

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: P332711-830

Luminaire Tested: **S124DIP-S1195D1205U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332711-830
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-S1195D1205U830-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1195 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8639.1 lumens
Efficiency: N/A
Efficacy: 120.5 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

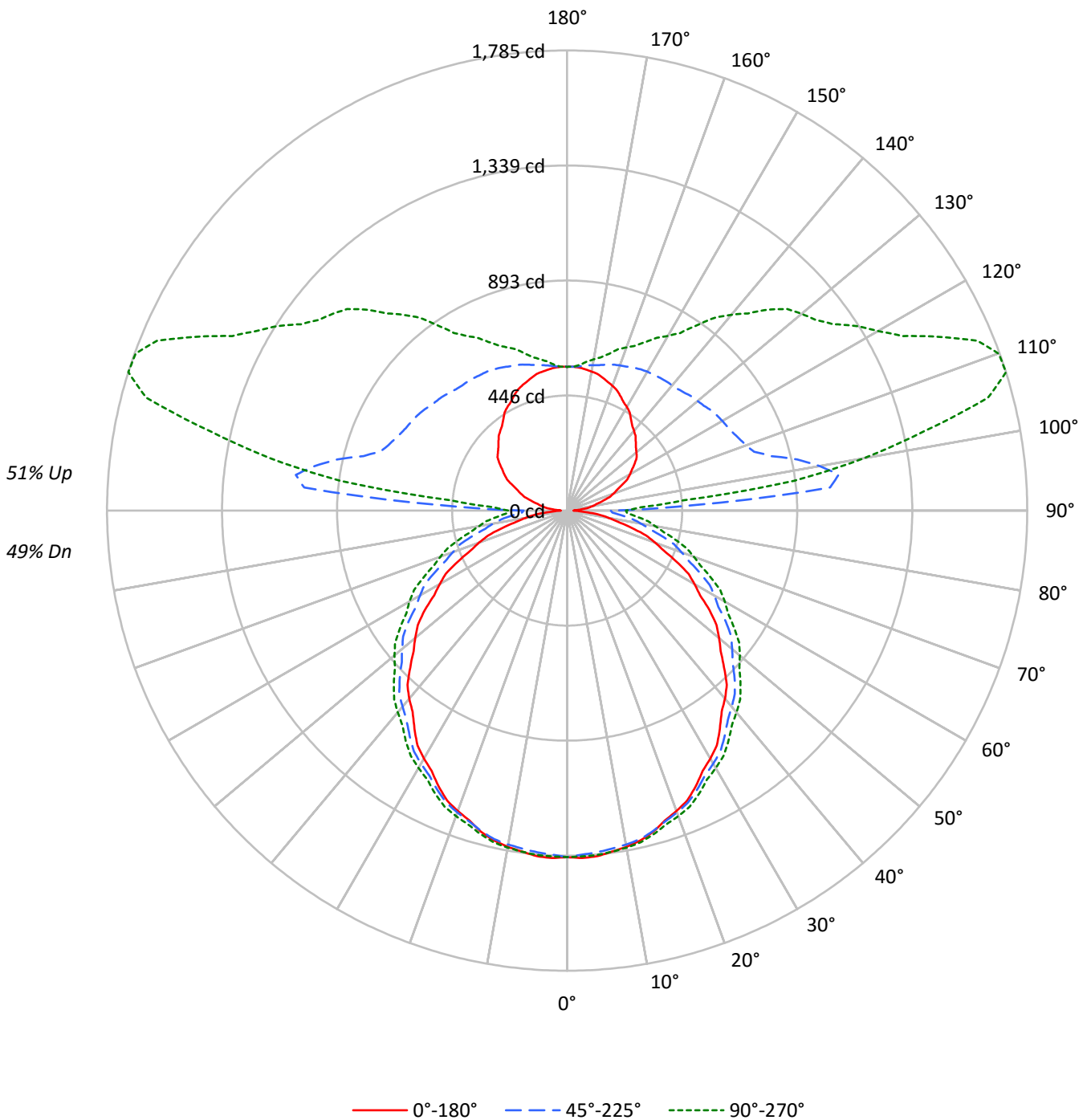
Input Watts (W): 71.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10851	10851	10851
5°	10884	10604	10635
10°	10818	10431	10423
15°	10721	10231	10174
20°	10574	10009	9931
25°	10410	9760	9665
30°	10231	9513	9392
35°	10029	9259	9152
40°	9868	9019	8902
45°	9628	8797	8688
50°	9425	8541	8461
55°	9216	8300	8195
60°	8889	7992	7953
65°	8532	7663	7655
70°	8098	7286	7308
75°	7493	6872	6995
80°	6823	6474	6686
85°	5963	6123	6505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	1.5
10°-20°	364.7	4.2
20°-30°	551.4	6.4
30°-40°	667.1	7.7
40°-50°	705.3	8.2
50°-60°	663.8	7.7
60°-70°	550.7	6.4
70°-80°	386.8	4.5
80°-90°	221.8	2.6
90°-100°	532.5	6.2
100°-110°	934.2	10.8
110°-120°	815.1	9.4
120°-130°	667.8	7.7
130°-140°	542.2	6.3
140°-150°	405.4	4.7
150°-160°	282.7	3.3
160°-170°	166.3	1.9
170°-180°	54.1	0.6
0°-30°	1043.3	12.1
0°-40°	1710.5	19.8
0°-60°	3079.5	35.6
0°-90°	4238.8	49.1
90°-120°	2281.8	26.4
90°-150°	3897.1	45.1
90°-180°	4400.0	50.9
0°-180°	8639.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1344	1344	1344	1344	1344	
5°	1346	1341	1330	1342	1341	128
15°	1290	1291	1287	1300	1299	363
25°	1180	1189	1194	1209	1212	543
35°	1032	1050	1066	1086	1091	646
45°	861	890	918	943	951	665
55°	674	707	751	780	790	601
65°	467	515	566	602	616	462
75°	259	315	378	418	434	275
85°	80	143	211	254	271	85
90°	25	93	169	213	228	18
95°	56	184	1024	612	452	56
105°	142	231	818	1683	1690	152
115°	235	308	711	1334	1594	233
125°	320	380	680	1117	1260	285
135°	376	448	646	967	1102	291
145°	432	493	629	793	877	271
155°	490	528	611	692	722	226
165°	533	550	586	620	630	151
175°	556	558	562	570	567	53
180°	558	558	558	558	558	



TEST NUMBER: P332711-830

CATALOG NUMBER: S124DIP-S1195D1205U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1
2.5°	1348.9	1348.0	1347.3	1346.4	1345.7	1344.2	1342.0	1339.9	1337.8	1335.6	1337.5
