

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: P332605-930

Luminaire Tested: **S124DIP-S795D810U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332605-930  
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-S795D810U930-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH 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: 5066.3 lumens  
Efficiency: N/A  
Efficacy: 110.4 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

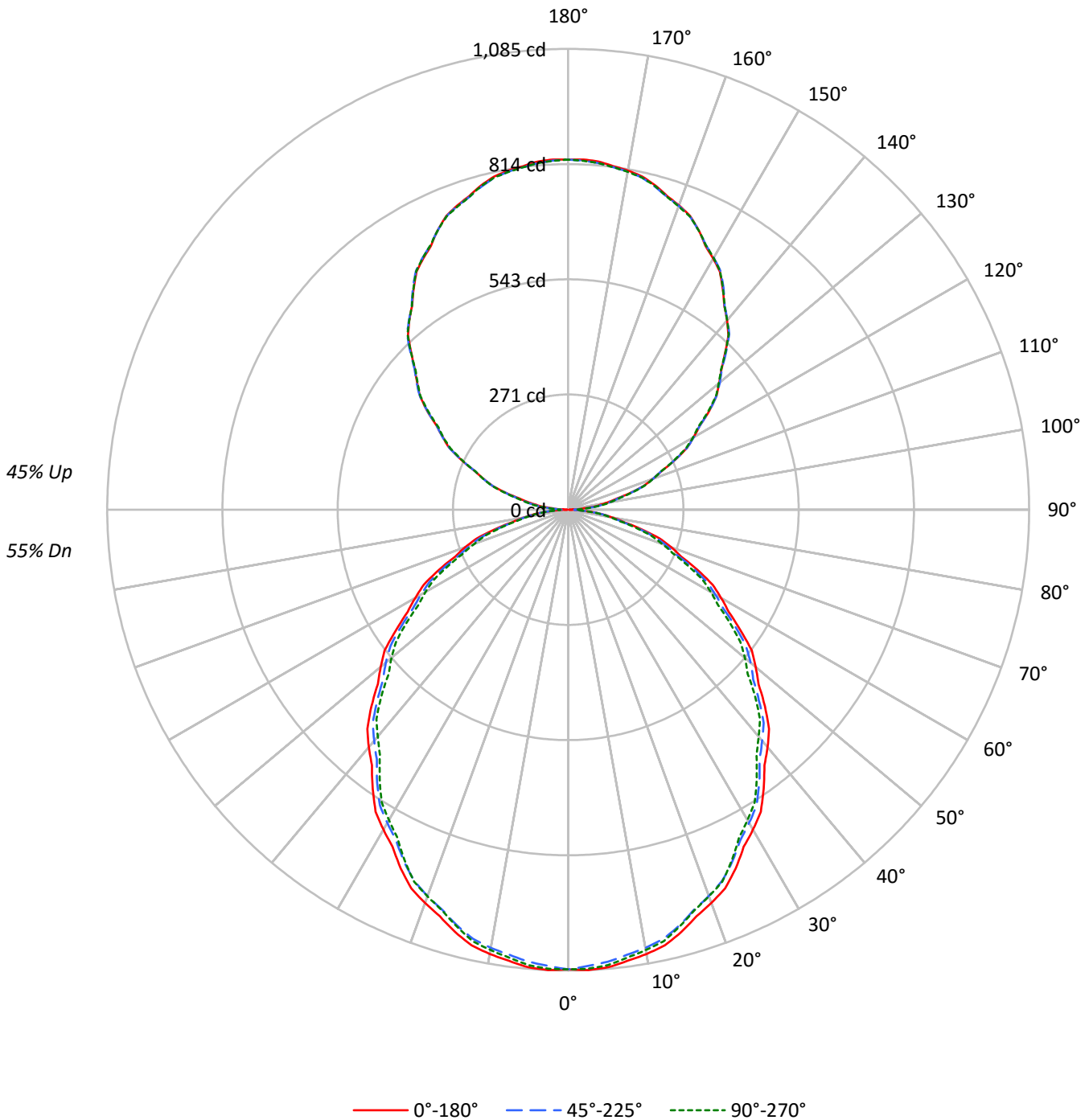
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	94	90	87	92	88	84	81	75	73	71	64	62	61	53	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39
3	82	72	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33
4	75	64	56	50	69	60	53	47	52	46	42	44	40	37	37	34	32	28
5	69	57	49	43	64	53	46	41	46	41	36	40	35	32	34	30	27	24
6	64	51	43	37	59	48	41	35	42	36	32	36	31	28	30	27	24	21
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	22	19
8	55	42	34	29	51	40	32	28	35	29	25	30	25	22	26	22	19	17
9	51	39	31	26	47	36	29	25	32	26	22	28	23	20	24	20	17	15
10	48	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14

