

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: P332729-927

Luminaire Tested: **S124DIW-S350D1050U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332729-927
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-S350D1050U927-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 350 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: 4464.0 lumens
Efficiency: N/A
Efficacy: 117.5 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

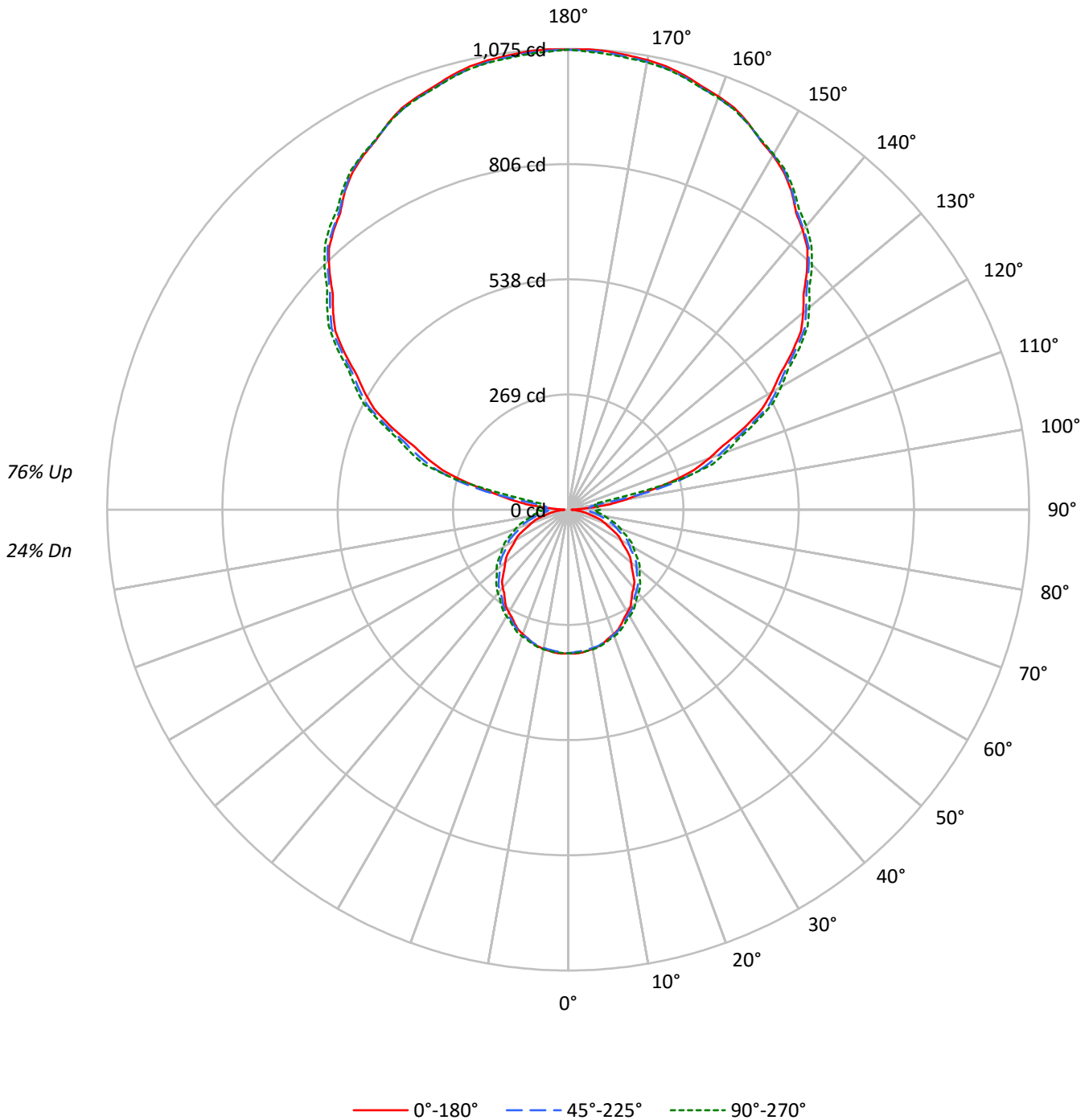
Input Watts (W): 38
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332729-927

CATALOG NUMBER: S124DIW-S350D1050U927-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P332729-927