5°	1345.5	1344.5	1343.5	1342.6	1341.5	1339.8	1337.5	1335.1	1332.8	1330.5	1333.1
7.5°	1334.1	1333.5	1332.8	1332.3	1331.7	1330.4	1328.5	1326.5	1324.6	1322.7	1325.7
10°	1324.5	1324.1	1323.8	1323.4	1323.1	1322.1	1320.4	1318.8	1317.1	1315.4	1318.4
12.5°	1311.2	1311.2	1311.1	1311.0	1311.0	1310.3	1309.2	1308.1	1306.9	1305.8	1308.5
15°	1289.9	1290.2	1290.5	1290.8	1291.2	1290.8	1289.9	1288.8	1287.8	1286.9	1289.9
17.5°	1260.7	1261.7	1262.6	1263.7	1264.6	1265.1	1264.9	1264.6	1264.4	1264.2	1267.3
20°	1240.2	1241.1	1242.2	1243.2	1244.2	1244.8	1245.2	1245.6	1245.9	1246.2	1249.5
22.5°	1217.3	1218.5	1219.8	1221.1	1222.4	1223.3	1223.9	1224.6	1225.1	1225.7	1229.1
25°	1180.0	1181.9	1184.0	1186.0	1188.0	1189.5	1190.5	1191.5	1192.5	1193.5	1197.2
27.5°	1138.4	1141.4	1144.3	1147.3	1150.2	1152.4	1154.0	1155.6	1157.1	1158.6	1162.0
30°	1110.7	1113.4	1116.1	1118.8	1121.4	1124.0	1126.2	1128.6	1131.0	1133.3	1137.0
32.5°	1080.6	1083.8	1087.0	1090.2	1093.4	1096.4	1099.0	1101.6	1104.2	1106.8	1111.1
35°	1032.5	1036.5	1040.5	1044.5	1048.5	1052.2	1055.6	1058.9	1062.2	1065.5	1070.3
37.5°	984.0	988.6	993.3	997.9	1002.5	1006.8	1011.0	1015.1	1019.3	1023.4	1028.2
40°	952.7	957.1	961.4	965.7	970.1	974.6	979.3	984.0	988.6	993.3	998.3
42.5°	916.6	921.4	926.3	931.2	936.1	941.3	946.8	952.3	957.7	963.3	968.8
45°	860.9	867.2	873.6	880.0	886.3	892.7	899.0	905.4	911.7	918.1	923.8
47.5°	807.6	814.2	820.8	827.3	833.9	840.8	848.2	855.5	862.9	870.2	876.1
50°	769.1	776.5	783.8	791.2	798.5	805.9	813.2	820.6	827.9	835.3	842.0
52.5°	730.6	737.9	745.3	752.6	760.0	767.9	776.3	784.8	793.1	801.6	808.3
55°	674.3	681.3	688.3	695.3	702.4	710.9	721.0	730.9	741.0	751.0	757.7
57.5°	611.3	620.1	628.8	637.4	646.1	655.4	665.4	675.4	685.4	695.3	703.3
60°	570.4	579.1	587.8	596.5	605.2	615.1	626.1	637.2	648.2	659.2	666.9
62.5°	530.7	540.2	549.7	559.2	568.6	578.9	590.0	601.1	612.1	623.1	630.7
65°	466.6	477.3	488.0	498.7	509.3	520.4	531.8	543.2	554.5	565.9	574.3
67.5°	404.8	416.2	427.6	438.9	450.3	462.1	474.3	486.4	498.6	510.9	519.3
70°	362.7	374.1	385.5	396.8	408.2	420.3	432.9	445.6	458.4	471.1	480.1
72.5°	321.8	333.4	345.1	356.7	368.3	380.9	394.5	407.9	421.4	435.0	443.7
75°	258.9	271.3	283.6	296.0	308.4	321.6	335.6	349.7	363.7	377.8	387.1
77.5°	200.2	213.3	226.4	239.5	252.6	266.6	281.3	296.0	310.7	325.4	334.9
80°	164.1	177.4	190.8	204.2	217.5	231.6	246.3	261.1	275.8	290.5	300.5
82.5°	127.9	141.9	155.8	169.7	183.6	197.9	212.6	227.3	242.0	256.7	267.0
