

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: P332766-930

Luminaire Tested: **S124DIW-S575D1340U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332766-930
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: S124DIW-S575D1340U930-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5728.4 lumens
Efficiency: N/A
Efficacy: 106.5 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: Semi-Indirect

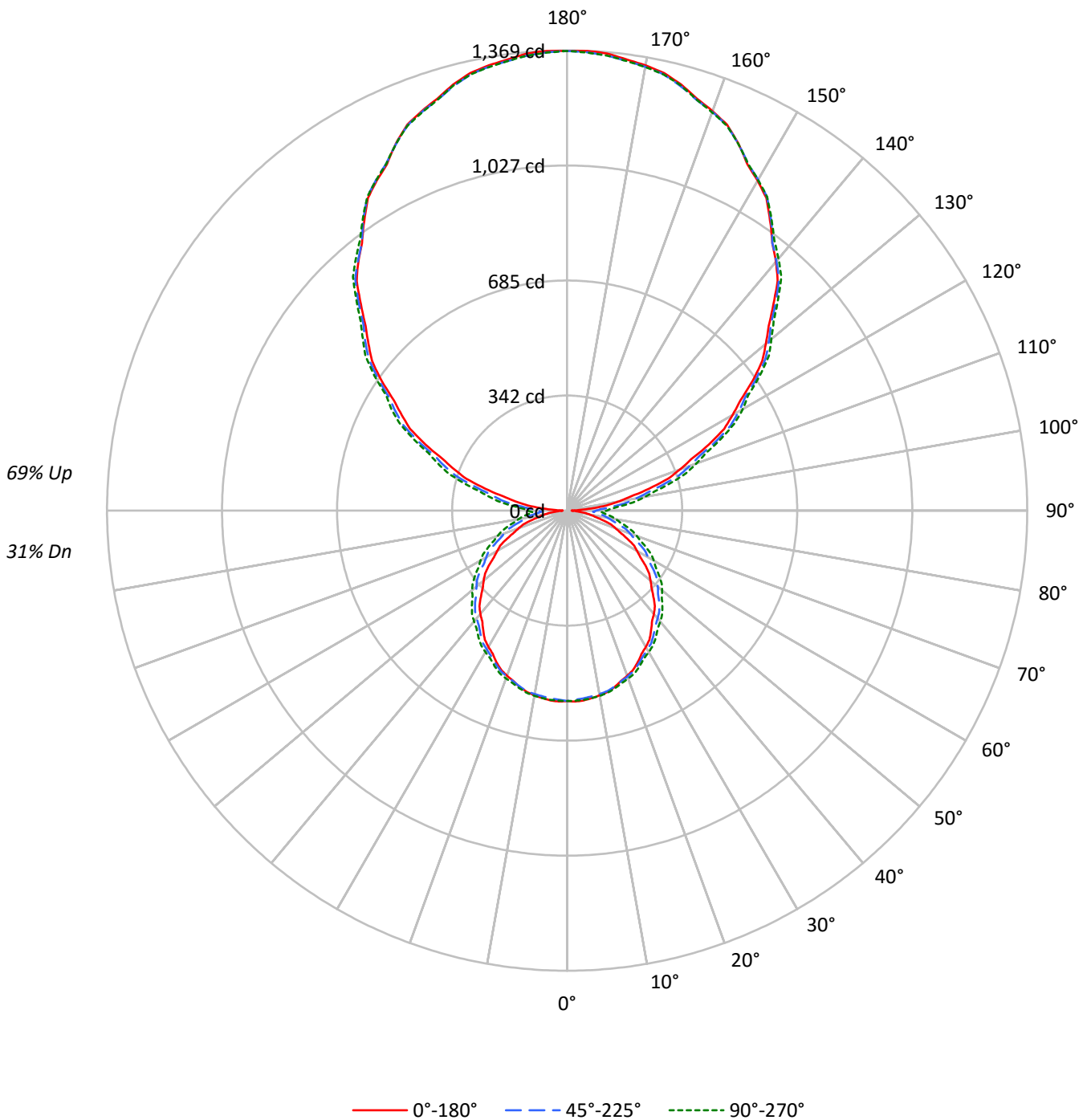
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	93	88	84	81	83	80	76	73	63	60	58	47	46	45	33	32	31	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	23	22	17
4	70	59	51	45	62	53	47	41	42	37	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	40	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12	9
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	12	10	8
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	0.9
10°-20°	153.7	2.7
20°-30°	232.4	4.1
30°-40°	281.2	4.9
40°-50°	297.3	5.2
50°-60°	279.8	4.9
60°-70°	232.1	4.1
70°-80°	163.1	2.8
80°-90°	96.3	1.7
90°-100°	144.9	2.5
100°-110°	307.6	5.4
110°-120°	480.6	8.4
120°-130°	613.2	10.7
130°-140°	678.0	11.8
140°-150°	661.1	11.5
150°-160°	554.9	9.7
160°-170°	369.2	6.4
170°-180°	129.3	2.3
0°-30°	439.8	7.7
0°-40°	721.0	12.6
0°-60°	1298.1	22.7
0°-90°	1789.6	31.2
90°-120°	933.1	16.3
90°-150°	2885.4	50.4
90°-180°	3939.0	68.8
0°-180°	5728.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	13	50	86	110	118	11
95°	72	102	136	155	162	77
105°	252	267	294	312	321	268
115°	465	471	489	501	505	458
125°	674	674	688	698	700	601
135°	867	874	878	886	887	671
145°	1053	1056	1057	1060	1060	659
155°	1205	1205	1204	1208	1204	554
165°	1312	1309	1307	1313	1309	370
175°	1365	1360	1359	1365	1359	130
180°	1367	1367	1367	1367	1367	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	19.4	25.7	32.0	38.2	44.5	50.9	57.5	64.0	70.5	77.1	81.4
90°	13.3	21.5	29.8	38.0	46.2	54.3	62.2	70.2	78.1	86.1	91.6
92.5°	32.3	40.3	48.3	56.4	64.4	72.2	79.5	86.9	94.2	101.7	106.5
95°	71.7	78.4	85.2	92.0	98.7	105.8	113.2	120.7	128.2	135.6	140.1
97.5°	118.3	124.0	129.7	135.4	141.0	147.7	155.4	163.1	170.7	178.4	182.9
100°	155.0	159.6	164.2	168.8	173.4	179.5	187.1	194.8	202.4	210.0	214.3
102.5°	193.9	197.5	201.1	204.7	208.3	213.8	221.0	228.4	235.7	243.0	247.4
105°	252.1	255.1	258.2	261.2	264.3	268.9	275.1	281.2	287.4	293.5	297.7
107.5°	314.3	316.9	319.5	322.1	324.7	328.6	333.6	338.7	343.7	348.9	352.9
110°	356.1	358.6	361.0	363.5	365.9	369.5	374.1	378.9	383.6	388.2	391.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	399.6	401.5	403.2	405.1	407.0	410.0	414.3	418.6	422.9	427.1	430.2
