

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

Luminaire Tested: **S124DIP-S1195D810U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332692  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S1195D810U835-4F0-1E-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: 7668.4 lumens  
Efficiency: N/A  
Efficacy: 126.3 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

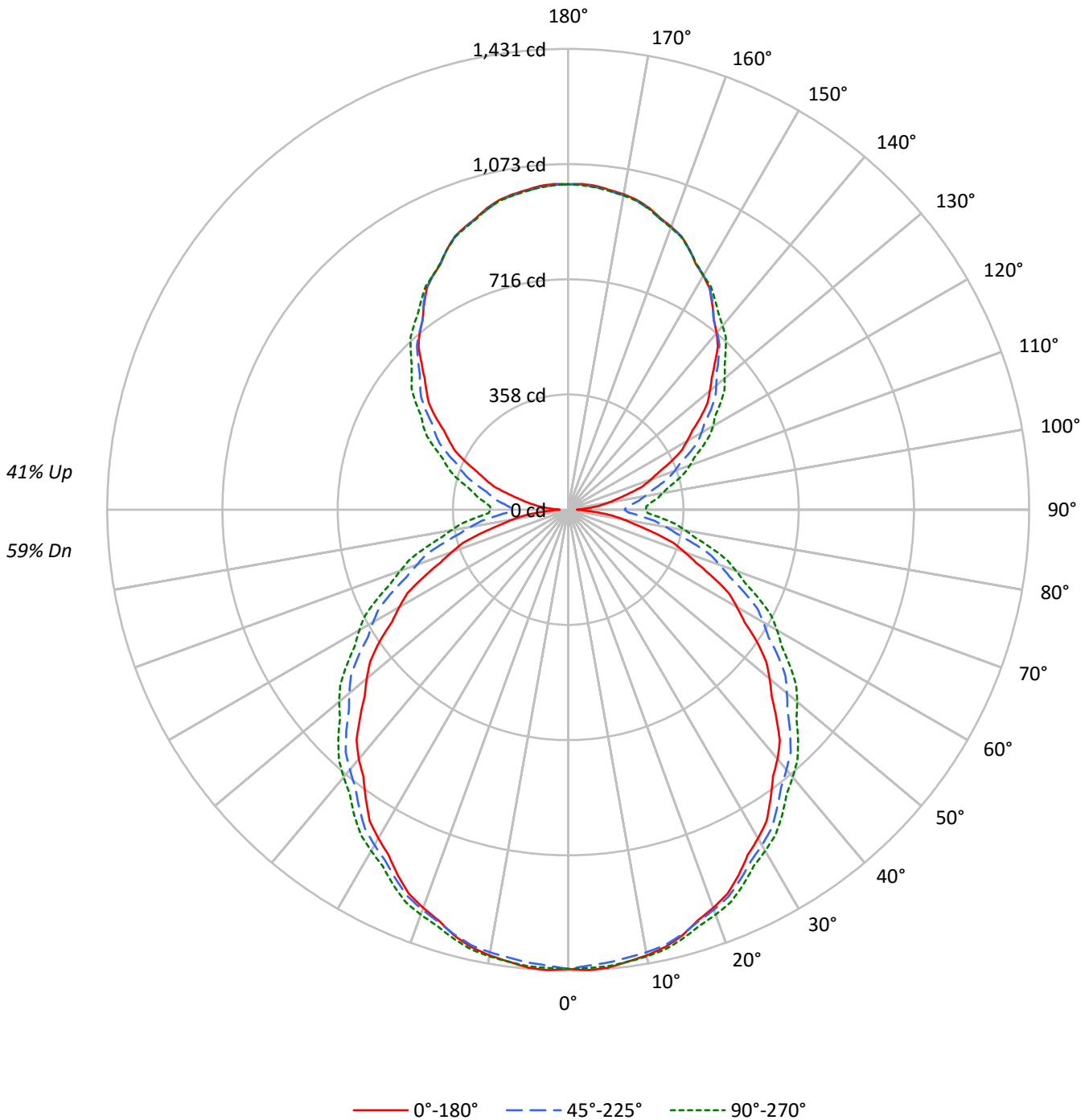
Input Watts (W): 60.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	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°	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	1.8
10°-20°	386.9	5.0
20°-30°	585.0	7.6
30°-40°	707.8	9.2
40°-50°	748.3	9.8
50°-60°	704.2	9.2
60°-70°	584.3	7.6
70°-80°	410.4	5.4
80°-90°	235.0	3.1
90°-100°	204.4	2.7
100°-110°	299.5	3.9
110°-120°	403.7	5.3
120°-130°	480.6	6.3
130°-140°	513.1	6.7
140°-150°	491.2	6.4
150°-160°	410.3	5.4
160°-170°	273.0	3.6
170°-180°	95.6	1.2
0°-30°	1106.9	14.4
0°-40°	1814.7	23.7
0°-60°	3267.3	42.6
0°-90°	4497.0	58.6
90°-120°	907.6	11.8
90°-150°	2392.5	31.2
90°-180°	3171.0	41.4
0°-180°	7668.4	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°	28	100	175	224	241	20
95°	68	128	198	242	258	69
105°	196	231	292	332	349	209
115°	350	367	414	447	459	346
125°	503	504	540	568	577	448
135°	644	648	659	682	691	498
145°	780	781	782	790	795	488
155°	891	891	890	893	890	410
165°	970	968	966	971	968	273
175°	1009	1006	1005	1010	1005	96
180°	1011	1011	1011	1011	1011	



