

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: P332791-930

Luminaire Tested: **S124DIW-S795D1050U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332791-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIW-S795D1050U930-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 1050 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

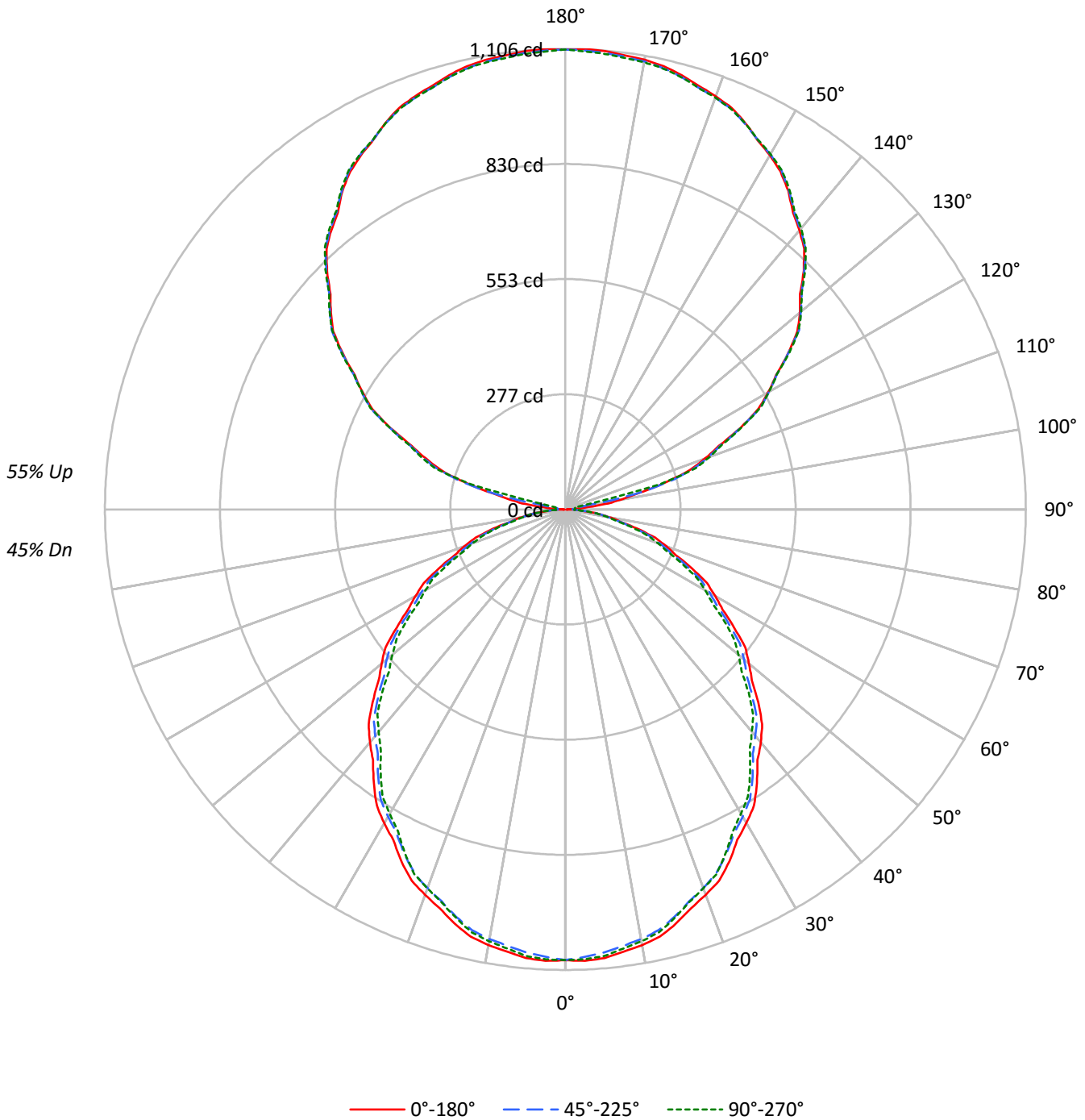
Lumens per Lamp: N/A  
Luminaire Lumens: 6196.8 lumens  
Efficiency: N/A  
Efficacy: 117.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 52.6  
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	45
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	32
3	80	71	64	58	73	65	59	54	54	50	46	45	41	38	35	33	31	27
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20
6	62	50	42	36	57	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	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

