

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: P332710-840

Luminaire Tested: **S124DIP-S1195D1205U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332710-840
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-S1195D1205U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9122.2 lumens
Efficiency: N/A
Efficacy: 127.2 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

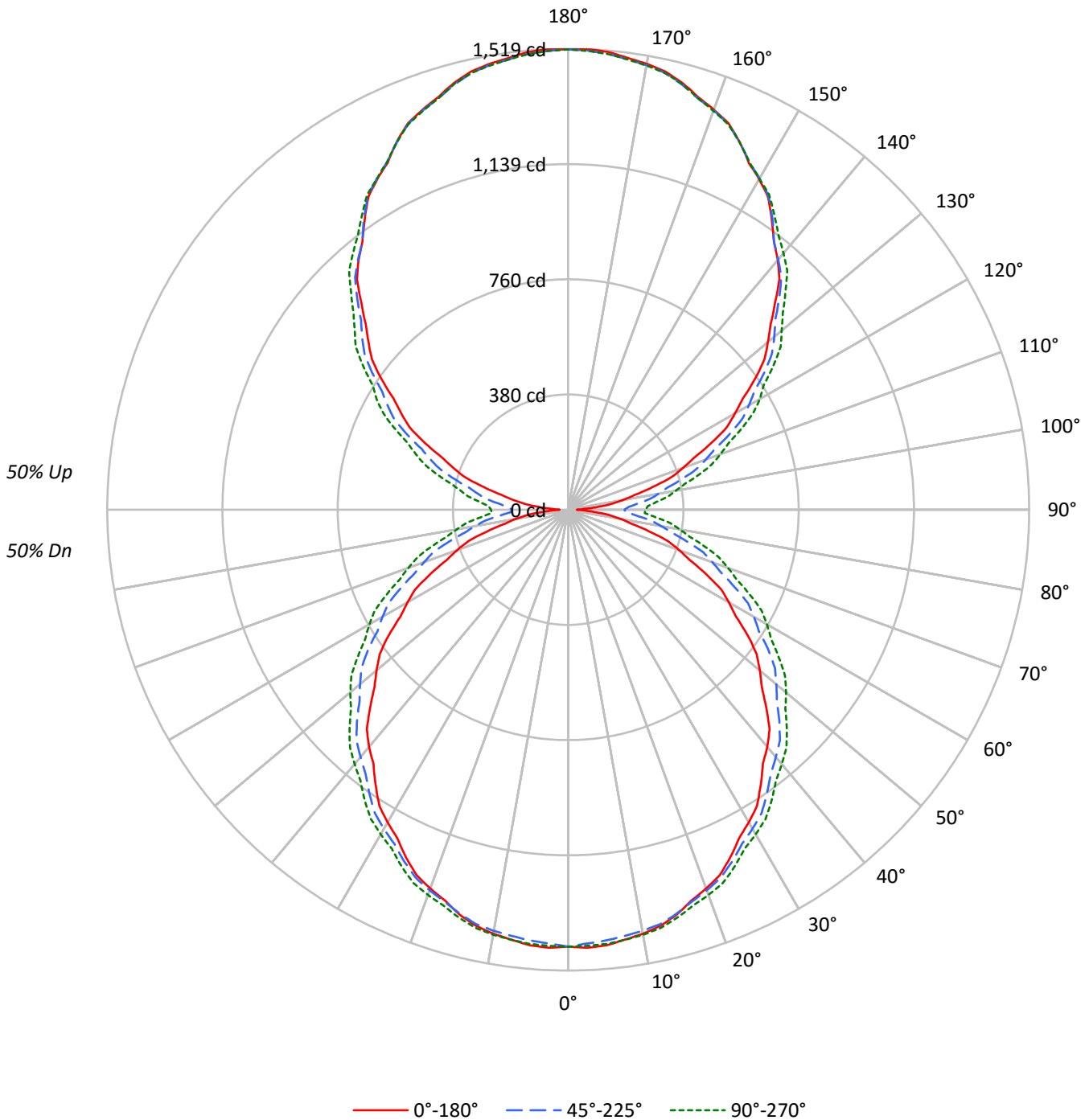
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	74	68	63	62	58	54	51	48	45	41	39	37	33
3	80	70	62	56	73	64	58	52	54	49	45	45	41	38	36	34	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	27	23
5	67	55	46	40	61	51	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11626	11626	11626
5°	11661	11362	11394
10°	11590	11176	11167
15°	11486	10961	10900
20°	11330	10723	10641
25°	11153	10457	10356
30°	10961	10193	10063
35°	10745	9921	9805
40°	10573	9663	9538
45°	10316	9426	9309
50°	10098	9151	9066
55°	9875	8894	8781
60°	9525	8563	8521
65°	9141	8210	8201
70°	8676	7806	7830
75°	8028	7363	7494
80°	7309	6935	7163
85°	6389	6559	6968



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.4	1.5
10°-20°	390.7	4.3
20°-30°	590.8	6.5
30°-40°	714.8	7.8
40°-50°	755.7	8.3
50°-60°	711.2	7.8
60°-70°	590.1	6.5
70°-80°	414.5	4.5
80°-90°	238.8	2.6
90°-100°	239.2	2.6
100°-110°	399.4	4.4
110°-120°	572.2	6.3
120°-130°	702.4	7.7
130°-140°	761.9	8.4
140°-150°	735.5	8.1
150°-160°	615.8	6.8
160°-170°	409.7	4.5
170°-180°	143.5	1.6
0°-30°	1117.8	12.3
0°-40°	1832.6	20.1
0°-60°	3299.5	36.2
0°-90°	4542.9	49.8
90°-120°	1210.8	13.3
90°-150°	3410.5	37.4
90°-180°	4579.0	50.2
0°-180°	9122.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1440	1440	1440	1440	1440	
5°	1442	1436	1426	1438	1437	137
15°	1382	1383	1379	1392	1392	389
25°	1264	1274	1279	1296	1298	582
35°	1106	1125	1142	1163	1169	692
45°	922	953	984	1010	1019	713
55°	722	757	805	836	847	643
65°	500	552	606	645	660	495
75°	277	338	405	448	464	295
85°	85	153	226	272	290	91
90°	29	107	185	237	254	21
95°	91	156	229	275	291	95
