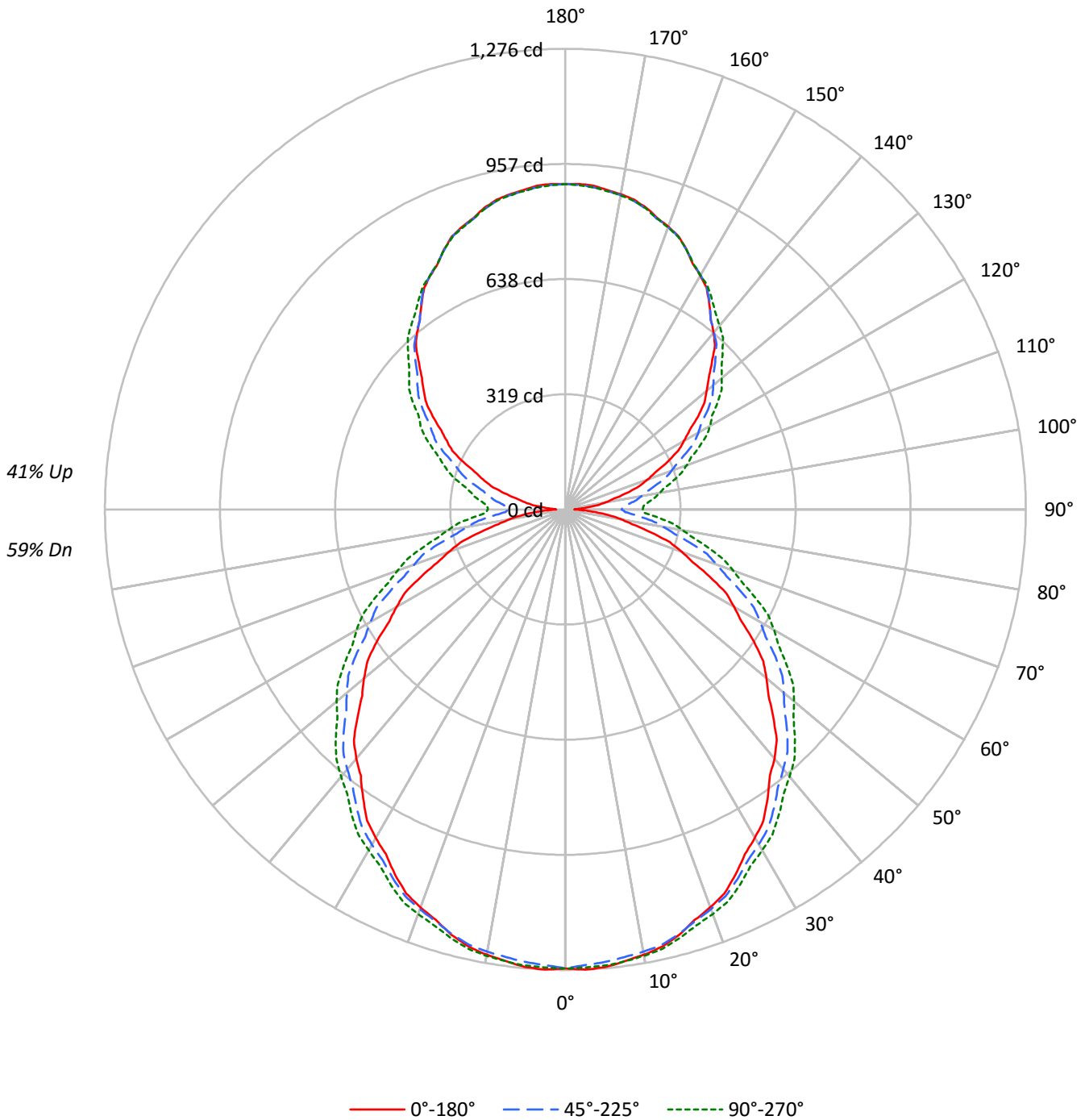
Lumens per Lamp: N/A
Luminaire Lumens: 6838.0 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 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	76	76	76	64	64	64	59				
1	99	94	89	85	92	87	83	80	76	73	70	65	63	61	55	53	52	47				
2	89	81	74	69	83	76	70	65	65	61	57	56	53	50	47	45	43	38				
3	81	71	63	57	75	66	59	53	57	52	47	49	45	41	42	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	36	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	27	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°	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	1.8
10°-20°	345.0	5.0
20°-30°	521.7	7.6
30°-40°	631.2	9.2
40°-50°	667.3	9.8
50°-60°	628.0	9.2
60°-70°	521.0	7.6
70°-80°	366.0	5.4
80°-90°	209.6	3.1
90°-100°	182.3	2.7
100°-110°	267.1	3.9
110°-120°	360.0	5.3
120°-130°	428.6	6.3
130°-140°	457.5	6.7
140°-150°	438.0	6.4
150°-160°	365.9	5.4
160°-170°	243.4	3.6
170°-180°	85.2	1.2
0°-30°	987.1	14.4
0°-40°	1618.2	23.7
0°-60°	2913.5	42.6
0°-90°	4010.0	58.6
90°-120°	809.3	11.8
90°-150°	2133.4	31.2
90°-180°	2828.0	41.4
0°-180°	6838.0	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°	25	90	156	200	214	18
95°	60	114	177	216	230	61
105°	175	206	260	296	311	187
115°	312	327	369	399	409	309
125°	448	449	482	506	515	400
135°	574	578	588	608	616	444
145°	695	696	697	705	709	435
155°	795	795	794	796	794	366
165°	865	863	862	865	863	244
175°	900	897	896	900	896	85
180°	901	901	901	901	901	