85°	79.7	93.8	107.8	121.9	135.9	150.5	165.5	180.6	195.7	210.8	220.7
87.5°	44.8	58.8	73.1	87.0	100.9	115.0	131.0	145.6	160.7	175.8	185.3
90°	25.2	40.7	57.4	71.9	86.3	100.2	121.2	135.5	152.1	168.7	177.3
92.5°	35.3	53.1	75.4	100.9	128.8	164.9	234.9	334.2	431.4	489.2	440.5
95°	55.7	70.0	92.0	117.3	154.6	213.0	322.0	515.3	790.8	1023.6	1057.8
97.5°	82.6	92.1	111.0	133.7	165.7	215.8	302.7	464.7	738.5	1061.8	1283.5
100°	99.8	108.5	124.9	146.7	176.2	222.2	299.8	436.6	673.1	994.9	1284.4
102.5°	117.3	126.7	141.1	161.0	188.6	232.1	303.3	425.0	627.8	914.5	1212.4
105°	141.7	151.7	163.8	183.7	210.1	251.4	316.3	419.6	585.3	817.8	1083.5
107.5°	171.6	179.3	190.3	209.7	234.0	274.0	333.8	428.4	571.1	760.0	978.3
110°	190.6	197.5	207.6	225.5	249.8	287.6	347.5	435.8	568.1	738.6	924.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	208.7	215.0	225.5	241.9	265.7	302.9	360.6	444.0	567.8	724.6	891.3
115°	234.7	240.9	251.7	265.6	289.4	325.8	380.3	456.8	569.3	711.4	856.8
117.5°	263.3	268.2	276.7	290.6	311.9	348.5	400.0	470.4	571.7	701.3	835.9
120°	281.3	284.6	293.2	306.2	325.8	361.8	413.2	479.8	573.9	695.3	823.6
122.5°	298.9	301.2	309.2	320.5	341.1	375.5	426.3	488.9	576.3	688.4	810.5
125°	320.4	324.4	330.6	342.3	362.8	397.5	445.3	504.1	581.4	679.6	791.1
127.5°	340.4	343.6	351.2	364.6	386.0	419.9	464.4	517.1	583.7	668.2	766.2
130°	350.6	354.7	363.1	379.2	399.6	433.9	476.5	524.6	585.8	661.2	750.5
132.5°	362.0	365.1	376.3	391.4	413.7	445.6	487.2	533.3	588.1	655.5	736.7
135°	376.5	380.9	391.8	410.5	433.5	463.1	501.5	543.4	590.6	645.5	714.4
137.5°	392.5	396.3	408.0	425.5	448.9	476.5	511.4	549.3	590.3	638.4	695.6
140°	403.9	406.8	418.5	436.8	459.5	485.8	519.0	554.3	591.9	633.9	685.3
142.5°	414.9	418.1	429.2	447.0	469.0	494.3	526.0	558.3	593.5	631.5	677.1
145°	432.0	434.9	445.5	460.5	481.0	504.9	533.4	563.0	594.7	628.7	665.7
147.5°	451.4	452.2	461.5	476.9	493.9	515.4	542.2	568.0	595.8	624.7	655.9
150°	463.7	464.5	472.9	485.7	501.8	522.5	546.5	570.6	595.8	622.1	649.5
152.5°	473.9	474.0	482.8	494.9	509.5	528.6	550.1	572.4	594.1	617.7	642.4
155°	489.6	490.7	497.2	508.2	520.3	536.7	555.3	573.9	591.4	611.1	632.0
157.5°	505.1	505.1	511.2	519.8	530.3	543.3	559.0	573.9	588.6	604.4	621.2
160°	514.7	514.7	519.2	526.8	535.6	547.6	560.7	573.9	586.0	599.1	613.3
162.5°	523.5	522.6	526.1	532.9	540.8	550.3	562.5	573.9	583.3	593.8	606.3