105°	288	323	386	428	446	306
115°	521	538	585	618	629	514
125°	751	752	789	816	825	670
135°	964	971	982	1005	1012	746
145°	1169	1172	1173	1181	1185	731
155°	1338	1337	1336	1340	1336	615
165°	1456	1453	1450	1456	1452	410
175°	1515	1509	1508	1515	1508	144
180°	1517	1517	1517	1517	1517	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1
2.5°	1445.2	1444.3	1443.5	1442.6	1441.8	1440.2	1437.8	1435.6	1433.3	1431.0	1433.0
5°	1441.6	1440.6	1439.5	1438.5	1437.3	1435.5	1433.0	1430.5	1428.1	1425.5	1428.4
7.5°	1429.4	1428.8	1428.1	1427.4	1426.8	1425.4	1423.4	1421.3	1419.2	1417.1	1420.4
10°	1419.1	1418.7	1418.4	1418.0	1417.6	1416.5	1414.7	1413.0	1411.2	1409.4	1412.6
12.5°	1404.8	1404.8	1404.7	1404.6	1404.6	1403.9	1402.7	1401.5	1400.3	1399.1	1402.0
15°	1382.0	1382.3	1382.7	1383.0	1383.4	1383.0	1382.0	1380.9	1379.8	1378.8	1382.0
17.5°	1350.7	1351.8	1352.8	1353.9	1354.9	1355.4	1355.2	1354.9	1354.7	1354.5	1357.9
20°	1328.8	1329.8	1330.9	1332.0	1333.0	1333.7	1334.1	1334.5	1334.8	1335.2	1338.8
22.5°	1304.2	1305.6	1307.0	1308.3	1309.7	1310.7	1311.3	1312.0	1312.6	1313.2	1316.9
25°	1264.3	1266.4	1268.6	1270.7	1272.8	1274.4	1275.6	1276.6	1277.7	1278.8	1282.7
27.5°	1219.7	1222.9	1226.1	1229.2	1232.3	1234.8	1236.4	1238.1	1239.7	1241.3	1245.0
30°	1190.0	1193.0	1195.8	1198.7	1201.5	1204.3	1206.7	1209.2	1211.7	1214.3	1218.2
32.5°	1157.8	1161.2	1164.7	1168.1	1171.5	1174.7	1177.5	1180.3	1183.1	1185.9	1190.4
35°	1106.2	1110.5	1114.8	1119.1	1123.4	1127.3	1130.9	1134.5	1138.1	1141.7	1146.7
37.5°	1054.3	1059.2	1064.2	1069.1	1074.1	1078.7	1083.2	1087.6	1092.1	1096.5	1101.7
40°	1020.8	1025.4	1030.1	1034.7	1039.4	1044.2	1049.2	1054.3	1059.2	1064.3	1069.6
42.5°	982.1	987.2	992.5	997.7	1003.0	1008.6	1014.4	1020.3	1026.1	1032.1	1038.0
45°	922.4	929.2	936.0	942.8	949.6	956.4	963.2	970.1	976.8	983.7	989.8
47.5°	865.3	872.3	879.4	886.4	893.4	900.9	908.8	916.7	924.5	932.4	938.7
50°	824.0	831.9	839.8	847.7	855.6	863.4	871.3	879.2	887.1	894.9	902.1
52.5°	782.7	790.6	798.5	806.4	814.3	822.7	831.7	840.8	849.8	858.9	866.1