**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	1.6
10°-20°	287.2	4.6
20°-30°	422.7	6.8
30°-40°	491.4	7.9
40°-50°	491.4	7.9
50°-60°	429.8	6.9
60°-70°	319.2	5.2
70°-80°	181.4	2.9
80°-90°	55.5	0.9
90°-100°	37.8	0.6
100°-110°	240.8	3.9
110°-120°	460.7	7.4
120°-130°	584.9	9.4
130°-140°	625.8	10.1
140°-150°	585.2	9.4
150°-160°	471.9	7.6
160°-170°	304.4	4.9
170°-180°	104.9	1.7
0°-30°	811.8	13.1
0°-40°	1303.1	21.0
0°-60°	2224.4	35.9
0°-90°	2780.5	44.9
90°-120°	739.3	11.9
90°-150°	2535.2	40.9
90°-180°	3416.0	55.1
0°-180°	6196.8	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	11	18	23	25	5
95°	45	19	18	23	24	58
105°	249	254	258	263	236	260
115°	464	466	466	467	468	457
125°	653	656	654	657	658	582
135°	810	809	812	814	815	623
145°	933	936	936	937	938	583
155°	1023	1024	1022	1025	1023	472
165°	1080	1076	1076	1081	1075	305
175°	1104	1100	1100	1107	1098	105
180°	1104	1104	1104	1104	1104	



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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°	18.5	18.8	19.0	19.3	19.6	19.7	19.9	20.0	20.1	20.3	20.5
90°	2.4	4.5	6.5	8.6	10.5	12.3	13.8	15.2	16.7	18.2	19.2
92.5°	10.4	10.5	10.6	10.8	10.8	11.7	13.1	14.6	16.1	17.5	18.6
95°	45.4	39.2	32.9	26.7	20.5	17.4	17.6	17.8	18.0	18.2	19.2
97.5°	96.4	100.4	104.3	108.2	112.0	103.8	83.2	62.8	42.3	21.8	21.9
100°	135.5	138.8	142.1	145.4	148.7	137.7	112.3	87.0	61.7	36.4	33.3
102.5°	179.1	181.5	183.9	186.4	188.7	188.3	185.1	181.7	178.4	175.1	141.5
105°	248.7	249.7	250.9	251.9	253.1	254.0	254.9	255.9	256.8	257.7	259.3
107.5°	313.2	313.8	314.3	314.9	315.4	316.3	317.6	318.9	320.1	321.3	322.1
110°	356.9	357.4	357.9	358.5	359.1	359.9	361.0	362.1	363.2	364.3	364.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	399.2	400.1	401.1	402.1	403.1	403.9	404.4	404.9	405.4	405.9	405.9
115°	464.2	464.8	465.4	465.9	466.4	466.6	466.4	466.3	466.1	465.9	466.3
117.5°	522.9	523.6	524.3	525.1	525.8	526.4	526.8	527.2	527.6	528.0	527.9
120°	562.6	563.3	564.0	564.8	565.5	565.7	565.6	565.4	565.2	565.0	565.4
122.5°	599.6	600.0	600.4	600.9	601.3	601.7	601.9	602.2	602.4	602.7	602.9
125°	652.6	653.3	654.0	654.8	655.5	655.7	655.3	654.9	654.6	654.2	654.8
127.5°	702.8	703.0	703.2	703.4	703.5	704.0	704.9	705.7	706.5	707.4	707.4
130°	735.2	735.4	735.6	735.7	735.9	736.3	736.9	737.4	737.9	738.5	738.7
132.5°	764.9	765.2	765.6	765.9	766.2	766.8	767.4	768.2	768.8	769.6	769.7
135°	809.5	809.3	809.2	808.9	808.8	809.1	809.8	810.6	811.3	812.0	812.4
137.5°	849.0	849.1	849.1	849.2	849.3	849.7	850.5	851.3	852.2	853.0	853.4
140°	874.8	875.1	875.5	875.9	876.3	876.6	877.0	877.3	877.8	878.1	878.6
142.5°	897.9	898.5	899.2	899.9	900.6	901.0	901.2	901.4	901.6	901.9	902.3
145°	933.4	934.0	934.5	935.1	935.6	935.9	935.9	935.9	935.9	935.9	936.1
147.5°	961.6	962.7	963.8	964.7	965.8	966.2	966.0	965.9	965.6	965.5	965.6
150°	982.2	982.9	983.7	984.4	985.1	985.4	985.2	985.0	984.8	984.6	984.6
152.5°	999.3	1000.0	1000.5	1001.1	1001.7	1001.8	1001.5	1001.2	1000.9	1000.5	1000.8
155°	1023.4	1023.7	1023.9	1024.0	1024.2	1024.0	1023.4	1023.0	1022.4	1021.8	1022.5
157.5°	1043.8	1043.7	1043.6	1043.4	1043.3	1043.0	1042.4	1041.7	1041.1	1040.5	1041.5
160°	1055.6	1055.2	1054.6	1054.0	1053.4	1053.1	1053.0	1052.7	1052.6	1052.4	1053.4
162.5°	1066.2	1065.6	1064.9	1064.1	1063.5	1063.0	1062.8	1062.7	1062.5	1062.3	1063.4
165°	1079.6	1078.7	1077.8	1076.8	1076.0	1075.5	1075.5	1075.5	1075.5	1075.5	1077.0
167.5°	1090.2	1089.2	1088.3	1087.4	1086.4	1085.9	1085.7	1085.7	1085.6	1085.4	1087.0
170°	1096.2	1095.0	1094.0	1092.8	1091.8	1091.3	1091.4	1091.7	1091.8	1092.0	1093.5
172.5°	1100.1	1099.0	1097.9	1096.8	1095.7	1095.3	1095.4	1095.6	1095.8	1096.0	1097.5
175°	1104.4	1103.3	1102.2	1101.1	1100.0	1099.6	1099.8	1099.9	1100.1	1100.3	1102.0
177.5°	1106.4	1105.4	1104.3	1103.3	1102.3	1102.0	1102.2	1102.5	1102.8	1103.1	1104.2
180°	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4