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

	0°	45°	90°
0°	8737	8737	8737
5°	8763	8658	8721
10°	8708	8588	8630
15°	8603	8466	8487
20°	8463	8314	8322
25°	8304	8141	8118
30°	8108	7938	7866
35°	7906	7727	7624
40°	7695	7484	7347
45°	7476	7247	7108
50°	7232	7036	6818
55°	6970	6763	6542
60°	6707	6455	6260
65°	6411	6162	5914
70°	6080	5773	5549
75°	5571	5303	5168
80°	4956	4756	4635
85°	4335	4177	4094



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.9	2.0
10°-20°	287.2	5.7
20°-30°	422.7	8.3
30°-40°	491.4	9.7
40°-50°	491.4	9.7
50°-60°	429.8	8.5
60°-70°	319.2	6.3
70°-80°	181.4	3.6
80°-90°	54.8	1.1
90°-100°	54.4	1.1
100°-110°	161.0	3.2
110°-120°	273.3	5.4
120°-130°	360.4	7.1
130°-140°	404.7	8.0
140°-150°	397.7	7.9
150°-160°	334.5	6.6
160°-170°	222.6	4.4
170°-180°	77.9	1.5
0°-30°	811.8	16.0
0°-40°	1303.1	25.7
0°-60°	2224.4	43.9
0°-90°	2779.7	54.9
90°-120°	488.7	9.6
90°-150°	1651.5	32.6
90°-180°	2287.0	45.1
0°-180°	5066.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1081	1078	1068	1077	1076	103
15°	1029	1025	1013	1018	1016	290
25°	932	926	914	915	911	429
35°	802	796	784	778	774	501
45°	655	648	635	626	623	505
55°	495	492	480	470	465	443
65°	336	331	323	314	310	332
75°	179	174	170	167	166	190
85°	47	47	45	45	44	52
90°	2	9	14	18	19	5
95°	38	44	48	50	50	43
105°	148	149	152	154	156	158
115°	278	278	277	276	275	274
125°	405	405	404	403	402	361
135°	522	526	526	524	523	404
145°	634	637	637	637	635	397
155°	727	727	726	728	726	334
165°	791	789	788	791	789	223
175°	823	820	819	823	819	78
180°	824	824	824	824	824	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1085.1	1084.6	1084.1	1083.7	1083.2	1082.1	1080.4	1078.7	1077.0	1075.4	1076.8
5°	1081.4	1080.7	1079.9	1079.1	1078.3	1076.8	1074.7	1072.6	1070.5	1068.4	1070.5
7.5°	1071.4	1070.6	1069.8	1069.0	1068.3	1066.7	1064.4	1062.0	1059.6	1057.3	1059.0
10°	1062.3	1061.6	1060.8	1060.1	1059.2	1057.6	1055.1	1052.6	1050.1	1047.6	1049.1
12.5°	1050.5	1049.8	1049.0	1048.2	1047.5	1045.7	1043.1	1040.4	1037.8	1035.1	1036.8
15°	1029.4	1028.6	1027.8	1027.0	1026.3	1024.5	1021.6	1018.7	1015.8	1012.9	1014.1
17.5°	1003.9	1002.9	1001.9	1001.0	1000.0	998.2	995.5	992.7	989.9	987.2	988.0
20°	985.1	984.1	983.3	982.3	981.3	979.3	976.5	973.5	970.7	967.8	968.4
22.5°	965.1	963.8	962.5	961.2	959.9	957.9	955.0	952.1	949.2	946.3	947.4
25°	932.2	930.9	929.5	928.2	926.8	924.8	922.1	919.4	916.7	914.0	914.2
27.5°	894.8	893.4	892.0	890.6	889.2	887.3	884.8	882.3	879.8	877.3	876.8
30°	869.8	868.3	866.7	865.2	863.6	861.6	859.1	856.6	854.1	851.6	850.8
32.5°	843.4	842.0	840.7	839.3	837.9	835.8	833.2	830.5	827.9	825.2	824.3
35°	802.2	800.8	799.5	798.1	796.8	794.8	792.1	789.4	786.7	784.0	782.6
37.5°	758.6	757.4	756.2	755.0	753.7	751.6	748.8	745.8	743.0	740.0	738.6
40°	730.2	728.6	727.1	725.5	724.0	721.8	718.9	716.0	713.1	710.2	708.3
42.5°	699.7	698.7	697.8	696.9	695.9	693.9	690.7	687.5	684.3	681.1	678.9
45°	654.8	653.4	652.1	650.7	649.4	647.1	644.1	641.0	637.9	634.8	632.7
47.5°	607.7	606.8	605.9	605.0	604.1	602.2	599.3	596.5	593.6	590.8	588.3