55°	722.5	729.9	737.5	745.0	752.6	761.6	772.4	783.2	794.0	804.7	811.8
57.5°	655.0	664.4	673.7	683.0	692.3	702.3	713.0	723.7	734.4	745.0	753.6
60°	611.2	620.5	629.8	639.1	648.4	659.0	670.9	682.7	694.5	706.3	714.6
62.5°	568.6	578.8	589.0	599.2	609.3	620.3	632.2	644.0	655.8	667.6	675.8
65°	499.9	511.4	522.8	534.3	545.7	557.5	569.8	582.0	594.1	606.3	615.3
67.5°	433.7	446.0	458.2	470.3	482.5	495.1	508.2	521.2	534.2	547.3	556.4
70°	388.6	400.8	413.0	425.2	437.4	450.3	463.8	477.5	491.1	504.7	514.4
72.5°	344.8	357.2	369.7	382.1	394.7	408.1	422.6	437.1	451.5	466.1	475.4
75°	277.4	290.6	303.9	317.1	330.4	344.6	359.6	374.7	389.7	404.8	414.8
77.5°	214.5	228.5	242.6	256.6	270.6	285.6	301.3	317.1	332.9	348.6	358.8
80°	175.8	190.1	204.4	218.7	233.1	248.1	263.9	279.7	295.5	311.2	321.9
82.5°	137.0	152.0	166.9	181.8	196.7	212.1	227.8	243.6	259.3	275.1	286.1
85°	85.4	100.5	115.5	130.6	145.6	161.3	177.3	193.5	209.6	225.8	236.5
87.5°	48.5	63.6	78.9	94.0	109.2	124.8	141.0	157.1	173.2	189.3	200.1
90°	29.3	46.6	63.7	80.9	98.2	115.4	133.0	150.5	167.9	185.4	197.4
92.5°	49.6	65.8	82.0	98.2	114.3	130.9	147.7	164.6	181.5	198.3	209.4
95°	91.4	105.5	119.7	133.9	148.0	163.4	180.0	196.4	213.0	229.4	239.9
97.5°	142.0	154.0	166.1	178.1	190.2	204.6	221.3	237.9	254.6	271.4	281.7
100°	182.0	192.4	202.7	213.1	223.5	236.8	253.1	269.4	285.8	302.1	312.3
102.5°	225.2	233.8	242.4	251.0	259.5	271.8	287.5	303.4	319.2	335.1	345.2
105°	287.9	295.3	302.8	310.1	317.6	328.4	342.7	357.1	371.3	385.7	395.4
107.5°	356.8	362.9	369.2	375.4	381.5	391.0	403.6	416.4	429.1	441.8	451.3
110°	402.4	408.0	413.5	419.0	424.5	433.5	445.8	458.1	470.3	482.6	490.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	449.9	454.4	459.1	463.6	468.2	476.2	487.7	499.2	510.7	522.2	530.0
115°	521.2	524.4	527.7	530.9	534.1	541.2	552.2	563.1	574.0	585.0	592.6
117.5°	589.9	592.0	594.2	596.3	598.4	604.7	615.0	625.3	635.6	645.9	652.5
120°	634.6	636.7	638.8	641.0	643.1	648.9	658.5	668.1	677.7	687.3	693.2
122.5°	682.5	683.1	683.7	684.4	685.0	690.0	699.4	708.9	718.4	727.8	734.1
