

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: P332682

Luminaire Tested: **S124DIP-S1195D590U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332682
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S1195D590U835-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7222.2 lumens
Efficiency: N/A
Efficacy: 131.1 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: Semi-Direct

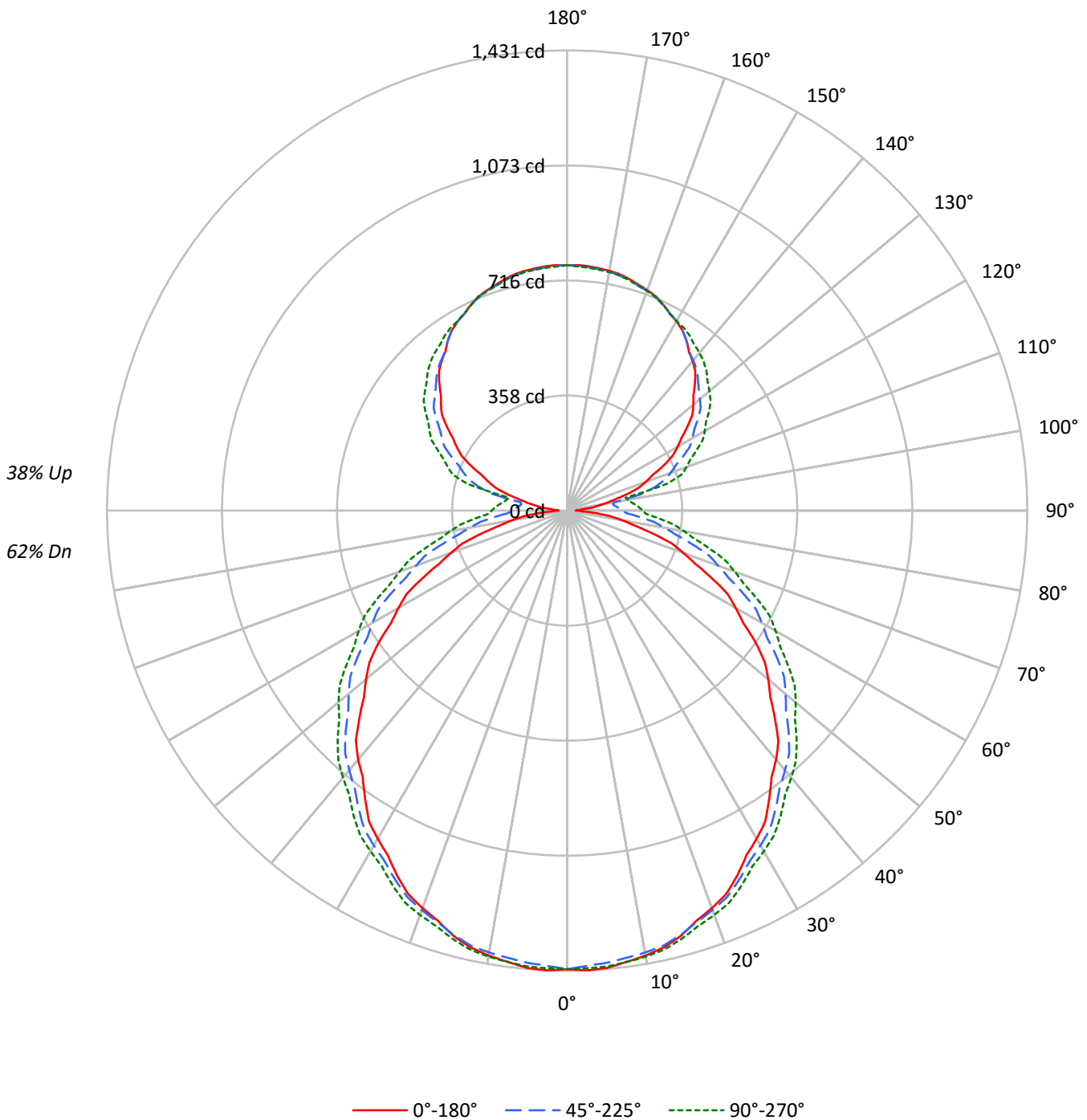
Input Watts (W): 55.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: S124DIP-S1195D590U835-4F0-1E-UDD-D

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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	94	90	86	93	88	84	81	77	74	72	67	65	63	58	56	54	50
2	90	82	75	69	84	77	70	65	67	62	58	58	55	51	50	47	45	41
3	82	71	63	57	76	67	60	54	59	53	48	51	47	43	44	40	38	34
4	75	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	29
5	68	56	47	41	64	53	45	39	46	40	35	40	35	31	35	31	28	25
6	63	50	41	35	59	47	39	34	42	35	30	36	31	27	32	27	24	21
7	58	45	37	31	54	43	35	29	38	31	27	33	28	24	29	25	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	33	26	21	29	23	19	26	21	17	23	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11512	11512	11512
5°	11547	11251	11283
10°	11477	11067	11058
15°	11374	10854	10794
20°	11219	10619	10537
25°	11044	10355	10254
30°	10854	10093	9964
35°	10640	9824	9710
40°	10469	9569	9445
45°	10215	9334	9218
50°	10000	9062	8977
55°	9778	8806	8695
60°	9431	8480	8438
65°	9051	8130	8122
70°	8591	7730	7753
75°	7950	7291	7421
80°	7239	6868	7093
85°	6329	6495	6901



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.0	1.9
10°-20°	386.9	5.4
20°-30°	585.0	8.1
30°-40°	707.8	9.8
40°-50°	748.3	10.4
50°-60°	704.2	9.8
60°-70°	584.3	8.1
70°-80°	410.4	5.7
80°-90°	234.2	3.2
90°-100°	163.9	2.3
100°-110°	268.3	3.7
110°-120°	386.6	5.4
120°-130°	442.5	6.1
130°-140°	448.8	6.2
140°-150°	407.5	5.6
150°-160°	325.9	4.5
160°-170°	210.2	2.9
170°-180°	72.4	1.0
0°-30°	1106.9	15.3
0°-40°	1814.7	25.1
0°-60°	3267.3	45.2
0°-90°	4496.2	62.3
90°-120°	818.8	11.3
90°-150°	2117.5	29.3
