

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: P332761-930

Luminaire Tested: **S124DIW-S575D1050U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332761-930
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-S575D1050U930-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 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: 5451.3 lumens
Efficiency: N/A
Efficacy: 120.6 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: Semi-Indirect

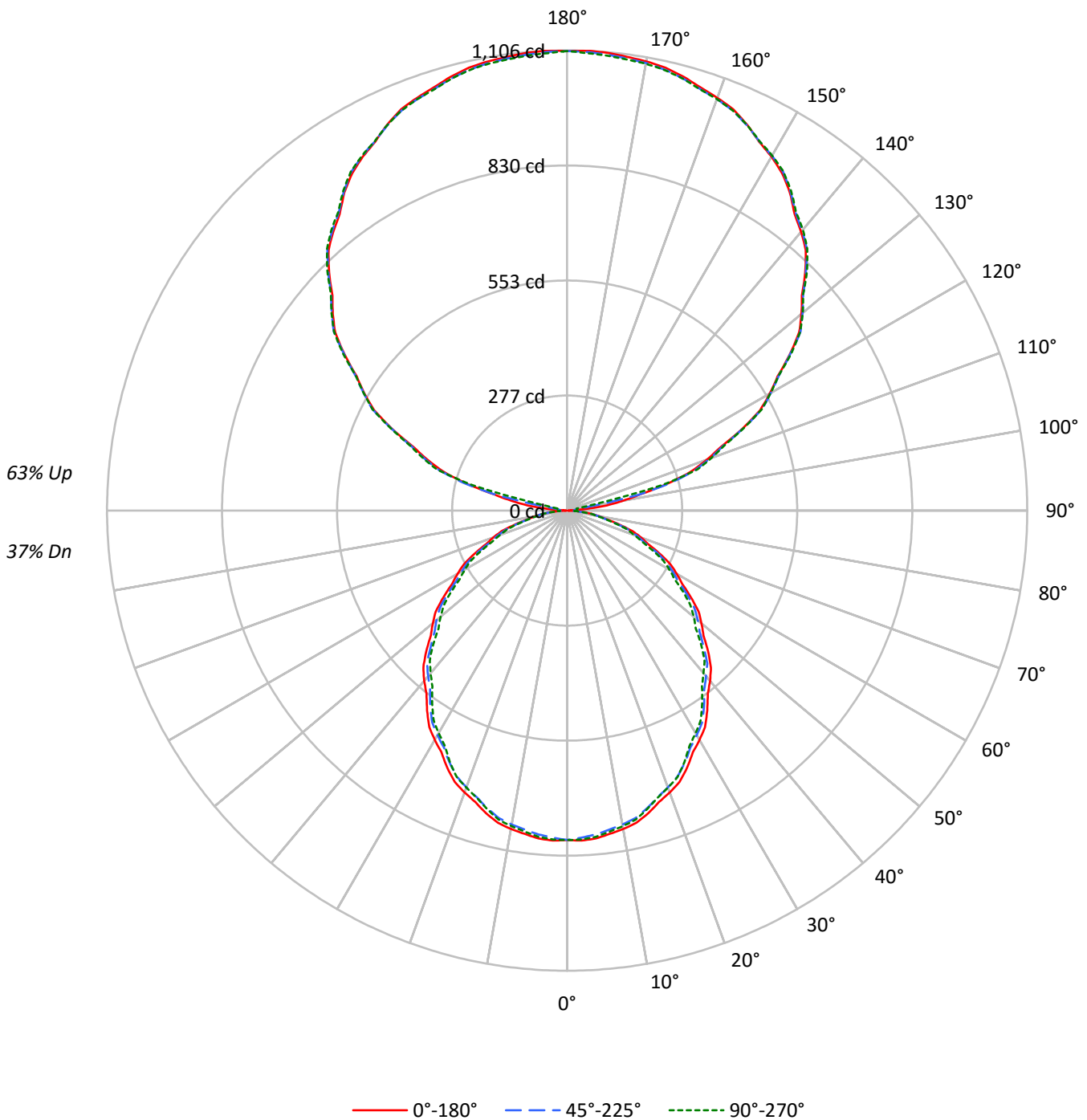
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332761-930

CATALOG NUMBER: S124DIW-S575D1050U930-4F0-1E-UDD-F

Luminous Intensity Polar Plot





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CATALOG NUMBER: S124DIW-S575D1050U930-4F0-1E-UDD-F