50°	575.8	575.0	574.3	573.5	572.7	571.0	568.3	565.7	562.9	560.2	557.5
52.5°	544.6	543.7	542.7	541.8	540.9	539.0	536.1	533.3	530.4	527.6	525.2
55°	495.2	494.6	494.0	493.4	492.8	491.2	488.5	485.8	483.1	480.5	478.1
57.5°	448.0	447.4	446.7	446.1	445.4	443.7	441.1	438.4	435.8	433.1	430.9
60°	415.4	414.4	413.4	412.5	411.6	409.8	407.3	404.8	402.3	399.8	398.0
62.5°	383.5	382.7	381.9	381.1	380.3	378.5	375.9	373.2	370.6	367.9	366.3
65°	335.6	334.7	333.7	332.7	331.7	330.3	328.4	326.4	324.5	322.6	320.7
67.5°	287.4	286.5	285.6	284.7	283.9	282.5	280.6	278.8	277.0	275.1	273.2
70°	257.6	256.2	254.9	253.5	252.2	250.7	249.2	247.6	246.1	244.6	243.0
72.5°	225.7	224.3	223.0	221.6	220.2	219.0	217.8	216.5	215.2	214.0	212.8
75°	178.6	177.7	176.8	175.8	174.8	173.8	172.8	171.9	171.0	170.0	169.2
77.5°	133.7	133.3	132.9	132.5	132.0	131.4	130.5	129.7	128.8	128.0	127.8
80°	106.6	106.1	105.5	104.9	104.4	103.9	103.5	103.1	102.7	102.3	101.9
82.5°	80.3	80.1	79.7	79.5	79.2	79.1	79.0	78.9	78.8	78.8	78.5
85°	46.8	46.8	46.8	46.8	46.8	46.6	46.2	45.9	45.5	45.1	45.1
87.5°	18.4	18.6	18.8	18.9	19.1	19.2	19.2	19.3	19.4	19.5	19.6
90°	1.9	3.5	5.1	6.6	8.2	9.5	10.6	11.7	12.9	14.0	14.8
92.5°	13.6	15.4	17.2	19.0	20.8	22.1	22.8	23.6	24.5	25.3	25.8
95°	38.2	39.5	40.8	42.1	43.4	44.5	45.5	46.5	47.5	48.4	48.8
97.5°	66.8	67.8	68.8	69.9	70.8	72.0	73.1	74.3	75.4	76.6	77.1
100°	89.3	89.8	90.3	90.9	91.5	92.5	93.7	95.0	96.2	97.5	97.8
102.5°	112.7	112.9	113.2	113.4	113.6	114.3	115.4	116.6	117.8	119.0	119.4
105°	148.5	148.6	148.8	149.0	149.1	149.4	150.0	150.6	151.2	151.7	152.1
107.5°	186.1	186.3	186.5	186.6	186.8	186.9	187.0	187.1	187.2	187.3	187.7
110°	211.7	211.9	212.1	212.5	212.7	212.8	212.7	212.5	212.4	212.2	212.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	238.1	238.1	238.2	238.3	238.4	238.2	238.0	237.7	237.5	237.3	237.2
115°	277.9	277.9	277.9	277.9	277.9	277.8	277.4	277.2	276.9	276.6	276.5
117.5°	315.4	315.5	315.6	315.7	315.8	315.8	315.6	315.4	315.2	315.0	314.5
120°	340.4	341.0	341.5	342.1	342.7	342.7	342.3	341.9	341.4	341.0	340.3
122.5°	366.4	366.6	366.8	367.0	367.3	367.3	367.1	366.9	366.7	366.5	366.0
125°	404.7	404.7	404.7	404.7	404.7	404.6	404.6	404.4	404.2	404.1	403.8
127.5°	439.5	439.9	440.4	440.8	441.2	441.3	441.1	440.9	440.7	440.4	440.2
130°	464.0	464.5	464.9	465.3	465.7	465.9	465.9	465.9	465.9	465.9	465.6
132.5°	489.0	489.3	489.7	489.9	490.2	490.3	490.2	490.2	490.0	489.9	489.6
135°	522.0	522.9	523.7	524.6	525.5	525.9	525.9	525.9	525.9	525.9	525.5
137.5°	558.0	558.4	558.7	559.1	559.5	559.9	560.1	560.4	560.5	560.8	560.4
140°	582.0	582.2	582.5	582.8	583.1	583.2	583.2	583.2	583.2	583.2	583.1
142.5°	603.9	604.1	604.5	604.7	605.0	605.1	605.0	604.9	604.7	604.6	604.6
145°	634.2	634.8	635.4	635.9	636.5	636.8	637.0	637.1	637.2	637.4	637.2
147.5°	664.3	665.0	665.6	666.3	667.0	667.3	667.2	667.1	666.9	666.8	666.8
150°	682.7	683.2	683.8	684.4	684.9	685.2	685.2	685.2	685.2	685.2	685.2
152.5°	700.0	700.3	700.7	701.0	701.3	701.6	701.6	701.8	701.9	702.1	702.4
155°	726.6	726.6	726.6	726.6	726.6	726.5	726.4	726.3	726.1	726.0	726.5