90°-180°	2726.0	37.7
0°-180°	7222.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1426	1426	1426	1426	1426	
5°	1428	1422	1412	1424	1423	135
15°	1368	1370	1365	1379	1378	385
25°	1252	1261	1266	1283	1285	576
35°	1095	1114	1130	1152	1158	686
45°	913	944	974	1000	1009	706
55°	715	750	797	828	838	637
65°	495	546	600	639	653	490
75°	275	334	401	444	460	292
85°	85	152	224	270	287	90
90°	27	98	171	218	234	18
95°	52	87	152	196	213	57
105°	186	223	283	326	321	196
115°	330	348	397	432	444	325
125°	457	460	496	527	539	408
135°	562	562	575	601	612	434
145°	646	646	646	656	664	404
155°	707	707	706	708	706	326
165°	746	743	743	747	742	211
175°	763	759	760	764	758	73
180°	763	763	763	763	763	



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CATALOG NUMBER: S124DIP-S1195D590U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1431.1	1430.2	1429.4	1428.5	1427.7	1426.1	1423.8	1421.6	1419.3	1417.0	1419.0
5°	1427.5	1426.5	1425.4	1424.4	1423.3	1421.5	1419.0	1416.5	1414.1	1411.6	1414.4
7.5°	1415.4	1414.8	1414.1	1413.5	1412.9	1411.5	1409.5	1407.4	1405.3	1403.3	1406.5
10°	1405.2	1404.8	1404.5	1404.1	1403.8	1402.7	1400.9	1399.2	1397.4	1395.6	1398.8
12.5°	1391.1	1391.1	1391.0	1390.9	1390.9	1390.2	1389.0	1387.8	1386.6	1385.4	1388.3
15°	1368.5	1368.8	1369.2	1369.5	1369.9	1369.5	1368.5	1367.4	1366.3	1365.3	1368.5
17.5°	1337.5	1338.6	1339.6	1340.7	1341.7	1342.2	1342.0	1341.7	1341.5	1341.3	1344.6
20°	1315.8	1316.8	1317.9	1319.0	1320.0	1320.7	1321.1	1321.5	1321.8	1322.2	1325.7
22.5°	1291.5	1292.8	1294.2	1295.5	1296.9	1297.9	1298.5	1299.2	1299.8	1300.4	1304.0
25°	1251.9	1254.0	1256.2	1258.3	1260.4	1262.0	1263.1	1264.1	1265.2	1266.3	1270.2
27.5°	1207.8	1211.0	1214.1	1217.2	1220.3	1222.7	1224.3	1226.0	1227.6	1229.2	1232.8
30°	1178.4	1181.3	1184.1	1187.0	1189.8	1192.5	1194.9	1197.4	1199.9	1202.4	1206.3
32.5°	1146.5	1149.9	1153.3	1156.7	1160.1	1163.2	1166.0	1168.8	1171.5	1174.3	1178.8
35°	1095.4	1099.7	1103.9	1108.2	1112.4	1116.3	1119.9	1123.4	1127.0	1130.5	1135.5
37.5°	1044.0	1048.9	1053.8	1058.7	1063.6	1068.2	1072.6	1077.0	1081.4	1085.8	1090.9