115°	464.8	466.1	467.3	468.6	469.9	472.5	476.5	480.6	484.7	488.7	491.5
117.5°	526.8	527.8	528.7	529.7	530.7	533.0	537.0	540.8	544.7	548.5	550.7
120°	567.8	569.2	570.5	571.9	573.2	575.6	579.0	582.4	585.8	589.1	590.8
122.5°	610.9	611.4	611.9	612.3	612.8	614.7	618.3	621.8	625.4	628.9	631.0
125°	673.9	673.8	673.7	673.5	673.4	675.0	678.2	681.5	684.9	688.1	690.3
127.5°	731.6	732.1	732.7	733.3	733.9	735.2	737.6	739.9	742.2	744.6	746.7
130°	771.7	772.3	772.7	773.3	773.9	775.3	777.6	779.8	782.1	784.3	786.4
132.5°	813.1	813.5	813.8	814.2	814.6	815.6	817.3	818.8	820.4	822.1	824.0
135°	867.2	868.6	870.1	871.5	872.9	874.1	875.1	876.0	877.0	878.0	879.8
137.5°	926.8	927.4	927.9	928.5	929.0	929.6	930.5	931.3	932.2	933.0	934.5
140°	966.6	966.9	967.3	967.6	967.9	968.2	968.3	968.5	968.6	968.7	970.4
142.5°	1002.5	1002.9	1003.4	1003.8	1004.3	1004.4	1004.0	1003.8	1003.6	1003.2	1004.8
145°	1052.7	1053.5	1054.3	1055.1	1055.9	1056.4	1056.6	1056.9	1057.1	1057.4	1057.9
147.5°	1102.6	1103.6	1104.6	1105.5	1106.5	1106.9	1106.8	1106.6	1106.4	1106.2	1106.1
150°	1133.0	1133.8	1134.7	1135.5	1136.3	1136.6	1136.6	1136.6	1136.6	1136.6	1136.6
152.5°	1161.3	1161.9	1162.4	1162.9	1163.4	1163.8	1164.0	1164.2	1164.4	1164.6	1165.1
155°	1205.3	1205.3	1205.3	1205.3	1205.3	1205.3	1205.0	1204.8	1204.5	1204.4	1205.3
157.5°	1242.6	1242.2	1241.8	1241.3	1240.9	1240.6	1240.6	1240.6	1240.6	1240.5	1241.2
160°	1264.6	1264.4	1264.1	1263.9	1263.6	1263.4	1263.1	1263.0	1262.7	1262.5	1263.1
162.5°	1284.9	1284.3	1283.7	1283.0	1282.5	1282.1	1281.8	1281.6	1281.3	1281.1	1282.4
165°	1312.1	1311.5	1310.8	1310.0	1309.4	1308.8	1308.3	1307.8	1307.3	1306.8	1308.3
167.5°	1333.1	1332.1	1331.1	1330.2	1329.2	1328.7	1328.8	1328.8	1328.9	1328.9	1330.3
170°	1344.9	1343.8	1342.6	1341.4	1340.3	1339.8	1340.0	1340.3	1340.5	1340.7	1342.1
172.5°	1353.4	1352.4	1351.4	1350.5	1349.5	1349.0	1349.1	1349.1	1349.2	1349.2	1350.8
175°	1365.1	1363.8	1362.7	1361.5	1360.3	1359.6	1359.4	1359.2	1358.9	1358.7	1360.3
177.5°	1368.8	1367.9	1366.9	1366.0	1365.1	1364.6	1364.6	1364.6	1364.6	1364.6	1366.0
180°	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	85.9	90.3	94.6	97.4	98.8	100.1	101.4	102.8
90°	97.1	102.6	108.0	111.6	113.2	114.8	116.4	118.0
92.5°	111.3	116.1	120.9	124.0	125.5	126.9	128.2	129.7
95°	144.6	149.1	153.6	156.5	157.8	159.1	160.3	161.6
97.5°	187.4	192.0	196.5	199.4	200.6	201.8	203.0	204.2
100°	218.6	222.8	227.1	229.8	230.7	231.7	232.7	233.7
102.5°	251.7	256.0	260.4	263.2	264.5	265.8	267.1	268.4
105°	302.0	306.2	310.5	313.5	315.3	317.2	318.9	320.8
107.5°	357.1	361.3	365.3	367.9	368.8	369.8	370.8	371.8
110°	393.8	396.6	399.3	401.6	403.5	405.3	407.2	409.0



