

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: P332759-930

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332759-930
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-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1050 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5350.8 lumens
Efficiency: N/A
Efficacy: 118.4 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

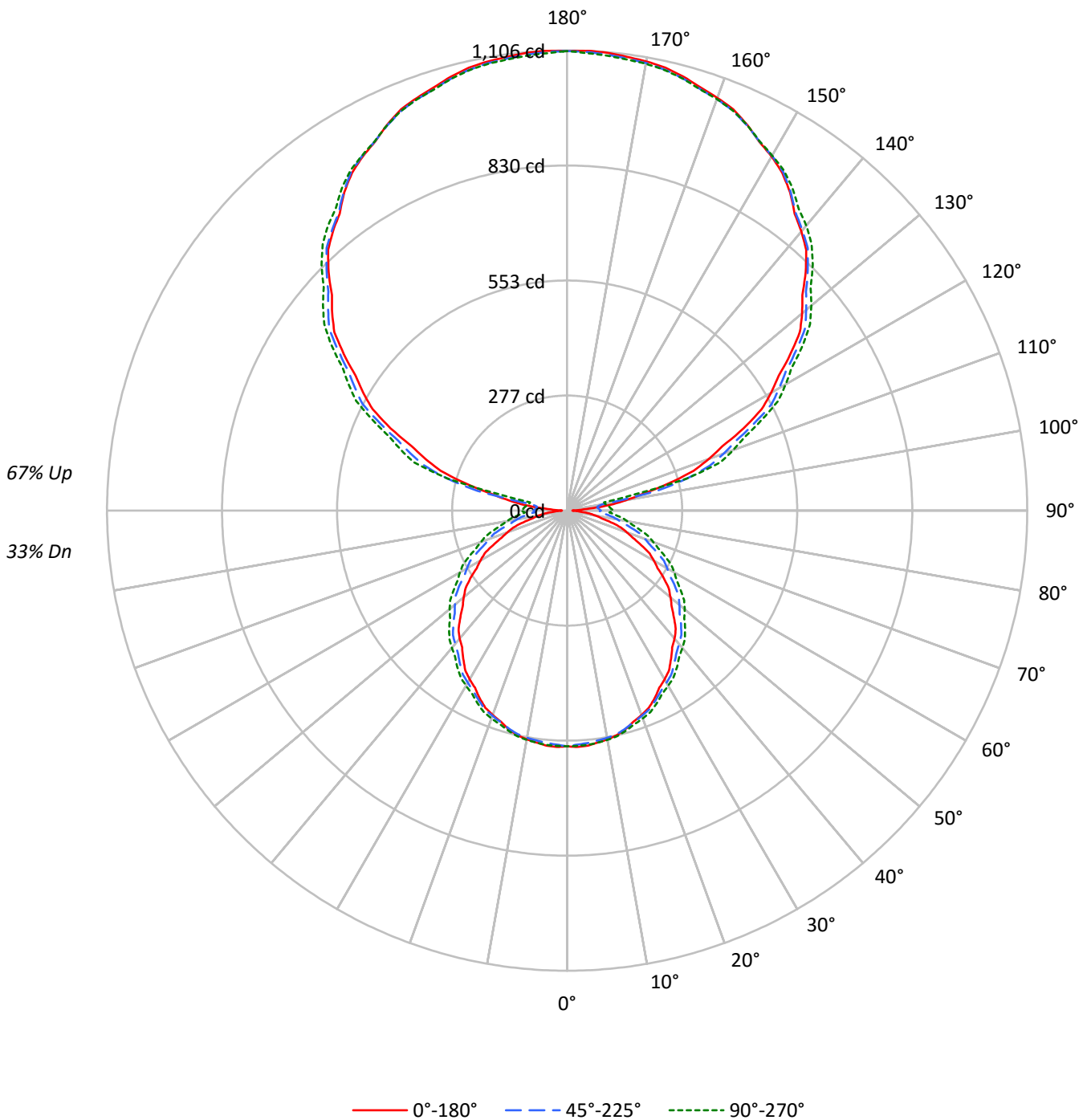
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	33
1	93	89	85	81	84	80	77	74	64	61	59	49	47	46	35	34	33	27
2	85	77	71	66	76	70	64	60	55	52	48	42	40	38	30	29	27	22
3	77	68	60	54	69	61	55	50	49	44	40	37	34	31	27	25	23	18
4	70	60	52	46	63	54	47	42	43	38	34	33	30	27	24	21	20	15
5	64	53	45	39	58	48	41	36	38	33	29	29	26	23	21	19	17	13
6	59	47	39	33	53	43	36	31	34	29	25	27	23	20	19	17	15	11
7	55	42	35	29	49	38	32	27	31	26	22	24	20	17	17	15	13	10
8	51	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	12	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	24	19	15	18	15	12	14	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	1.0
10°-20°	153.7	2.9
20°-30°	232.4	4.3
30°-40°	281.2	5.3
40°-50°	297.3	5.6
50°-60°	279.8	5.2
60°-70°	232.1	4.3
70°-80°	163.1	3.0
80°-90°	95.4	1.8
90°-100°	92.5	1.7
100°-110°	281.4	5.3
110°-120°	487.9	9.1
120°-130°	600.2	11.2
130°-140°	632.4	11.8
140°-150°	586.5	11.0
150°-160°	471.9	8.8
160°-170°	304.4	5.7
170°-180°	104.9	2.0
0°-30°	439.8	8.2
0°-40°	721.0	13.5
0°-60°	1298.1	24.3
0°-90°	1788.7	33.4
90°-120°	861.8	16.1
90°-150°	2680.9	50.1
90°-180°	3562.0	66.6
0°-180°	5350.8	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	47	81	103	111	9
95°	54	48	73	95	102	65
105°	254	273	300	320	298	267
115°	468	477	496	511	516	461
125°	655	658	672	686	691	585
135°	811	810	818	829	835	625
145°	934	936	936	940	945	584
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°	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°	19.2	25.4	31.6	37.7	43.9	50.2	56.7	63.2	69.6	76.1	80.4
90°	12.6	20.3	28.0	35.6	43.3	50.9	58.4	66.0	73.5	81.0	86.2
92.5°	20.1	25.3	30.4	35.6	40.8	47.1	54.7	62.2	69.7	77.3	82.3
95°	53.6	52.1	50.5	48.9	47.3	49.5	55.4	61.5	67.4	73.4	78.3
97.5°	104.0	111.9	119.8	127.7	135.6	132.1	117.3	102.6	87.8	73.1	76.9
100°	142.4	149.4	156.4	163.4	170.3	163.9	144.1	124.3	104.4	84.5	85.3
102.5°	186.1	191.7	197.3	203.0	208.6	212.5	214.6	216.6	218.7	220.8	190.9
105°	254.4	258.3	262.2	266.1	270.0	275.1	281.2	287.3	293.4	299.6	304.8
107.5°	318.8	321.7	324.6	327.4	330.3	334.8	341.0	347.2	353.4	359.5	363.8
110°	361.9	364.4	367.0	369.5	372.0	376.3	382.4	388.4	394.4	400.5	404.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	403.7	406.4	409.2	412.0	414.7	418.7	423.9	429.1	434.3	439.5	442.6
115°	468.1	469.9	471.7	473.5	475.3	478.4	482.7	487.1	491.4	495.7	499.2
117.5°	526.6	528.1	529.5	531.1	532.6	535.6	540.2	544.8	549.4	554.0	556.8
120°	565.7	566.9	568.0	569.2	570.3	572.8	576.7	580.7	584.6	588.5	591.7
122.5°	602.8	603.2	603.7	604.3	604.8	607.2	611.2	615.4	619.5	623.6	626.6
125°	655.1	655.7	656.3	656.9	657.5	659.3	662.5	665.7	668.9	672.0	675.2
127.5°	705.2	705.2	705.3	705.3	705.4	707.2	710.7	714.3	717.8	721.4	723.8
130°	737.1	737.1	737.2	737.2	737.3	738.7	741.5	744.3	747.1	749.9	752.6
132.5°	766.8	767.0	767.2	767.4	767.6	768.9	771.4	774.0	776.4	778.9	781.5
135°	810.8	810.6	810.4	810.2	810.1	810.8	812.5	814.2	816.0	817.7	820.4
137.5°	850.3	850.2	850.1	850.1	850.0	850.6	851.9	853.2	854.5	855.7	858.3
140°	876.0	876.3	876.5	876.7	876.9	877.3	877.8	878.3	878.8	879.4	881.7
142.5°	898.7	899.3	899.9	900.6	901.2	901.6	901.7	901.9	902.0	902.1	904.2
145°	934.1	934.5	934.9	935.3	935.7	935.9	935.9	935.9	935.9	935.9	936.9
147.5°	962.3	963.2	964.1	965.0	965.9	966.2	966.0	965.9	965.6	965.5	965.7
150°	982.8	983.4	984.0	984.6	985.2	985.4	985.2	985.0	984.8	984.6	984.6
152.5°	999.5	1000.0	1000.6	1001.2	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°	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°	84.7	89.0	93.4	96.1	97.4	98.7	100.0	101.4
90°	91.4	96.5	101.7	105.1	106.6	108.1	109.6	111.0
92.5°	87.4	92.5	97.6	100.7	101.9	103.1	104.4	105.5
95°	83.2	88.1	93.0	96.2	97.7	99.1	100.5	102.0
97.5°	80.7	84.5	88.3	90.9	92.3	93.7	95.1	96.4
100°	85.9	86.6	87.3	88.2	89.4	90.6	91.7	92.9
102.5°	160.9	130.9	100.9	86.5	87.6	88.8	89.9	91.1
105°	310.0	315.1	320.3	320.2	314.7	309.2	303.7	298.2
107.5°	368.1	372.3	376.6	379.6	381.3	383.0	384.7	386.5
110°	407.6	411.2	414.9	417.5	419.2	420.9	422.6	424.3