40°	1010.8	1015.4	1020.0	1024.6	1029.2	1034.0	1039.0	1044.0	1048.9	1053.9	1059.2
42.5°	972.5	977.6	982.8	988.0	993.2	998.7	1004.5	1010.3	1016.1	1022.0	1027.9
45°	913.4	920.1	926.9	933.6	940.3	947.1	953.8	960.6	967.3	974.1	980.1
47.5°	856.8	863.8	870.8	877.7	884.7	892.1	899.9	907.7	915.5	923.3	929.5
50°	816.0	823.8	831.6	839.4	847.2	855.0	862.8	870.6	878.4	886.2	893.3
52.5°	775.1	782.9	790.7	798.5	806.3	814.7	823.6	832.6	841.5	850.5	857.6
55°	715.4	722.8	730.3	737.7	745.2	754.2	764.9	775.5	786.2	796.8	803.9
57.5°	648.6	657.9	667.1	676.3	685.5	695.4	706.0	716.6	727.2	737.7	746.2
60°	605.2	614.4	623.6	632.9	642.1	652.6	664.3	676.0	687.7	699.4	707.6
62.5°	563.0	573.1	583.2	593.3	603.3	614.2	626.0	637.7	649.4	661.1	669.2
65°	495.0	506.4	517.7	529.1	540.4	552.1	564.2	576.3	588.3	600.4	609.3
67.5°	429.5	441.6	453.7	465.7	477.8	490.3	503.2	516.1	529.0	542.0	551.0
70°	384.8	396.9	409.0	421.0	433.1	445.9	459.3	472.8	486.3	499.8	509.4
72.5°	341.4	353.7	366.1	378.4	390.8	404.1	418.5	432.8	447.1	461.5	470.8
75°	274.7	287.8	300.9	314.0	327.2	341.2	356.1	371.0	385.9	400.8	410.7
77.5°	212.4	226.3	240.2	254.1	268.0	282.8	298.4	314.0	329.6	345.2	355.3
80°	174.1	188.2	202.4	216.6	230.8	245.7	261.3	277.0	292.6	308.2	318.8
82.5°	135.7	150.5	165.3	180.0	194.8	210.0	225.6	241.2	256.8	272.4	283.3
85°	84.6	99.5	114.4	129.3	144.2	159.7	175.6	191.6	207.6	223.6	234.2
87.5°	47.6	62.4	77.1	91.9	106.6	121.9	137.6	153.4	169.1	184.9	195.3
90°	27.3	42.8	58.4	74.0	89.6	105.5	121.8	138.1	154.4	170.6	181.7
92.5°	31.5	44.3	57.2	70.0	82.9	97.4	113.7	130.0	146.2	162.5	173.3
95°	52.1	59.5	66.9	74.3	81.7	92.8	107.4	122.1	136.8	151.5	161.8
97.5°	85.5	98.2	111.0	123.8	136.5	143.0	143.3	143.6	143.8	144.1	153.5
100°	111.1	122.6	134.1	145.6	157.1	161.1	157.4	153.8	150.1	146.5	153.9
102.5°	141.2	151.0	160.8	170.5	180.3	190.8	202.1	213.4	224.6	235.9	221.9
105°	186.1	193.9	201.8	209.6	217.5	228.3	242.1	255.8	269.6	283.4	293.4
107.5°	230.4	236.6	242.8	249.0	255.2	264.9	278.2	291.5	304.7	318.0	327.3