125°	751.4	751.1	750.7	750.4	750.0	754.2	763.0	771.6	780.3	789.0	795.3
127.5°	815.2	815.7	816.1	816.5	816.9	820.3	826.8	833.2	839.7	846.2	852.1
130°	859.0	859.4	859.8	860.2	860.7	863.7	869.5	875.3	880.9	886.7	892.6
132.5°	904.9	905.1	905.3	905.6	905.8	908.1	912.5	916.9	921.3	925.6	931.3
135°	964.1	965.7	967.2	968.9	970.4	972.4	974.9	977.4	980.0	982.5	987.6
137.5°	1030.3	1030.7	1031.1	1031.4	1031.8	1032.8	1034.4	1036.0	1037.7	1039.4	1043.9
140°	1074.4	1074.6	1074.7	1074.9	1075.1	1075.3	1075.7	1076.0	1076.4	1076.7	1081.2
142.5°	1113.5	1113.9	1114.4	1114.8	1115.3	1115.3	1114.9	1114.5	1114.0	1113.6	1117.6
145°	1169.0	1169.7	1170.3	1171.0	1171.7	1172.3	1172.5	1172.8	1173.0	1173.3	1175.2
147.5°	1224.4	1225.3	1226.2	1227.1	1228.0	1228.3	1228.1	1227.9	1227.7	1227.5	1227.6
150°	1258.2	1258.9	1259.5	1260.2	1260.9	1261.2	1261.2	1261.2	1261.2	1261.2	1261.2
152.5°	1288.8	1289.4	1289.9	1290.5	1291.0	1291.4	1291.6	1291.8	1292.0	1292.2	1292.8
155°	1337.5	1337.5	1337.5	1337.5	1337.5	1337.4	1337.2	1336.9	1336.6	1336.4	1337.4
157.5°	1378.8	1378.4	1377.9	1377.5	1377.0	1376.6	1376.6	1376.5	1376.5	1376.4	1377.3
160°	1403.2	1403.0	1402.7	1402.4	1402.2	1401.9	1401.7	1401.4	1401.1	1400.9	1401.7
162.5°	1425.7	1425.0	1424.4	1423.7	1423.0	1422.6	1422.3	1422.1	1421.8	1421.5	1422.9
165°	1456.0	1455.2	1454.4	1453.7	1452.9	1452.2	1451.7	1451.2	1450.7	1450.2	1451.7
167.5°	1479.3	1478.1	1477.0	1475.9	1474.9	1474.3	1474.4	1474.4	1474.5	1474.5	1476.1
170°	1492.4	1491.1	1489.8	1488.4	1487.1	1486.6	1486.9	1487.1	1487.4	1487.7	1489.2
172.5°	1501.8	1500.7	1499.5	1498.4	1497.4	1496.8	1496.9	1497.0	1497.0	1497.1	1498.8
175°	1514.7	1513.4	1512.1	1510.8	1509.4	1508.6	1508.4	1508.1	1507.9	1507.6	1509.4
177.5°	1518.9	1517.8	1516.8	1515.8	1514.7	1514.2	1514.2	1514.2	1514.2	1514.2	1515.7
180°	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1	1440.1
2.5°	1435.0	1437.0	1439.1	1439.9	1439.6	1439.3	1439.1	1438.8
5°	1431.3	1434.1	1436.9	1438.2	1437.8	1437.5	1437.1	1436.8
7.5°	1423.6	1426.8	1430.1	1431.5	1431.1	1430.8	1430.4	1430.1
10°	1415.8	1419.1	1422.3	1423.7	1423.4	1423.0	1422.6	1422.3
