

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: P332624-830

Luminaire Tested: **S124DIP-S795D1205U830-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332624-830  
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-S795D1205U830-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

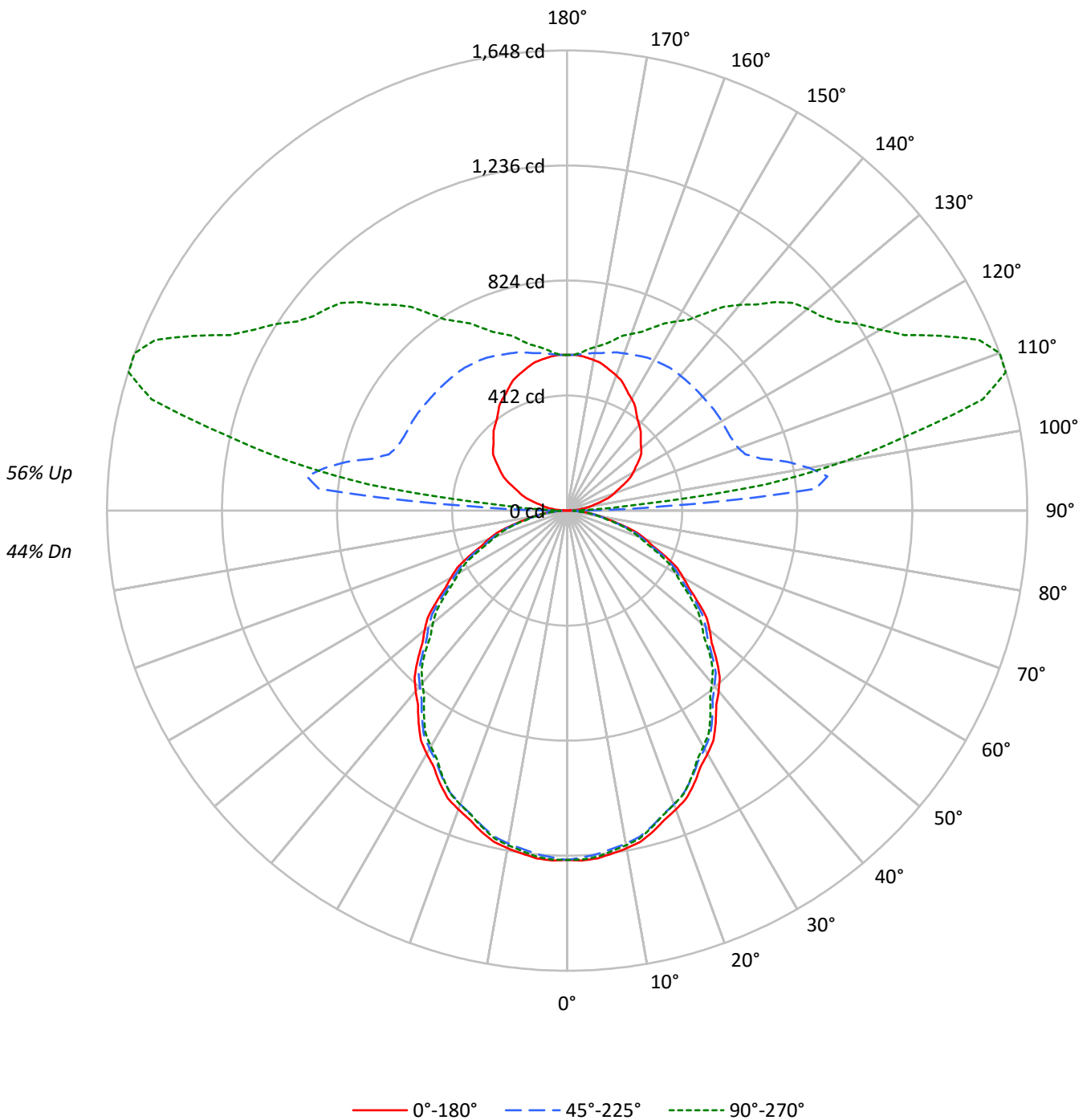
Lumens per Lamp: N/A  
Luminaire Lumens: 7268.2 lumens  
Efficiency: N/A  
Efficacy: 127.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse  
  
Input Watts (W): 56.9  
Input Voltage (V): 120  
Input Current (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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44
1	96	92	88	85	88	84	81	78	70	68	66	57	55	54	45	44	43	37
2	88	80	74	69	80	74	69	64	61	58	54	50	47	45	39	38	36	31
3	80	71	63	58	73	65	59	54	54	49	46	44	41	38	35	33	31	26
4	73	63	55	49	67	58	51	45	48	43	39	39	36	33	31	29	26	23
5	67	56	48	42	61	51	44	39	43	38	33	35	31	28	28	25	23	20
6	62	50	42	36	56	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	33	28	48	38	31	26	32	27	23	27	22	19	21	18	16	14
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	20	17	15	12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10101	10101	10101
5°	10131	10009	10083
10°	10067	9928	9977
15°	9947	9787	9812
20°	9784	9613	9620
25°	9600	9413	9386
30°	9374	9177	9093
35°	9140	8932	8814
40°	8896	8652	8495
45°	8643	8379	8218
50°	8361	8133	7882
55°	8058	7817	7562
60°	7753	7463	7237
65°	7412	7125	6837
70°	7027	6675	6413
75°	6441	6129	5973
80°	5732	5500	5360
85°	5011	4826	4733



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	1.6
10°-20°	332.0	4.6
20°-30°	488.6	6.7
30°-40°	568.1	7.8
40°-50°	568.1	7.8
50°-60°	496.9	6.8
60°-70°	369.0	5.1
70°-80°	209.7	2.9
80°-90°	63.6	0.9
90°-100°	402.7	5.5
100°-110°	838.0	11.5
110°-120°	750.6	10.3
120°-130°	631.4	8.7
130°-140°	526.5	7.2
140°-150°	402.2	5.5
150°-160°	282.7	3.9
160°-170°	166.3	2.3
170°-180°	54.1	0.7
0°-30°	938.5	12.9
0°-40°	1506.5	20.7
0°-60°	2571.5	35.4
0°-90°	3213.8	44.2
90°-120°	1991.3	27.4
90°-150°	3551.4	48.9
90°-180°	4054.0	55.8
0°-180°	7268.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1250	1246	1235	1245	1244	119