165°	533.4	533.4	535.6	541.0	546.5	553.1	563.0	571.7	578.2	586.0	594.7
167.5°	543.3	542.2	543.3	547.4	550.4	555.5	562.7	569.1	573.1	578.1	584.2
170°	547.6	546.5	547.6	550.9	553.1	556.4	561.8	567.3	569.5	572.8	577.2
172.5°	552.0	550.9	551.1	553.6	554.9	557.2	561.0	565.6	566.0	567.5	571.1
175°	556.4	555.3	555.3	556.4	557.5	557.5	559.7	563.0	561.8	561.8	564.0
177.5°	558.4	557.5	556.6	557.5	557.5	557.5	558.4	560.1	558.4	558.4	559.2
180°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1	1344.1
2.5°	1339.4	1341.2	1343.1	1343.9	1343.6	1343.3	1343.1	1342.8
5°	1335.9	1338.5	1341.1	1342.4	1342.0	1341.7	1341.3	1341.0
7.5°	1328.7	1331.7	1334.7	1336.1	1335.7	1335.4	1335.0	1334.7
10°	1321.4	1324.5	1327.5	1328.8	1328.5	1328.1	1327.8	1327.5
12.5°	1311.3	1314.0	1316.7	1318.1	1318.1	1318.0	1317.9	1317.9
15°	1292.9	1295.9	1298.8	1300.2	1299.9	1299.6	1299.2	1298.8
17.5°	1270.5	1273.5	1276.6	1278.0	1277.7	1277.4	1277.1	1276.9
20°	1252.9	1256.2	1259.6	1261.2	1261.2	1261.2	1261.2	1261.2
22.5°	1232.4	1235.8	1239.1	1241.0	1241.6	1242.1	1242.6	1243.2
25°	1200.9	1204.6	1208.2	1210.2	1210.6	1210.9	1211.3	1211.5
27.5°	1165.5	1168.8	1172.2	1174.1	1174.6	1175.0	1175.4	1175.7
30°	1140.7	1144.3	1148.0	1150.2	1150.8	1151.5	1152.2	1152.9
32.5°	1115.2	1119.5	1123.7	1126.1	1126.8	1127.5	1128.1	1128.8
35°	1075.0	1079.6	1084.3	1087.1	1088.2	1089.2	1090.1	1091.2
37.5°	1032.9	1037.6	1042.5	1045.4	1046.4	1047.4	1048.6	1049.6
40°	1003.3	1008.4	1013.4	1016.6	1017.9	1019.3	1020.6	1021.9
42.5°	974.3	979.9	985.4	988.7	989.9	990.9	991.9	993.1
45°	929.4	935.2	940.8	944.5	946.2	947.8	949.5	951.2
47.5°	882.0	887.9	893.8	897.7	899.8	901.7	903.7	905.8
50°	848.7	855.4	862.0	866.4	868.5	870.4	872.4	874.4
52.5°	815.0	821.7	828.3	832.7	834.7	836.7	838.7	840.7
55°	764.4	771.1	777.8	782.1	784.1	786.2	788.2	790.1
57.5°	711.2	719.3	727.2	732.1	734.0	735.8	737.7	739.6
60°	674.6	682.3	689.9	695.1	697.9	700.5	703.2	705.9
62.5°	638.5	646.2	653.8	659.0	661.8	664.4	667.0	669.8
65°	582.6	591.0	599.4	604.8	607.6	610.2	612.9	615.6
67.5°	527.8	536.3	544.8	550.4	553.0	555.5	558.2	560.8
70°	489.2	498.1	507.2	512.9	515.2	517.6	519.9	522.3
72.5°	452.5	461.3	470.0	475.7	478.3	480.9	483.5	486.2
75°	396.5	405.9	415.2	421.4	424.4	427.4	430.5	433.5
77.5°	344.4	353.9	363.4	369.8	373.0	376.2	379.4	382.6
80°	310.6	320.6	330.6	337.0	339.6	342.3	345.0	347.7
82.5°	277.4	287.7	297.9	304.6	307.6	310.5	313.4	316.3