12.5°	1404.9	1407.9	1410.8	1412.3	1412.2	1412.1	1412.0	1412.0
15°	1385.2	1388.5	1391.6	1393.1	1392.7	1392.4	1392.0	1391.6
17.5°	1361.2	1364.4	1367.8	1369.3	1369.0	1368.7	1368.4	1368.1
20°	1342.4	1345.9	1349.6	1351.3	1351.3	1351.3	1351.3	1351.3
22.5°	1320.4	1324.0	1327.6	1329.7	1330.3	1330.8	1331.4	1332.0
25°	1286.7	1290.6	1294.5	1296.7	1297.1	1297.4	1297.8	1298.1
27.5°	1248.7	1252.3	1256.0	1258.0	1258.5	1258.9	1259.3	1259.7
30°	1222.1	1226.1	1230.0	1232.3	1233.0	1233.8	1234.5	1235.3
32.5°	1194.9	1199.4	1204.0	1206.6	1207.3	1208.0	1208.7	1209.4
35°	1151.8	1156.7	1161.7	1164.8	1165.9	1167.0	1168.0	1169.1
37.5°	1106.7	1111.8	1116.9	1120.0	1121.2	1122.3	1123.5	1124.6
40°	1075.0	1080.5	1085.8	1089.2	1090.7	1092.1	1093.5	1094.9
42.5°	1043.9	1049.9	1055.8	1059.3	1060.6	1061.7	1062.8	1064.0
45°	995.8	1002.0	1008.0	1012.0	1013.8	1015.5	1017.3	1019.2
47.5°	945.0	951.3	957.7	961.8	964.0	966.1	968.3	970.5
50°	909.3	916.5	923.6	928.3	930.5	932.6	934.7	936.9
52.5°	873.2	880.4	887.5	892.2	894.3	896.5	898.6	900.8
55°	819.0	826.2	833.3	838.0	840.1	842.3	844.4	846.6
57.5°	762.0	770.6	779.1	784.4	786.4	788.4	790.4	792.4
60°	722.8	731.0	739.2	744.8	747.7	750.5	753.5	756.3
62.5°	684.1	692.4	700.5	706.1	709.0	711.9	714.7	717.6
65°	624.2	633.2	642.2	648.0	651.0	653.8	656.7	659.5
67.5°	565.5	574.6	583.7	589.7	592.5	595.2	598.0	600.9
70°	524.1	533.7	543.4	549.6	552.0	554.5	557.0	559.6
72.5°	484.8	494.2	503.6	509.7	512.5	515.2	518.1	520.9
75°	424.9	434.8	444.8	451.5	454.7	458.0	461.2	464.4
77.5°	369.0	379.2	389.3	396.2	399.6	403.0	406.5	409.9
80°	332.8	343.5	354.3	361.0	363.9	366.8	369.6	372.5
82.5°	297.2	308.2	319.2	326.4	329.5	332.6	335.8	338.9
85°	247.2	258.0	268.7	275.9	279.5	283.1	286.7	290.2
87.5°	210.8	221.5	232.2	239.1	242.4	245.6	248.9	252.2
90°	209.3	221.4	233.3	241.0	244.4	247.7	251.2	254.5
92.5°	220.5	231.5	242.6	249.6	252.9	256.0	259.2	262.4
95°	250.3	260.8	271.2	278.1	281.3	284.6	287.8	291.0
97.5°	292.0	302.3	312.7	319.3	322.4	325.5	328.6	331.6
100°	322.4	332.6	342.8	349.2	351.7	354.3	356.7	359.2