15°	1190	1185	1171	1176	1174	335
25°	1078	1070	1057	1057	1054	496
35°	927	920	906	899	894	580
45°	757	749	734	723	720	583
55°	572	569	555	544	537	513
65°	388	383	373	363	358	384
75°	206	202	196	193	192	219
85°	54	54	52	52	51	60
90°	1	9	20	22	23	5
95°	36	114	893	442	267	40
105°	128	186	718	1547	1541	137
115°	226	283	641	1231	1480	224
125°	314	374	637	1048	1181	280
135°	373	445	632	930	1056	289
145°	430	493	629	784	862	270
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1254.4	1253.9	1253.3	1252.8	1252.3	1251.0	1249.1	1247.1	1245.1	1243.2	1244.9
5°	1250.2	1249.3	1248.4	1247.5	1246.6	1244.9	1242.5	1240.0	1237.6	1235.1	1237.6
7.5°	1238.6	1237.7	1236.8	1235.9	1235.0	1233.2	1230.5	1227.8	1225.0	1222.3	1224.3
10°	1228.1	1227.3	1226.3	1225.5	1224.6	1222.7	1219.7	1216.9	1214.0	1211.1	1212.9
12.5°	1214.5	1213.6	1212.7	1211.8	1211.0	1208.9	1205.9	1202.8	1199.8	1196.7	1198.6
15°	1190.1	1189.1	1188.3	1187.3	1186.5	1184.4	1181.0	1177.7	1174.3	1171.0	1172.3
17.5°	1160.6	1159.4	1158.3	1157.3	1156.1	1154.0	1150.8	1147.6	1144.4	1141.3	1142.2
20°	1138.9	1137.7	1136.7	1135.6	1134.4	1132.2	1128.9	1125.5	1122.2	1118.9	1119.6
22.5°	1115.7	1114.2	1112.7	1111.3	1109.7	1107.4	1104.0	1100.7	1097.3	1094.0	1095.2
25°	1077.7	1076.2	1074.6	1073.1	1071.5	1069.1	1066.0	1062.9	1059.8	1056.7	1056.9
27.5°	1034.4	1032.8	1031.2	1029.6	1028.0	1025.8	1022.8	1020.0	1017.1	1014.2	1013.6
30°	1005.6	1003.8	1002.0	1000.2	998.4	996.1	993.2	990.3	987.4	984.5	983.6
32.5°	975.1	973.5	971.9	970.3	968.7	966.3	963.3	960.2	957.2	954.0	953.0
35°	927.4	925.8	924.3	922.7	921.1	918.8	915.7	912.6	909.5	906.3	904.7
37.5°	877.0	875.6	874.2	872.8	871.3	868.9	865.6	862.2	858.9	855.5	853.8
40°	844.1	842.4	840.6	838.8	837.0	834.4	831.1	827.7	824.4	821.0	818.9
42.5°	808.9	807.8	806.7	805.7	804.6	802.2	798.5	794.8	791.1	787.4	784.9
45°	757.0	755.4	753.8	752.2	750.7	748.1	744.6	741.0	737.4	733.9	731.4
47.5°	702.6	701.5	700.5	699.4	698.3	696.2	692.9	689.6	686.3	683.0	680.1
50°	665.7	664.8	663.9	663.0	662.1	660.2	657.0	653.9	650.7	647.6	644.5
52.5°	629.6	628.6	627.5	626.4	625.3	623.1	619.8	616.5	613.2	609.9	607.2