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**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°	47.7	62.6	77.5	92.3	107.2	122.5	138.3	154.2	170.0	185.8	196.3
90°	27.9	44.0	60.1	76.2	92.3	108.7	125.3	142.0	158.6	175.3	186.6
92.5°	41.0	56.0	70.9	85.9	100.9	116.5	132.7	148.9	165.1	181.4	192.0
95°	67.7	80.9	94.2	107.5	120.8	135.3	151.0	166.8	182.6	198.3	208.4
97.5°	100.8	112.1	123.4	134.8	146.1	159.7	175.5	191.3	207.2	223.0	232.9
100°	127.0	136.9	146.9	156.8	166.7	179.4	194.8	210.2	225.6	241.0	250.9
102.5°	155.8	164.2	172.5	180.9	189.3	200.9	215.9	230.9	245.9	260.9	270.6
105°	196.5	203.8	211.1	218.3	225.6	236.2	250.0	263.8	277.6	291.5	300.8
107.5°	242.3	248.4	254.4	260.4	266.4	275.7	288.2	300.8	313.3	325.8	335.0
110°	272.3	277.6	283.0	288.3	293.6	302.4	314.6	326.9	339.1	351.4	359.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	303.6	308.0	312.5	317.0	321.5	329.5	341.0	352.5	364.1	375.6	383.4
115°	350.4	353.6	356.8	360.0	363.2	370.3	381.3	392.3	403.3	414.3	422.0
117.5°	396.1	398.1	400.2	402.3	404.3	410.5	420.8	431.2	441.5	451.8	458.6
120°	425.5	427.2	429.0	430.7	432.5	438.3	448.0	457.8	467.6	477.3	483.6
122.5°	457.4	457.8	458.3	458.8	459.3	464.3	473.8	483.3	492.7	502.2	508.7
125°	502.8	502.5	502.1	501.8	501.4	505.6	514.3	523.0	531.7	540.4	546.8
127.5°	545.2	545.4	545.5	545.7	545.9	549.2	555.7	562.3	568.8	575.3	581.4
130°	573.9	574.1	574.3	574.4	574.6	577.5	583.2	588.9	594.6	600.2	606.3
132.5°	604.6	604.6	604.6	604.7	604.7	606.9	611.3	615.7	620.1	624.5	630.3
135°	643.5	644.5	645.6	646.6	647.6	649.4	651.9	654.4	656.9	659.3	664.7
137.5°	687.6	687.7	687.8	688.0	688.1	688.9	690.4	691.9	693.4	694.8	699.6
140°	717.0	717.0	716.9	716.9	716.9	717.1	717.5	717.8	718.2	718.5	723.0
142.5°	742.6	742.9	743.1	743.4	743.7	743.6	743.3	742.9	742.6	742.2	746.3
145°	779.5	779.8	780.2	780.5	780.8	781.1	781.3	781.4	781.6	781.8	783.7
147.5°	816.4	816.9	817.3	817.8	818.3	818.5	818.3	818.2	818.0	817.9	818.0
150°	838.9	839.2	839.6	839.9	840.3	840.4	840.4	840.4	840.4	840.4	840.4
152.5°	858.9	859.2	859.6	859.9	860.3	860.5	860.6	860.8	860.9	861.1	861.5
155°	891.2	891.2	891.2	891.2	891.2	891.1	891.0	890.8	890.6	890.5	891.1
157.5°	918.8	918.4	918.1	917.8	917.5	917.3	917.3	917.3	917.2	917.2	917.7
160°	935.0	934.8	934.7	934.5	934.3	934.1	934.0	933.8	933.6	933.5	934.0
162.5°	950.0	949.6	949.1	948.7	948.2	947.9	947.7	947.6	947.4	947.2	948.2
165°	970.2	969.7	969.2	968.6	968.1	967.7	967.3	967.0	966.6	966.3	967.3
167.5°	985.7	984.9	984.2	983.5	982.8	982.4	982.4	982.5	982.5	982.5	983.6
170°	994.4	993.6	992.7	991.8	991.0	990.6	990.8	991.0	991.1	991.3	992.3
172.5°	1000.7	1000.0	999.2	998.5	997.8	997.4	997.5	997.5	997.5	997.6	998.7
175°	1009.3	1008.4	1007.5	1006.7	1005.8	1005.3	1005.1	1004.9	1004.8	1004.6	1005.8
177.5°	1012.1	1011.4	1010.7	1010.0	1009.3	1009.0	1009.0	1009.0	1009.0	1009.0	1009.9
180°	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8