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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37				
1	95	91	87	83	86	82	79	76	67	64	62	52	51	50	39	38	37	31				
2	86	79	73	68	78	72	67	62	58	55	52	46	44	41	35	33	32	26				
3	79	69	62	57	71	63	57	52	52	47	43	41	38	35	31	29	27	22				
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19				
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17				
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	15				
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13				
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	12				
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10				
10	45	33	26	22	41	31	24	20	25	21	17	21	17	14	16	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6391	6391	6391
5°	6412	6334	6380
10°	6370	6283	6314
15°	6294	6193	6209
20°	6192	6082	6088
25°	6075	5956	5940
30°	5931	5808	5754
35°	5784	5653	5577
40°	5630	5476	5376
45°	5469	5302	5200
50°	5291	5148	4987
55°	5098	4947	4787
60°	4907	4721	4579
65°	4690	4508	4327
70°	4447	4223	4057
75°	4077	3877	3780
80°	3626	3477	3394
85°	3168	3057	3001



TEST NUMBER: P332761-930

CATALOG NUMBER: S124DIW-S575D1050U930-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.6	1.4
10°-20°	210.1	3.9
20°-30°	309.2	5.7
30°-40°	359.5	6.6
40°-50°	359.5	6.6
50°-60°	314.5	5.8
60°-70°	233.5	4.3
70°-80°	132.7	2.4
80°-90°	41.5	0.8
90°-100°	37.8	0.7
100°-110°	240.8	4.4
110°-120°	460.7	8.5
120°-130°	584.9	10.7
130°-140°	625.8	11.5
140°-150°	585.2	10.7
150°-160°	471.9	8.7
160°-170°	304.4	5.6
170°-180°	104.9	1.9
0°-30°	593.9	10.9
0°-40°	953.4	17.5
0°-60°	1627.3	29.9
0°-90°	2035.0	37.3
90°-120°	739.3	13.6
90°-150°	2535.2	46.5
90°-180°	3416.0	62.7
0°-180°	5451.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	791	788	782	788	787	75
15°	753	750	741	744	743	212
25°	682	677	669	669	667	314
35°	587	582	574	569	566	367
45°	479	474	464	458	456	369
55°	362	360	352	344	340	324
65°	246	242	236	230	226	243
75°	131	128	124	122	121	139
85°	34	34	33	33	32	38
90°	2	11	18	23	25	4
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	



TEST NUMBER: P332761-930

CATALOG NUMBER: S124DIW-S575D1050U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7
2.5°	793.8	793.4	793.1	792.8	792.5	791.7	790.4	789.2	787.9	786.7	787.8
5°	791.2	790.6	790.0	789.5	788.9	787.8	786.3	784.7	783.2	781.6	783.2
7.5°	783.7	783.2	782.7	782.1	781.5	780.4	778.7	777.0	775.2	773.5	774.8
10°	777.1	776.7	776.1	775.5	774.9	773.7	771.9	770.1	768.3	766.4	767.5
12.5°	768.6	768.0	767.4	766.9	766.3	765.1	763.1	761.2	759.2	757.2	758.5
15°	753.1	752.5	752.0	751.4	750.8	749.5	747.4	745.3	743.1	741.0	741.8
17.5°	734.4	733.7	733.0	732.3	731.6	730.3	728.2	726.3	724.2	722.3	722.8
20°	720.7	720.0	719.3	718.6	717.9	716.5	714.4	712.2	710.1	708.0	708.4
22.5°	706.0	705.1	704.2	703.2	702.3	700.7	698.6	696.5	694.4	692.3	693.1
25°	682.0	681.0	680.0	679.1	678.1	676.6	674.6	672.6	670.7	668.7	668.9
27.5°	654.6	653.6	652.6	651.6	650.5	649.1	647.3	645.5	643.6	641.8	641.5
30°	636.3	635.2	634.1	632.9	631.9	630.3	628.5	626.6	624.8	623.1	622.5
32.5°	617.0	616.0	615.0	614.0	613.0	611.5	609.6	607.6	605.7	603.7	603.1
35°	586.9	585.9	584.9	583.9	582.9	581.4	579.4	577.5	575.5	573.6	572.5
37.5°	555.0	554.1	553.2	552.3	551.4	549.9	547.8	545.7	543.6	541.4	540.4
40°	534.2	533.0	531.9	530.8	529.7	528.1	525.9	523.8	521.7	519.6	518.2
42.5°	511.8	511.2	510.5	509.8	509.2	507.6	505.3	503.0	500.6	498.3	496.7
45°	479.0	478.0	477.0	476.1	475.1	473.4	471.2	468.9	466.7	464.4	462.8
47.5°	444.6	443.9	443.3	442.5	441.9	440.5	438.5	436.3	434.2	432.2	430.4
50°	421.3	420.7	420.1	419.6	419.0	417.8	415.8	413.8	411.8	409.9	407.9
52.5°	398.4	397.8	397.1	396.4	395.7	394.4	392.2	390.2	388.1	386.0	384.3
55°	362.2	361.8	361.4	361.0	360.6	359.4	357.4	355.4	353.4	351.5	349.8
57.5°	327.8	327.3	326.8	326.3	325.8	324.7	322.7	320.7	318.8	316.8	315.2
60°	303.9	303.2	302.5	301.7	301.1	299.8	298.0	296.1	294.3	292.4	291.2
62.5°	280.5	280.0	279.3	278.8	278.2	276.9	275.0	273.0	271.1	269.1	268.0
65°	245.5	244.8	244.1	243.4	242.7	241.7	240.3	238.8	237.4	236.0	234.6
67.5°	210.3	209.6	209.0	208.3	207.7	206.7	205.3	204.0	202.6	201.2	199.9
70°	188.4	187.4	186.5	185.5	184.5	183.4	182.3	181.2	180.0	178.9	177.8
72.5°	165.1	164.1	163.1	162.1	161.1	160.2	159.3	158.4	157.5	156.5	155.6
75°	130.7	130.0	129.3	128.6	127.8	127.2	126.5	125.7	125.1	124.3	123.8
77.5°	97.8	97.5	97.2	96.9	96.6	96.1	95.5	94.9	94.2	93.7	93.4
80°	78.0	77.6	77.2	76.8	76.3	76.0	75.7	75.4	75.2	74.8	74.6
82.5°	58.8	58.5	58.4	58.1	58.0	57.8	57.8	57.7	57.6	57.6	57.4
85°	34.2	34.2	34.2	34.2	34.2	34.1	33.8	33.6	33.3	33.0	33.0
87.5°	13.7	14.0	14.3	14.6	14.8	15.1	15.2	15.5	15.7	15.8	16.1
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