55°	572.5	571.7	571.1	570.4	569.8	567.9	564.8	561.7	558.6	555.4	552.7
57.5°	517.9	517.2	516.4	515.7	514.9	512.9	509.9	506.8	503.8	500.7	498.1
60°	480.2	479.1	478.0	476.9	475.8	473.7	470.9	468.0	465.1	462.2	460.1
62.5°	443.4	442.4	441.5	440.5	439.6	437.6	434.5	431.4	428.4	425.3	423.5
65°	388.0	386.9	385.8	384.7	383.5	381.8	379.7	377.4	375.1	373.0	370.7
67.5°	332.2	331.2	330.2	329.1	328.2	326.6	324.4	322.3	320.2	318.0	315.8
70°	297.7	296.2	294.6	293.0	291.5	289.8	288.0	286.3	284.5	282.8	281.0
72.5°	260.9	259.3	257.8	256.2	254.6	253.2	251.8	250.2	248.8	247.4	246.0
75°	206.5	205.4	204.3	203.2	202.1	201.0	199.8	198.7	197.7	196.5	195.6
77.5°	154.6	154.1	153.6	153.2	152.6	151.9	150.9	150.0	148.9	148.0	147.7
80°	123.3	122.6	122.0	121.3	120.6	120.1	119.6	119.2	118.8	118.3	117.8
82.5°	92.8	92.6	92.2	91.9	91.6	91.4	91.3	91.2	91.1	91.0	90.8
85°	54.1	54.1	54.1	54.1	54.1	53.9	53.4	53.1	52.6	52.1	52.1
87.5°	21.1	21.3	21.8	21.9	21.9	21.7	22.8	22.7	22.9	23.2	23.0
90°	1.1	3.3	6.6	7.6	8.8	8.8	15.4	15.4	17.5	19.7	18.7
92.5°	12.4	18.2	28.5	41.8	57.9	80.6	136.3	221.2	304.1	347.4	289.4
95°	36.1	39.4	50.4	64.7	90.9	137.0	232.1	411.8	673.5	892.6	917.8
97.5°	64.8	64.8	74.3	87.4	110.0	148.5	221.9	370.2	630.4	940.2	1153.1
100°	83.2	83.2	90.9	104.1	124.9	159.9	224.5	348.3	571.7	880.5	1160.9
102.5°	100.8	102.5	109.3	121.6	141.5	174.8	233.3	342.1	532.3	806.1	1095.2
105°	128.2	131.4	137.0	150.1	169.8	201.5	254.1	345.0	498.3	718.5	975.8
107.5°	158.3	160.5	166.1	180.0	198.9	230.3	278.4	361.2	492.2	669.4	879.5
110°	178.5	180.7	186.2	199.3	219.0	248.6	296.8	373.4	494.0	652.8	831.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	197.8	200.0	206.3	218.6	238.4	267.9	314.3	386.6	499.2	644.9	804.1
115°	225.6	228.9	236.6	247.5	268.3	297.9	341.7	407.5	509.3	640.7	778.7
117.5°	254.5	257.6	264.4	276.4	296.0	326.6	368.3	428.7	520.0	639.6	767.3
120°	273.8	276.0	283.7	295.7	314.3	345.0	386.6	443.6	527.9	639.6	761.2
122.5°	291.3	293.5	301.2	312.4	332.7	362.5	404.2	457.6	535.8	638.8	754.2
125°	314.3	318.7	325.3	337.3	358.2	388.8	428.2	478.6	547.6	637.4	742.5
127.5°	334.7	338.2	346.1	359.9	381.5	412.5	450.5	496.8	557.0	635.0	727.0