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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°	42.5	55.8	69.1	82.3	95.6	109.2	123.3	137.5	151.6	165.7	175.0
90°	24.9	39.2	53.6	67.9	82.3	96.9	111.7	126.6	141.4	156.3	166.4
92.5°	36.6	49.9	63.2	76.6	90.0	103.9	118.3	132.8	147.2	161.8	171.2
95°	60.4	72.1	84.0	95.9	107.7	120.6	134.6	148.7	162.8	176.8	185.8
97.5°	89.9	100.0	110.0	120.2	130.3	142.4	156.5	170.6	184.8	198.9	207.7
100°	113.2	122.1	131.0	139.8	148.6	160.0	173.7	187.4	201.2	214.9	223.7
102.5°	138.9	146.4	153.8	161.3	168.8	179.1	192.5	205.9	219.3	232.6	241.3
105°	175.2	181.7	188.2	194.7	201.2	210.6	222.9	235.2	247.5	259.9	268.2
107.5°	216.1	221.5	226.9	232.2	237.6	245.8	257.0	268.2	279.4	290.5	298.7
110°	242.8	247.5	252.4	257.1	261.8	269.7	280.5	291.5	302.4	313.3	320.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	270.7	274.6	278.7	282.7	286.7	293.8	304.1	314.3	324.7	334.9	341.9
115°	312.5	315.3	318.2	321.0	323.9	330.2	340.0	349.8	359.6	369.4	376.3
117.5°	353.2	355.0	356.9	358.7	360.5	366.0	375.2	384.5	393.7	402.9	408.9
120°	379.4	380.9	382.5	384.1	385.7	390.8	399.5	408.2	417.0	425.6	431.2
122.5°	407.9	408.2	408.7	409.1	409.6	414.0	422.5	431.0	439.3	447.8	453.6
125°	448.4	448.1	447.7	447.5	447.1	450.8	458.6	466.4	474.1	481.9	487.6
127.5°	486.2	486.3	486.4	486.6	486.8	489.7	495.5	501.4	507.2	513.0	518.4
130°	511.8	511.9	512.1	512.2	512.4	515.0	520.0	525.1	530.2	535.2	540.6
132.5°	539.1	539.1	539.1	539.2	539.2	541.2	545.1	549.0	552.9	556.9	562.0
135°	573.8	574.7	575.7	576.6	577.5	579.1	581.3	583.5	585.8	587.9	592.7
137.5°	613.1	613.2	613.3	613.5	613.6	614.3	615.6	617.0	618.3	619.6	623.8
140°	639.4	639.4	639.3	639.3	639.3	639.4	639.8	640.1	640.4	640.7	644.7
142.5°	662.2	662.5	662.6	662.9	663.2	663.1	662.8	662.5	662.2	661.8	665.5
145°	695.1	695.4	695.7	696.0	696.2	696.5	696.7	696.8	697.0	697.1	698.8
147.5°	728.0	728.4	728.8	729.2	729.7	729.9	729.7	729.6	729.4	729.3	729.4
150°	748.1	748.3	748.7	748.9	749.3	749.4	749.4	749.4	749.4	749.4	749.4
152.5°	765.9	766.2	766.5	766.8	767.1	767.3	767.4	767.6	767.7	767.9	768.2
155°	794.7	794.7	794.7	794.7	794.7	794.6	794.5	794.3	794.2	794.1	794.6
157.5°	819.3	818.9	818.7	818.4	818.1	818.0	818.0	818.0	817.9	817.9	818.3
160°	833.7	833.6	833.5	833.3	833.1	832.9	832.9	832.7	832.5	832.4	832.9
162.5°	847.1	846.8	846.3	846.0	845.5	845.3	845.1	845.0	844.8	844.6	845.5
165°	865.1	864.7	864.2	863.7	863.3	862.9	862.6	862.3	861.9	861.7	862.6
167.5°	879.0	878.2	877.6	877.0	876.4	876.0	876.0	876.1	876.1	876.1	877.1
170°	886.7	886.0	885.2	884.4	883.7	883.3	883.5	883.7	883.8	884.0	884.8
172.5°	892.3	891.7	891.0	890.4	889.7	889.4	889.5	889.5	889.5	889.6	890.6
175°	900.0	899.2	898.4	897.7	896.9	896.4	896.3	896.1	896.0	895.8	896.9
177.5°	902.5	901.9	901.3	900.6	900.0	899.7	899.7	899.7	899.7	899.7	900.5
180°	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3