110°	259.2	264.5	269.9	275.2	280.6	289.9	303.0	316.2	329.4	342.6	351.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	287.1	292.2	297.3	302.4	307.5	316.1	328.3	340.5	352.7	364.9	372.8
115°	330.2	333.7	337.3	340.9	344.5	351.9	363.1	374.3	385.5	396.8	404.8
117.5°	370.3	372.8	375.2	377.6	380.0	386.7	397.5	408.4	419.2	430.1	437.4
120°	396.4	398.0	399.6	401.2	402.7	408.6	418.8	428.9	439.1	449.3	456.6
122.5°	422.0	422.5	423.0	423.6	424.1	429.3	439.2	449.1	459.0	468.9	476.1
125°	457.0	457.2	457.3	457.5	457.6	462.0	470.6	479.3	487.9	496.5	503.6
127.5°	491.4	491.2	490.9	490.7	490.5	494.1	501.5	508.9	516.2	523.6	530.0
130°	512.5	512.2	512.0	511.8	511.6	514.5	520.5	526.6	532.6	538.7	545.2
132.5°	533.0	532.9	532.8	532.6	532.5	534.9	540.0	545.0	550.0	555.0	561.3
135°	562.2	562.1	562.0	561.8	561.7	563.1	566.1	569.1	572.1	575.1	581.0
137.5°	589.5	589.2	588.9	588.6	588.3	589.0	590.8	592.5	594.3	596.0	601.5
140°	607.3	607.2	607.1	607.0	606.9	607.1	607.7	608.3	608.9	609.6	614.5
142.5°	622.0	622.4	622.7	623.1	623.5	623.7	623.6	623.6	623.5	623.4	627.8
145°	646.2	646.2	646.2	646.3	646.3	646.3	646.3	646.3	646.3	646.3	648.5
147.5°	665.7	666.0	666.4	666.8	667.1	667.2	667.1	667.0	666.8	666.7	667.1
150°	679.8	680.0	680.1	680.3	680.4	680.5	680.3	680.2	680.1	679.9	679.9
152.5°	690.4	690.8	691.1	691.4	691.8	691.8	691.6	691.4	691.1	690.9	691.1
155°	706.8	706.9	707.0	707.1	707.3	707.1	706.8	706.4	706.0	705.6	706.1
157.5°	720.8	720.7	720.6	720.6	720.5	720.2	719.8	719.4	718.9	718.5	719.2
160°	729.0	728.6	728.2	727.9	727.5	727.2	727.1	727.0	726.8	726.7	727.5
162.5°	736.3	735.8	735.3	734.9	734.4	734.1	733.9	733.8	733.7	733.6	734.3
165°	745.5	744.9	744.3	743.6	743.0	742.7	742.7	742.7	742.7	742.7	743.7
167.5°	752.8	752.2	751.5	750.9	750.2	749.8	749.8	749.7	749.6	749.5	750.7
170°	757.0	756.2	755.4	754.7	753.9	753.6	753.7	753.8	754.0	754.1	755.1
172.5°	759.7	758.9	758.2	757.4	756.7	756.3	756.5	756.6	756.7	756.8	757.9
175°	762.7	761.9	761.1	760.4	759.6	759.3	759.4	759.6	759.7	759.8	760.9
177.5°	764.0	763.3	762.6	761.9	761.2	760.9	761.1	761.3	761.5	761.7	762.6
180°	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0	1426.0