130°	346.1	350.4	359.2	375.7	396.4	428.2	465.5	508.2	564.0	634.1	717.4
132.5°	357.5	361.0	372.4	388.0	410.5	440.5	477.8	519.6	570.1	633.3	708.6
135°	373.4	377.9	388.8	407.5	430.5	458.9	495.0	534.5	579.4	632.0	695.5
137.5°	389.5	393.6	405.7	423.4	447.3	474.5	508.2	545.0	584.8	631.7	684.1
140°	400.9	404.2	416.2	434.8	457.8	484.1	517.0	552.0	589.3	630.8	678.0
142.5°	413.1	416.4	427.5	445.4	467.4	492.9	524.8	557.2	592.8	630.8	672.7
145°	430.5	433.8	444.7	460.0	480.8	504.9	533.4	563.0	594.7	628.7	663.7
147.5°	449.9	451.0	460.6	476.5	493.7	515.4	542.2	568.0	595.8	624.7	655.6
150°	462.2	463.3	472.0	485.2	501.6	522.5	546.5	570.6	595.8	622.1	649.5
152.5°	473.5	473.8	482.6	494.8	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°	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2	1251.2
2.5°	1246.7	1248.5	1250.3	1251.1	1250.9	1250.8	1250.6	1250.4
5°	1240.0	1242.5	1244.9	1245.9	1245.5	1245.1	1244.6	1244.2
7.5°	1226.2	1228.2	1230.1	1231.0	1230.8	1230.5	1230.2	1229.9
10°	1214.7	1216.4	1218.2	1218.9	1218.4	1218.0	1217.6	1217.1
12.5°	1200.6	1202.5	1204.5	1205.1	1204.6	1203.9	1203.2	1202.7
15°	1173.7	1175.0	1176.3	1176.7	1176.0	1175.4	1174.7	1174.0
17.5°	1143.0	1143.9	1144.7	1144.9	1144.4	1144.0	1143.6	1143.1
20°	1120.2	1120.9	1121.5	1121.6	1121.2	1120.8	1120.3	1119.8
22.5°	1096.4	1097.6	1098.8	1099.0	1098.2	1097.4	1096.6	1095.8
25°	1057.2	1057.3	1057.6	1057.2	1056.4	1055.5	1054.6	1053.7
27.5°	1013.1	1012.6	1012.0	1011.3	1010.1	1009.0	1007.9	1006.7
30°	982.7	981.8	980.9	980.0	978.8	977.7	976.6	975.5
32.5°	951.9	950.8	949.8	948.7	947.5	946.4	945.3	944.2
35°	903.2	901.6	900.0	898.7	897.6	896.5	895.4	894.3
37.5°	852.2	850.5	848.9	847.3	845.7	844.3	842.8	841.3
40°	816.6	814.5	812.2	810.5	809.4	808.3	807.2	806.1
42.5°	782.2	779.7	777.0	775.4	774.7	773.9	773.2	772.4
45°	729.0	726.5	724.1	722.6	721.8	721.1	720.5	719.8
47.5°	677.4	674.7	671.8	669.7	668.0	666.3	664.6	662.9
50°	641.4	638.3	635.2	632.9	631.6	630.3	629.0	627.6
52.5°	604.5	601.6	598.9	596.7	595.0	593.3	591.6	589.9
55°	550.1	547.4	544.7	542.7	541.4	540.1	538.7	537.3
57.5°	495.6	493.0	490.5	488.6	487.3	486.0	484.7	483.4
60°	458.2	456.2	454.1	452.6	451.5	450.3	449.2	448.2