TEST NUMBER: P332766-930

CATALOG NUMBER: S124DIW-S575D1340U930-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	433.3	436.3	439.3	441.5	442.7	444.0	445.2	446.5
115°	494.5	497.3	500.2	502.0	502.7	503.4	504.3	505.0
117.5°	552.9	555.0	557.1	558.5	559.1	559.8	560.4	561.1
120°	592.5	594.1	595.7	597.4	598.9	600.5	602.2	603.7
122.5°	632.9	635.0	637.0	638.1	638.3	638.5	638.6	638.8
125°	692.5	694.7	696.9	698.2	698.6	699.0	699.4	699.8
127.5°	748.7	750.8	752.8	754.2	754.8	755.4	755.9	756.5
130°	788.5	790.5	792.6	793.6	793.5	793.4	793.3	793.2
132.5°	826.0	827.9	829.9	831.1	831.6	832.0	832.5	833.0
135°	881.6	883.4	885.2	886.1	886.2	886.4	886.6	886.7
137.5°	936.0	937.3	938.8	940.0	940.9	941.7	942.5	943.4
140°	971.9	973.5	975.1	976.2	976.6	977.1	977.5	978.0
142.5°	1006.4	1008.0	1009.5	1010.6	1011.1	1011.6	1012.2	1012.8
145°	1058.6	1059.2	1059.8	1060.1	1059.9	1059.7	1059.6	1059.5
147.5°	1106.0	1106.0	1105.9	1106.0	1106.2	1106.4	1106.6	1106.9
150°	1136.6	1136.6	1136.6	1136.5	1136.3	1136.0	1135.8	1135.6
152.5°	1165.7	1166.3	1166.9	1166.8	1166.2	1165.6	1165.0	1164.3
155°	1206.2	1207.1	1208.1	1208.1	1207.1	1206.2	1205.3	1204.4
157.5°	1241.9	1242.6	1243.3	1243.2	1242.4	1241.6	1240.9	1240.1
160°	1263.9	1264.6	1265.3	1265.0	1263.9	1262.7	1261.5	1260.4
162.5°	1283.6	1284.9	1286.1	1286.2	1285.0	1283.9	1282.7	1281.5
165°	1309.7	1311.1	1312.6	1312.8	1311.8	1310.8	1309.9	1309.0
167.5°	1331.7	1333.1	1334.5	1334.5	1333.0	1331.5	1330.2	1328.7
170°	1343.5	1344.9	1346.4	1346.2	1344.6	1343.0	1341.3	1339.7
172.5°	1352.3	1354.0	1355.6	1355.5	1353.9	1352.3	1350.6	1349.0
175°	1362.0	1363.6	1365.3	1365.3	1363.6	1362.0	1360.3	1358.7
177.5°	1367.3	1368.6	1369.9	1369.8	1368.3	1366.8	1365.3	1363.8
180°	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2	1367.2

(END OF REPORT)