TEST NUMBER: P332761-930

CATALOG NUMBER: S124DIW-S575D1050U930-4F0-1E-UDD-F

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



TEST NUMBER: P332761-930

CATALOG NUMBER: S124DIW-S575D1050U930-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7
2.5°	789.0	790.1	791.2	791.7	791.6	791.5	791.4	791.2
5°	784.7	786.3	787.8	788.5	788.1	787.9	787.6	787.3
7.5°	776.0	777.2	778.4	779.0	778.9	778.7	778.5	778.3
10°	768.7	769.8	770.9	771.4	771.0	770.8	770.5	770.2
12.5°	759.8	761.0	762.2	762.6	762.2	761.8	761.5	761.1
15°	742.7	743.6	744.4	744.6	744.2	743.8	743.3	742.9
17.5°	723.3	723.8	724.4	724.5	724.2	723.9	723.7	723.4
20°	708.9	709.3	709.7	709.8	709.5	709.2	709.0	708.7
22.5°	693.8	694.6	695.4	695.5	695.0	694.5	694.0	693.4
25°	669.0	669.1	669.3	669.0	668.5	667.9	667.3	666.8
27.5°	641.2	640.7	640.4	639.9	639.2	638.5	637.8	637.1
30°	621.9	621.3	620.8	620.1	619.4	618.7	618.0	617.3
32.5°	602.3	601.7	601.0	600.3	599.7	598.9	598.2	597.5
35°	571.5	570.5	569.6	568.8	568.0	567.3	566.6	565.9
37.5°	539.3	538.2	537.1	536.1	535.2	534.3	533.4	532.4
40°	516.8	515.4	514.0	512.9	512.2	511.5	510.8	510.1
42.5°	495.0	493.3	491.7	490.6	490.2	489.8	489.3	488.8
45°	461.3	459.7	458.2	457.2	456.8	456.4	455.9	455.5
47.5°	428.7	426.9	425.2	423.8	422.7	421.6	420.5	419.5
50°	405.9	403.9	401.9	400.6	399.7	398.8	398.0	397.1
52.5°	382.5	380.7	379.0	377.6	376.5	375.4	374.4	373.3
55°	348.1	346.4	344.7	343.4	342.6	341.8	340.9	340.1
57.5°	313.6	312.0	310.4	309.2	308.3	307.5	306.7	305.9
60°	289.9	288.7	287.4	286.4	285.7	285.0	284.3	283.6
62.5°	266.8	265.6	264.5	263.6	262.9	262.2	261.5	260.7
65°	233.2	231.8	230.4	229.3	228.6	227.9	227.2	226.5
67.5°	198.5	197.2	195.8	195.0	194.9	194.7	194.4	194.3
70°	176.7	175.5	174.4	173.7	173.2	172.8	172.4	171.9
72.5°	154.7	153.8	153.0	152.3	151.9	151.5	151.1	150.6
75°	123.2	122.6	122.1	121.7	121.6	121.5	121.3	121.2
77.5°	93.3	93.1	92.9	92.7	92.3	92.0	91.6	91.2
80°	74.3	74.0	73.7	73.5	73.4	73.2	73.1	73.0
82.5°	57.2	57.1	56.9	56.7	56.7	56.5	56.3	56.2
85°	33.0	33.0	33.0	32.9	32.8	32.6	32.5	32.4
87.5°	16.2	16.5	16.7	16.9	16.9	17.0	17.0	17.1
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: P332761-930

CATALOG NUMBER: S124DIW-S575D1050U930-4F0-1E-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)