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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°	20.7	21.0	21.2	21.3	21.4	21.4	21.5	21.6
90°	20.4	21.4	22.6	23.3	23.6	24.1	24.4	24.8
92.5°	19.7	20.8	21.9	22.5	22.6	22.7	22.7	22.8
95°	20.4	21.4	22.6	23.2	23.4	23.6	23.8	24.0
97.5°	22.0	22.2	22.3	22.4	22.6	22.7	22.9	23.2
100°	30.1	27.0	23.9	22.4	22.6	22.7	22.9	23.2
102.5°	107.8	74.1	40.4	23.6	23.6	23.7	23.7	23.8
105°	261.1	262.7	264.3	261.9	255.3	248.7	242.1	235.5
107.5°	322.9	323.8	324.6	325.3	326.0	326.7	327.4	328.1
110°	365.0	365.4	365.7	366.2	366.8	367.3	367.9	368.4





TEST NUMBER: P332791-930

CATALOG NUMBER: S124DIW-S795D1050U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	405.8	405.7	405.6	405.9	406.7	407.3	408.1	408.7
115°	466.6	467.0	467.3	467.6	467.6	467.6	467.6	467.6
117.5°	527.8	527.8	527.7	527.7	527.6	527.5	527.4	527.3
120°	565.7	566.1	566.5	566.5	566.1	565.7	565.4	565.0
122.5°	603.2	603.3	603.6	603.5	603.2	602.8	602.4	602.0
125°	655.3	655.9	656.4	656.8	657.0	657.1	657.4	657.5
127.5°	707.2	707.1	706.9	706.9	706.7	706.5	706.4	706.3
130°	738.8	739.1	739.2	739.3	739.3	739.3	739.3	739.3
132.5°	769.9	770.1	770.3	770.3	770.1	770.0	769.9	769.7
135°	812.8	813.1	813.5	813.8	814.2	814.6	815.0	815.3
137.5°	853.8	854.2	854.6	854.8	854.6	854.5	854.4	854.3
140°	879.2	879.7	880.3	880.7	880.8	881.0	881.2	881.4
142.5°	902.7	903.1	903.5	903.7	903.8	903.8	903.8	903.8
145°	936.3	936.5	936.6	936.9	937.3	937.7	938.0	938.4
147.5°	965.8	965.9	966.0	966.2	966.5	966.6	966.8	966.9
150°	984.6	984.6	984.6	984.7	984.9	985.1	985.3	985.5
152.5°	1001.1	1001.4	1001.7	1001.8	1001.7	1001.5	1001.4	1001.4
155°	1023.3	1024.0	1024.7	1024.8	1024.3	1023.8	1023.2	1022.6
157.5°	1042.4	1043.3	1044.3	1044.3	1043.3	1042.4	1041.5	1040.5
160°	1054.6	1055.6	1056.8	1056.8	1055.6	1054.6	1053.4	1052.4
162.5°	1064.5	1065.6	1066.7	1066.7	1065.4	1064.1	1062.9	1061.6
165°	1078.5	1079.9	1081.4	1081.2	1079.6	1078.0	1076.4	1074.6
167.5°	1088.7	1090.3	1091.8	1091.8	1090.0	1088.1	1086.3	1084.4
170°	1094.9	1096.4	1097.9	1097.7	1095.8	1094.1	1092.2	1090.4
172.5°	1098.9	1100.4	1101.9	1101.6	1099.6	1097.6	1095.7	1093.6
175°	1103.6	1105.2	1106.9	1106.6	1104.4	1102.2	1100.0	1097.8
177.5°	1105.5	1106.6	1107.8	1107.5	1105.7	1104.0	1102.2	1100.5
180°	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4	1104.4

(END OF REPORT)