157.5°	749.1	748.8	748.5	748.3	748.0	747.9	747.9	747.9	747.8	747.8	748.2
160°	762.3	762.1	762.1	761.9	761.7	761.6	761.5	761.3	761.2	761.1	761.5
162.5°	774.5	774.2	773.8	773.5	773.1	772.8	772.7	772.6	772.4	772.3	773.1
165°	791.0	790.6	790.2	789.7	789.3	789.0	788.6	788.4	788.1	787.8	788.6
167.5°	803.6	803.0	802.4	801.8	801.3	801.0	801.0	801.0	801.0	801.0	801.9
170°	810.7	810.1	809.3	808.6	808.0	807.6	807.8	808.0	808.0	808.2	809.0
172.5°	815.9	815.3	814.6	814.1	813.5	813.2	813.3	813.3	813.3	813.3	814.2
175°	822.9	822.1	821.4	820.8	820.0	819.6	819.5	819.3	819.2	819.0	820.0
177.5°	825.2	824.6	824.0	823.5	822.9	822.6	822.6	822.6	822.6	822.6	823.4
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1078.4	1079.9	1081.5	1082.2	1082.1	1081.9	1081.7	1081.6
5°	1072.6	1074.7	1076.8	1077.7	1077.3	1077.0	1076.6	1076.2
7.5°	1060.7	1062.4	1064.0	1064.8	1064.6	1064.4	1064.1	1063.9
10°	1050.7	1052.2	1053.8	1054.3	1053.9	1053.5	1053.2	1052.8
12.5°	1038.5	1040.2	1041.9	1042.4	1042.0	1041.4	1040.8	1040.3
15°	1015.2	1016.4	1017.5	1017.8	1017.2	1016.7	1016.1	1015.5
17.5°	988.7	989.4	990.2	990.3	989.9	989.5	989.2	988.8
20°	969.0	969.6	970.1	970.2	969.8	969.5	969.1	968.7
22.5°	948.4	949.4	950.5	950.6	949.9	949.3	948.5	947.9
25°	914.4	914.6	914.8	914.5	913.8	913.0	912.2	911.4
27.5°	876.4	875.9	875.4	874.7	873.8	872.8	871.8	870.8
30°	850.0	849.3	848.5	847.7	846.7	845.7	844.7	843.8
32.5°	823.4	822.5	821.6	820.6	819.6	818.6	817.7	816.8
35°	781.3	779.9	778.5	777.4	776.4	775.5	774.5	773.6
37.5°	737.1	735.6	734.3	732.9	731.6	730.3	729.0	727.7
40°	706.4	704.5	702.5	701.1	700.1	699.2	698.2	697.2
42.5°	676.6	674.4	672.1	670.7	670.1	669.4	668.8	668.1
45°	630.6	628.4	626.3	625.0	624.4	623.8	623.2	622.6
47.5°	586.0	583.6	581.1	579.3	577.8	576.3	574.9	573.4
50°	554.8	552.1	549.4	547.5	546.3	545.2	544.0	542.9
52.5°	522.9	520.4	518.0	516.2	514.7	513.2	511.8	510.3
55°	475.8	473.5	471.2	469.4	468.3	467.2	465.9	464.8
57.5°	428.7	426.5	424.3	422.7	421.5	420.4	419.3	418.2
60°	396.3	394.6	392.8	391.5	390.5	389.6	388.6	387.7
62.5°	364.7	363.1	361.6	360.3	359.3	358.3	357.4	356.4
65°	318.8	316.8	314.9	313.5	312.5	311.5	310.5	309.6
67.5°	271.4	269.5	267.7	266.6	266.4	266.1	265.8	265.5
70°	241.5	239.9	238.4	237.3	236.8	236.2	235.6	235.1
72.5°	211.6	210.3	209.1	208.2	207.6	207.0	206.4	205.9
75°	168.4	167.6	166.9	166.4	166.2	166.0	165.8	165.7
77.5°	127.5	127.3	127.1	126.7	126.2	125.7	125.2	124.7
80°	101.6	101.2	100.8	100.5	100.3	100.1	100.0	99.7
82.5°	78.3	78.0	77.8	77.6	77.5	77.2	77.0	76.8
85°	45.1	45.1	45.1	45.0	44.8	44.6	44.4	44.2
87.5°	19.8	20.0	20.1	20.2	20.3	20.4	20.4	20.5
90°	15.7	16.6	17.4	18.0	18.3	18.6	18.8	19.2
92.5°	26.3	26.7	27.3	27.6	27.8	28.0	28.1	28.3
95°	49.3	49.7	50.1	50.4	50.4	50.4	50.4	50.4
97.5°	77.6	78.1	78.7	78.9	78.9	78.9	78.9	78.9
100°	98.1	98.4	98.7	98.8	98.8	98.8	98.8	98.8
102.5°	119.8	120.1	120.5	120.7	120.9	121.0	121.2	121.2
105°	152.5	153.0	153.4	153.8	154.3	154.7	155.1	155.6
107.5°	188.1	188.4	188.8	189.1	189.0	189.0	189.0	188.9
110°	211.7	211.4	211.1	211.2	211.7	212.1	212.5	212.9