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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°	184.4	193.8	203.1	209.2	212.0	214.9	217.8	220.6
90°	176.5	186.6	196.7	203.2	206.1	208.8	211.7	214.5
92.5°	180.7	190.2	199.7	205.7	208.5	211.2	213.9	216.6
95°	194.8	203.8	212.9	218.8	221.7	224.5	227.4	230.2
97.5°	216.5	225.4	234.3	240.0	242.7	245.5	248.2	250.9
100°	232.6	241.5	250.3	255.8	258.1	260.3	262.4	264.7
102.5°	250.0	258.8	267.5	273.1	275.7	278.3	281.0	283.6
105°	276.6	285.0	293.4	299.1	302.1	305.1	308.1	311.0
107.5°	306.9	315.2	323.4	328.6	330.9	333.1	335.4	337.6
110°	327.3	334.2	341.2	346.2	349.2	352.1	355.2	358.1



TEST NUMBER: P332692-940

CATALOG NUMBER: SA4XXDIP-C1195D810U940-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	348.8	355.8	362.7	367.6	370.2	372.8	375.4	378.1
115°	383.1	389.9	396.7	401.1	403.2	405.3	407.3	409.4
117.5°	415.0	421.1	427.1	431.2	433.5	435.7	437.9	440.1
120°	436.8	442.3	447.9	452.1	454.9	457.7	460.6	463.4
122.5°	459.4	465.2	471.0	474.8	476.5	478.2	480.0	481.7
125°	493.3	498.9	504.6	508.3	509.9	511.5	513.1	514.7
127.5°	523.8	529.2	534.6	538.2	540.1	542.1	543.9	545.8
130°	546.0	551.3	556.8	560.1	561.4	562.7	563.9	565.3
132.5°	567.1	572.3	577.4	580.8	582.5	584.1	585.8	587.4
135°	597.4	602.2	607.0	610.0	611.4	613.0	614.4	615.8
137.5°	628.0	632.2	636.5	639.4	641.1	642.7	644.4	646.1
140°	648.6	652.6	656.6	659.2	660.7	662.1	663.5	664.9
142.5°	669.1	672.6	676.2	678.6	679.9	681.2	682.5	683.8
145°	700.6	702.4	704.1	705.3	706.1	706.9	707.8	708.6
147.5°	729.6	729.7	729.9	730.3	731.2	732.1	732.9	733.8
150°	749.4	749.4	749.4	749.3	749.2	749.0	748.9	748.7
152.5°	768.6	768.9	769.3	769.3	768.9	768.5	768.1	767.7
155°	795.2	795.9	796.5	796.5	795.9	795.2	794.6	794.1
157.5°	818.8	819.3	819.7	819.7	819.2	818.7	818.1	817.6
160°	833.3	833.7	834.2	834.1	833.3	832.5	831.8	831.0
162.5°	846.3	847.1	848.0	848.0	847.2	846.5	845.7	844.9
165°	863.5	864.4	865.4	865.5	864.9	864.2	863.6	863.1
167.5°	878.0	879.0	879.9	879.9	878.9	877.9	877.0	876.0
170°	885.8	886.7	887.7	887.6	886.5	885.5	884.3	883.2
172.5°	891.6	892.7	893.8	893.8	892.7	891.5	890.5	889.4
175°	898.0	899.0	900.2	900.2	899.0	898.0	896.9	895.8
177.5°	901.4	902.3	903.2	903.1	902.1	901.2	900.2	899.1
180°	901.3	901.3	901.3	901.3	901.3	901.3	901.3	901.3

(END OF REPORT)