2.5°	1421.0	1423.0	1425.0	1425.8	1425.5	1425.2	1425.0	1424.7
5°	1417.3	1420.1	1422.9	1424.2	1423.8	1423.5	1423.1	1422.8
7.5°	1409.7	1412.9	1416.1	1417.5	1417.1	1416.8	1416.4	1416.1
10°	1402.0	1405.2	1408.4	1409.8	1409.5	1409.1	1408.7	1408.4
12.5°	1391.2	1394.1	1397.0	1398.5	1398.4	1398.3	1398.2	1398.2
15°	1371.7	1374.9	1378.0	1379.5	1379.1	1378.8	1378.4	1378.0
17.5°	1347.9	1351.1	1354.4	1355.9	1355.6	1355.3	1355.0	1354.7
20°	1329.3	1332.8	1336.4	1338.1	1338.1	1338.1	1338.1	1338.1
22.5°	1307.5	1311.1	1314.6	1316.7	1317.3	1317.8	1318.4	1319.0
25°	1274.1	1278.0	1281.9	1284.0	1284.4	1284.7	1285.1	1285.4
27.5°	1236.5	1240.1	1243.7	1245.7	1246.2	1246.6	1247.0	1247.4
30°	1210.2	1214.1	1218.0	1220.3	1221.0	1221.7	1222.4	1223.2
32.5°	1183.2	1187.7	1192.2	1194.8	1195.5	1196.2	1196.9	1197.6
35°	1140.5	1145.4	1150.4	1153.4	1154.5	1155.6	1156.6	1157.7
37.5°	1095.9	1100.9	1106.0	1109.1	1110.2	1111.3	1112.5	1113.6
40°	1064.5	1069.9	1075.2	1078.6	1080.0	1081.4	1082.8	1084.2
42.5°	1033.7	1039.6	1045.5	1049.0	1050.2	1051.3	1052.4	1053.6
45°	986.1	992.2	998.2	1002.1	1003.9	1005.6	1007.4	1009.2
47.5°	935.8	942.0	948.3	952.4	954.6	956.7	958.8	961.0
50°	900.4	907.5	914.6	919.2	921.4	923.5	925.6	927.7
52.5°	864.7	871.8	878.8	883.5	885.6	887.7	889.8	892.0
55°	811.0	818.1	825.2	829.8	831.9	834.1	836.2	838.3
57.5°	754.6	763.1	771.5	776.7	778.7	780.7	782.7	784.7
60°	715.7	723.9	732.0	737.5	740.4	743.2	746.1	748.9
62.5°	677.4	685.6	693.7	699.2	702.1	704.9	707.7	710.6
65°	618.1	627.0	635.9	641.7	644.6	647.4	650.3	653.1
67.5°	560.0	569.0	578.0	583.9	586.7	589.4	592.2	595.0
70°	519.0	528.5	538.1	544.2	546.6	549.1	551.6	554.1
72.5°	480.1	489.4	498.7	504.7	507.5	510.2	513.0	515.8
75°	420.7	430.6	440.5	447.1	450.3	453.5	456.7	459.9
77.5°	365.4	375.5	385.5	392.3	395.7	399.1	402.5	405.9
80°	329.5	340.1	350.8	357.5	360.3	363.2	366.0	368.9
82.5°	294.3	305.2	316.1	323.2	326.3	329.4	332.5	335.6
85°	244.8	255.5	266.1	273.2	276.8	280.3	283.9	287.4
87.5°	205.8	216.2	226.6	233.4	236.6	239.8	243.0	246.1
90°	192.7	203.8	214.8	221.9	225.0	228.1	231.2	234.3