85°	230.7	240.8	250.8	257.5	260.9	264.2	267.6	270.9
87.5°	195.2	205.1	215.1	221.4	224.5	227.7	230.5	233.4
90°	188.1	198.9	209.7	215.9	219.7	223.5	225.0	227.7
92.5°	375.7	332.0	308.3	292.5	282.2	279.0	278.0	280.6
95°	960.5	799.8	662.1	561.8	511.2	480.3	463.5	452.3
97.5°	1338.2	1283.8	1185.5	1077.0	1001.3	938.2	908.2	888.3
100°	1453.3	1484.2	1439.6	1364.2	1271.3	1206.8	1176.3	1169.9
102.5°	1440.6	1558.0	1582.3	1554.3	1498.5	1452.6	1420.6	1416.2
105°	1342.7	1540.6	1657.4	1707.8	1712.6	1706.6	1693.9	1690.0
107.5°	1208.6	1418.6	1579.5	1682.5	1739.1	1766.4	1779.8	1785.1
110°	1127.4	1324.6	1491.1	1616.7	1697.1	1745.9	1768.2	1780.7



TEST NUMBER: P332711-830

CATALOG NUMBER: S124DIP-S1195D1205U830-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1065.6	1240.7	1398.2	1523.6	1614.6	1672.9	1703.2	1721.8
115°	1001.1	1143.1	1278.7	1388.6	1477.5	1545.6	1582.9	1594.0
117.5°	964.0	1082.5	1190.2	1284.2	1360.7	1418.6	1456.7	1466.2
120°	945.3	1053.8	1148.1	1230.6	1295.6	1346.5	1377.7	1392.4
122.5°	928.7	1033.8	1120.2	1192.9	1248.0	1291.7	1318.1	1332.6
125°	902.6	1003.1	1085.1	1149.4	1195.2	1229.1	1251.9	1260.5
127.5°	871.0	967.0	1048.4	1109.7	1156.0	1186.6	1206.4	1215.2
130°	847.4	940.0	1020.5	1082.5	1129.4	1158.9	1178.4	1186.9
132.5°	823.7	910.7	989.2	1051.1	1097.1	1130.0	1148.7	1157.3
135°	788.7	865.3	937.5	995.9	1041.7	1074.3	1093.9	1102.5
137.5°	757.9	823.0	884.2	937.0	979.6	1011.4	1027.7	1037.2
140°	740.0	795.9	849.5	898.5	938.5	964.3	981.3	991.7
142.5°	724.2	773.5	819.5	862.0	897.4	921.1	936.1	943.7
145°	702.8	742.1	776.8	809.3	837.9	857.9	870.2	877.0
147.5°	685.0	714.9	741.4	766.2	787.4	804.5	813.9	816.9
150°	675.8	701.0	722.8	742.5	760.1	774.3	780.9	782.0
152.5°	666.1	687.8	707.9	724.2	739.0	750.6	754.6	755.7
155°	651.7	669.2	685.6	698.8	709.7	718.5	721.8	721.8
157.5°	636.1	650.8	664.6	675.1	683.4	690.0	692.0	692.0
160°	626.5	638.5	650.5	659.3	665.9	672.5	673.5	673.5
162.5°	616.8	627.2	636.6	644.4	649.2	655.8	657.0	656.0
165°	603.5	610.0	617.7	623.2	627.5	632.0	630.8	629.8
167.5°	590.6	595.6	601.7	605.0	607.2	610.0	609.8	609.0
170°	582.7	586.0	590.3	593.6	595.8	596.9	595.8	595.8
172.5°	575.6	578.1	580.7	583.1	584.4	585.5	584.4	582.7
175°	566.3	567.3	569.5	569.5	569.5	571.7	569.5	567.3
177.5°	560.1	561.0	561.0	561.8	561.0	561.8	560.1	558.4
180°	557.5	557.5	557.5	557.5	557.5	557.5	557.5	557.5

(END OF REPORT)