102.5°	355.3	365.4	375.5	382.0	385.1	388.1	391.1	394.0
105°	405.2	414.9	424.6	431.3	434.9	438.6	442.2	446.0
107.5°	460.9	470.4	480.0	486.0	488.6	491.1	493.6	496.1
110°	498.1	505.7	513.5	519.2	522.8	526.4	530.1	533.8



TEST NUMBER: P332710-840

CATALOG NUMBER: S124DIP-S1195D1205U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	537.9	545.7	553.5	559.0	562.0	565.0	568.0	571.1
115°	600.3	607.8	615.5	620.5	622.7	624.9	627.1	629.4
117.5°	659.0	665.6	672.2	676.7	679.0	681.4	683.7	686.0
120°	699.1	705.0	710.8	715.4	718.8	722.3	725.6	729.0
122.5°	740.4	746.7	753.0	756.9	758.6	760.2	761.8	763.5
125°	801.5	807.9	814.2	818.1	819.7	821.3	823.0	824.7
127.5°	858.1	863.9	869.9	873.9	876.0	878.0	880.0	882.0
130°	898.6	904.4	910.4	913.9	915.0	916.1	917.3	918.4
132.5°	937.0	942.6	948.2	951.9	953.6	955.3	957.0	958.9
135°	992.9	998.0	1003.3	1006.6	1007.9	1009.4	1010.7	1012.1
137.5°	1048.4	1053.0	1057.5	1060.8	1062.8	1064.7	1066.6	1068.5
140°	1085.5	1089.9	1094.4	1097.3	1098.8	1100.3	1101.9	1103.5
142.5°	1121.7	1125.7	1129.7	1132.5	1133.9	1135.4	1136.8	1138.3
145°	1177.0	1178.9	1180.8	1182.0	1182.8	1183.4	1184.1	1184.7
147.5°	1227.6	1227.7	1227.8	1228.3	1229.1	1230.0	1230.9	1231.8
150°	1261.2	1261.2	1261.2	1261.1	1260.8	1260.6	1260.3	1260.1
152.5°	1293.4	1294.1	1294.7	1294.7	1294.0	1293.3	1292.6	1292.0
155°	1338.5	1339.5	1340.5	1340.5	1339.5	1338.5	1337.4	1336.4
157.5°	1378.1	1378.8	1379.6	1379.6	1378.7	1377.8	1376.8	1376.0
160°	1402.4	1403.2	1404.0	1403.7	1402.4	1401.1	1399.9	1398.6
162.5°	1424.3	1425.7	1427.1	1427.2	1425.9	1424.6	1423.3	1422.0
165°	1453.3	1454.8	1456.4	1456.6	1455.6	1454.6	1453.5	1452.5
167.5°	1477.6	1479.3	1480.8	1480.8	1479.1	1477.5	1475.9	1474.3
170°	1490.9	1492.4	1494.0	1493.8	1492.0	1490.2	1488.3	1486.5
172.5°	1500.7	1502.4	1504.2	1504.2	1502.3	1500.5	1498.6	1496.8
175°	1511.3	1513.1	1514.9	1514.9	1513.1	1511.3	1509.4	1507.6
177.5°	1517.1	1518.6	1520.0	1519.9	1518.2	1516.6	1514.9	1513.3
180°	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0

(END OF REPORT)