92.5°	184.0	194.8	205.6	212.4	215.3	218.2	221.1	224.0
95°	172.2	182.5	192.8	199.7	203.0	206.3	209.6	213.0
97.5°	162.8	172.2	181.6	187.8	191.0	194.2	197.4	200.6
100°	161.3	168.7	176.2	181.2	183.8	186.4	189.0	191.6
102.5°	208.0	194.0	180.1	174.5	177.3	180.1	182.9	185.7
105°	303.4	313.4	323.4	327.6	325.8	324.1	322.4	320.7
107.5°	336.6	345.9	355.2	361.3	364.4	367.4	370.4	373.5
110°	359.4	367.8	376.2	382.1	385.3	388.5	391.7	394.9



TEST NUMBER: P332682

CATALOG NUMBER: S124DIP-S1195D590U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	380.6	388.4	396.2	401.8	405.1	408.5	411.8	415.1
115°	412.9	421.0	429.0	434.3	436.8	439.3	441.7	444.2
117.5°	444.7	452.1	459.4	464.5	467.3	470.0	472.8	475.6
120°	464.0	471.3	478.7	483.6	486.2	488.8	491.4	494.0
122.5°	483.4	490.6	497.9	502.6	505.0	507.3	509.6	511.9
125°	510.7	517.9	525.0	529.7	531.9	534.2	536.4	538.7
127.5°	536.3	542.6	548.9	553.2	555.5	557.8	560.1	562.4
130°	551.7	558.2	564.8	569.1	571.2	573.3	575.5	577.6
132.5°	567.5	573.7	580.0	584.1	586.1	588.1	590.2	592.2
135°	587.0	592.9	598.8	603.0	605.4	607.7	610.1	612.5
137.5°	607.0	612.4	617.9	621.5	623.2	624.9	626.6	628.3
140°	619.5	624.5	629.5	633.0	634.9	636.8	638.7	640.6
142.5°	632.1	636.4	640.7	643.6	645.2	646.7	648.2	649.7
145°	650.8	653.1	655.3	657.3	659.0	660.6	662.3	664.0
147.5°	667.5	667.9	668.3	669.1	670.3	671.6	672.9	674.1
150°	679.9	679.9	679.9	680.0	680.1	680.3	680.4	680.5
152.5°	691.3	691.5	691.7	691.8	691.7	691.6	691.5	691.5
155°	706.6	707.1	707.6	707.7	707.3	706.9	706.6	706.2
157.5°	719.8	720.5	721.1	721.1	720.5	719.8	719.2	718.5
160°	728.2	729.0	729.8	729.8	729.0	728.2	727.5	726.7
162.5°	735.1	735.8	736.6	736.6	735.7	734.8	734.0	733.1
165°	744.7	745.7	746.8	746.7	745.5	744.4	743.3	742.1
167.5°	751.8	752.9	754.0	753.9	752.7	751.4	750.1	748.9
170°	756.1	757.1	758.2	758.0	756.8	755.5	754.2	753.0
172.5°	758.9	759.9	760.9	760.7	759.4	758.0	756.6	755.2
175°	762.1	763.2	764.4	764.2	762.7	761.1	759.6	758.1
177.5°	763.4	764.2	765.0	764.8	763.6	762.4	761.1	759.9
180°	762.7	762.7	762.7	762.7	762.7	762.7	762.7	762.7

(END OF REPORT)