TEST NUMBER: P332759-930

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	445.6	448.7	451.8	454.2	456.0	457.9	459.7	461.5
115°	502.6	506.1	509.6	511.8	512.8	513.8	514.8	515.8
117.5°	559.7	562.6	565.5	567.4	568.4	569.5	570.5	571.6
120°	594.8	598.0	601.2	603.2	604.0	604.7	605.5	606.3
122.5°	629.7	632.8	635.8	637.6	638.3	639.0	639.6	640.2
125°	678.4	681.7	684.9	687.1	688.0	689.1	690.2	691.1
127.5°	726.3	728.6	731.1	732.7	733.5	734.3	735.2	736.0
130°	755.4	758.1	760.8	762.5	763.4	764.3	765.1	766.0
132.5°	784.2	786.8	789.4	791.0	791.7	792.4	793.1	793.8
135°	823.0	825.6	828.2	830.1	831.4	832.6	833.7	834.9
137.5°	860.7	863.2	865.6	867.2	867.7	868.3	868.9	869.5
140°	884.1	886.5	888.9	890.6	891.4	892.3	893.2	894.1
142.5°	906.1	908.2	910.2	911.5	912.2	912.7	913.4	914.0
145°	938.0	939.0	940.0	941.0	941.9	942.9	943.8	944.8
147.5°	966.0	966.3	966.5	966.9	967.6	968.2	968.9	969.5
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

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