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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°	206.8	217.3	227.8	234.6	237.8	241.0	244.2	247.4
90°	197.9	209.3	220.6	227.9	231.1	234.2	237.4	240.6
92.5°	202.6	213.3	223.9	230.7	233.8	236.8	239.9	242.9
95°	218.5	228.6	238.7	245.4	248.6	251.8	255.0	258.2
97.5°	242.8	252.8	262.7	269.2	272.2	275.3	278.3	281.4
100°	260.8	270.8	280.7	286.9	289.4	291.9	294.3	296.8
102.5°	280.4	290.2	300.0	306.3	309.2	312.1	315.1	318.0
105°	310.2	319.6	329.0	335.4	338.8	342.1	345.5	348.8
107.5°	344.2	353.5	362.7	368.5	371.1	373.6	376.1	378.6
110°	367.0	374.8	382.6	388.2	391.6	394.9	398.3	401.6





TEST NUMBER: P332692

CATALOG NUMBER: S124DIP-S1195D810U835-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	391.2	399.0	406.8	412.2	415.2	418.1	421.0	424.0
115°	429.6	437.2	444.9	449.8	452.2	454.5	456.8	459.1
117.5°	465.4	472.2	479.0	483.6	486.1	488.6	491.1	493.6
120°	489.8	496.0	502.3	507.0	510.1	513.3	516.5	519.7
122.5°	515.2	521.7	528.2	532.5	534.4	536.3	538.3	540.2
125°	553.2	559.5	565.9	570.0	571.8	573.6	575.4	577.2
127.5°	587.4	593.5	599.5	603.6	605.7	607.9	610.0	612.1
130°	612.3	618.3	624.4	628.1	629.6	631.0	632.4	633.9
132.5°	636.0	641.8	647.5	651.3	653.2	655.0	656.9	658.7
135°	670.0	675.3	680.7	684.1	685.7	687.4	689.0	690.6
137.5°	704.3	709.0	713.8	717.1	718.9	720.8	722.7	724.6
140°	727.4	731.8	736.3	739.3	740.9	742.5	744.1	745.7
142.5°	750.3	754.3	758.3	761.0	762.5	763.9	765.4	766.8
145°	785.7	787.7	789.6	791.0	791.9	792.8	793.7	794.6
147.5°	818.2	818.3	818.5	819.0	820.0	821.0	821.9	822.9
150°	840.4	840.4	840.4	840.3	840.2	840.0	839.8	839.6
152.5°	861.9	862.3	862.7	862.7	862.3	861.8	861.4	860.9
155°	891.8	892.5	893.2	893.2	892.5	891.8	891.1	890.5
157.5°	918.2	918.8	919.3	919.2	918.7	918.1	917.5	916.9
160°	934.5	935.0	935.5	935.4	934.5	933.6	932.8	931.9
162.5°	949.1	950.0	951.0	951.0	950.1	949.3	948.4	947.5
165°	968.4	969.4	970.5	970.6	969.9	969.2	968.5	967.9
167.5°	984.6	985.7	986.7	986.7	985.6	984.5	983.5	982.4
170°	993.4	994.4	995.5	995.4	994.2	993.0	991.7	990.5
172.5°	999.9	1001.1	1002.3	1002.3	1001.1	999.8	998.6	997.4
175°	1007.0	1008.2	1009.5	1009.5	1008.2	1007.0	1005.8	1004.6
177.5°	1010.9	1011.9	1012.9	1012.8	1011.7	1010.6	1009.5	1008.3
180°	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8	1010.8

(END OF REPORT)