62.5°	421.6	419.8	418.0	416.5	415.4	414.2	413.2	412.1
65°	368.5	366.3	364.0	362.4	361.3	360.1	359.0	357.9
67.5°	313.8	311.6	309.4	308.2	307.9	307.6	307.3	307.0
70°	279.2	277.4	275.6	274.4	273.7	273.1	272.4	271.7
72.5°	244.6	243.2	241.8	240.7	240.0	239.3	238.7	238.0
75°	194.7	193.8	192.9	192.4	192.2	191.9	191.7	191.5
77.5°	147.4	147.1	146.9	146.5	145.9	145.3	144.8	144.2
80°	117.4	117.0	116.5	116.2	115.9	115.7	115.6	115.3
82.5°	90.5	90.2	89.9	89.7	89.5	89.3	89.1	88.8
85°	52.1	52.1	52.1	52.0	51.8	51.6	51.4	51.1
87.5°	23.2	23.4	23.7	23.7	23.8	24.0	23.8	23.8
90°	19.7	20.8	21.9	21.9	23.0	24.1	23.0	23.0
92.5°	215.1	161.8	128.8	106.9	94.0	88.0	84.4	84.4
95°	811.5	641.8	495.0	388.8	335.2	301.2	281.4	267.2
97.5°	1199.1	1136.0	1028.9	914.5	835.8	770.0	737.1	714.4
100°	1320.9	1342.7	1289.1	1208.1	1112.8	1045.9	1013.1	1004.4
102.5°	1314.8	1423.3	1438.9	1405.1	1346.7	1298.3	1263.7	1256.7
105°	1226.6	1416.2	1524.6	1569.4	1571.7	1562.9	1547.6	1541.0
107.5°	1101.5	1303.3	1456.0	1553.7	1607.8	1632.8	1643.7	1646.6
110°	1026.2	1215.7	1374.5	1495.0	1572.7	1618.7	1638.5	1648.3





TEST NUMBER: P332624-830

CATALOG NUMBER: S124DIP-S795D1205U830-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	971.0	1138.6	1288.6	1409.1	1497.4	1553.0	1580.6	1596.7
115°	915.6	1050.4	1178.5	1283.6	1370.2	1435.9	1470.9	1479.7
117.5°	888.4	999.9	1100.7	1189.9	1263.7	1318.9	1354.3	1361.1
120°	876.2	978.1	1065.6	1143.4	1205.9	1254.1	1282.5	1294.6
122.5°	865.6	964.0	1043.8	1111.9	1164.7	1205.9	1229.9	1242.0
125°	847.7	941.9	1017.5	1077.7	1121.5	1153.3	1174.1	1180.6
127.5°	825.8	915.9	991.2	1048.4	1092.4	1120.7	1138.2	1144.7
130°	808.3	894.8	969.3	1027.4	1072.2	1099.6	1117.1	1123.7
132.5°	789.9	871.2	943.9	1001.9	1045.9	1076.9	1093.4	1100.0
135°	764.5	835.7	902.5	957.2	1001.1	1031.7	1049.2	1055.8
137.5°	741.5	801.7	858.0	907.5	948.5	978.7	993.2	1001.1
140°	728.3	779.8	829.1	875.1	913.4	937.5	952.8	961.6
142.5°	716.0	761.4	803.7	843.6	877.5	899.8	913.4	919.5
145°	698.8	736.0	768.8	799.6	826.9	845.6	856.5	862.0
147.5°	684.6	714.1	740.4	764.5	784.7	800.6	809.0	810.9
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)