TEST NUMBER: P332605-930

CATALOG NUMBER: S124DIP-S795D810U930-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	237.1	237.1	237.0	237.0	237.1	237.2	237.3	237.3
115°	276.3	276.2	276.1	275.9	275.8	275.7	275.5	275.3
117.5°	314.1	313.6	313.1	312.7	312.4	312.1	311.9	311.5
120°	339.6	338.8	338.2	337.9	338.3	338.5	338.8	339.1
122.5°	365.5	365.1	364.6	364.1	363.5	363.1	362.6	362.1
125°	403.6	403.2	403.0	402.7	402.4	402.1	401.9	401.5
127.5°	439.9	439.6	439.3	439.0	438.8	438.6	438.4	438.1
130°	465.4	465.0	464.8	464.4	463.8	463.3	462.7	462.1
132.5°	489.3	489.0	488.8	488.5	488.3	488.0	487.8	487.6
135°	525.3	525.0	524.7	524.3	523.9	523.5	523.1	522.7
137.5°	560.0	559.7	559.3	559.1	559.2	559.3	559.4	559.5
140°	582.9	582.8	582.6	582.5	582.4	582.2	582.0	582.0
142.5°	604.5	604.5	604.5	604.5	604.5	604.5	604.4	604.4
145°	637.1	637.0	636.8	636.5	636.1	635.7	635.3	634.9
147.5°	666.6	666.5	666.3	666.3	666.1	665.9	665.9	665.7
150°	685.2	685.2	685.2	685.1	685.0	684.9	684.7	684.5
152.5°	702.7	703.0	703.4	703.4	703.0	702.6	702.3	701.9
155°	727.1	727.7	728.2	728.2	727.7	727.1	726.5	726.0
157.5°	748.6	749.1	749.5	749.4	749.0	748.5	748.0	747.5
160°	761.9	762.3	762.7	762.6	761.9	761.2	760.5	759.8
162.5°	773.8	774.5	775.3	775.3	774.6	774.0	773.2	772.5
165°	789.5	790.4	791.2	791.3	790.8	790.2	789.6	789.1
167.5°	802.7	803.6	804.5	804.5	803.6	802.7	801.8	801.0
170°	809.9	810.7	811.6	811.5	810.6	809.6	808.5	807.6
172.5°	815.2	816.2	817.2	817.2	816.2	815.1	814.2	813.2
175°	821.0	822.0	823.0	823.0	822.0	821.0	820.0	819.0
177.5°	824.2	825.0	825.8	825.7	824.8	823.9	823.0	822.1
180°	824.1	824.1	824.1	824.1	824.1	824.1	824.1	824.1

(END OF REPORT)