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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	101	101	101	101	90	90	90	90	69	69	69	50	50	50	32	32	32	24
1	91	87	83	80	81	77	74	71	59	57	55	43	41	40	27	27	26	19
2	83	76	70	64	73	67	62	58	52	48	45	37	35	33	24	23	21	15
3	76	66	59	53	67	59	53	48	45	41	38	33	30	28	21	19	18	13
4	69	58	51	45	61	52	45	40	40	35	32	29	26	23	19	17	15	11
5	63	52	44	38	56	46	39	34	36	31	27	26	23	20	17	15	13	9
6	58	46	38	33	51	41	34	30	32	27	23	23	20	17	15	13	12	8
7	53	41	34	28	47	37	30	26	29	24	20	21	18	15	14	12	10	7
8	49	37	30	25	44	34	27	23	26	21	18	19	16	13	12	10	9	6
9	46	34	27	22	41	30	24	20	24	19	16	17	14	12	11	10	8	6
10	43	31	24	19	38	28	22	18	22	17	14	16	13	11	11	9	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2704	2704	2704
5°	2712	2641	2650
10°	2694	2599	2596
15°	2670	2549	2535
20°	2635	2494	2475
25°	2594	2432	2408
30°	2549	2370	2340
35°	2498	2307	2280
40°	2458	2247	2218
45°	2398	2191	2164
50°	2348	2128	2108
55°	2296	2068	2042
60°	2214	1991	1982
65°	2125	1909	1908
70°	2018	1816	1820
75°	1867	1712	1743
80°	1701	1613	1665
85°	1489	1525	1621



TEST NUMBER: P332729-927

CATALOG NUMBER: S124DIW-S350D1050U927-4F0-1E-UDD-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	0.7
10°-20°	90.8	2.0
20°-30°	137.4	3.1
30°-40°	166.2	3.7
40°-50°	175.7	3.9
50°-60°	165.4	3.7
60°-70°	137.2	3.1
70°-80°	96.4	2.2
80°-90°	57.6	1.3
90°-100°	69.1	1.5
100°-110°	258.0	5.8
110°-120°	463.7	10.4
120°-130°	577.4	12.9
130°-140°	611.9	13.7
140°-150°	569.4	12.8
150°-160°	458.5	10.3
160°-170°	295.7	6.6
170°-180°	101.9	2.3
0°-30°	259.9	5.8
0°-40°	426.1	9.5
0°-60°	767.2	17.2
0°-90°	1058.4	23.7
90°-120°	790.8	17.7
90°-150°	2549.4	57.1
90°-180°	3406.0	76.3
0°-180°	4464.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	335	335	335	335	335	
5°	335	334	331	334	334	32
15°	321	322	321	324	324	90
25°	294	296	297	301	302	135
35°	257	262	266	270	272	161
45°	214	222	229	235	237	166
55°	168	176	187	194	197	150
65°	116	128	141	150	153	115
75°	64	78	94	104	108	69
85°	20	36	52	63	68	21
90°	8	32	55	70	75	6
95°	49	36	50	65	69	61
105°	245	258	275	289	266	257
115°	453	459	470	480	483	446
125°	636	639	646	655	659	567
135°	787	787	792	800	804	606
145°	907	909	909	912	916	567
155°	994	995	993	996	994	458
165°	1049	1045	1045	1051	1044	296
175°	1073	1069	1069	1075	1067	102
180°	1073	1073	1073	1073	1073	



TEST NUMBER: P332729-927

CATALOG NUMBER: S124DIW-S350D1050U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	336.0	335.8	335.6	335.4	335.3	334.9	334.4	333.8	333.3	332.7	333.2
5°	335.3	334.9	334.7	334.5	334.2	333.8	333.2	332.6	332.1	331.4	332.2
7.5°	332.4	332.2	332.1	331.9	331.8	331.4	331.0	330.5	330.0	329.5	330.3
10°	329.9	329.9	329.8	329.7	329.6	329.4	329.0	328.5	328.1	327.7	328.4
12.5°	326.7	326.6	326.6	326.6	326.6	326.5	326.1	325.9	325.6	325.3	326.0
15°	321.3	321.5	321.5	321.6	321.7	321.6	321.3	321.1	320.8	320.6	321.3
17.5°	314.1	314.3	314.6	314.8	315.1	315.2	315.1	315.1	315.1	315.0	315.8
20°	309.0	309.2	309.5	309.7	310.0	310.1	310.2	310.3	310.4	310.5	311.3
22.5°	303.2	303.6	303.9	304.2	304.5	304.8	304.9	305.1	305.2	305.4	306.2
25°	294.0	294.5	295.0	295.5	296.0	296.4	296.6	296.8	297.1	297.4	298.3
27.5°	283.6	284.4	285.1	285.8	286.5	287.1	287.5	287.9	288.3	288.7	289.5
30°	276.7	277.4	278.1	278.7	279.4	280.0	280.6	281.1	281.8	282.3	283.3
32.5°	269.3	270.1	270.8	271.6	272.4	273.1	273.8	274.4	275.1	275.8	276.8
35°	257.2	258.3	259.2	260.2	261.3	262.1	263.0	263.8	264.7	265.5	266.6
37.5°	245.2	246.3	247.5	248.6	249.8	250.8	251.9	252.9	254.0	255.0	256.2
40°	237.3	238.4	239.6	240.6	241.7	242.8	244.0	245.2	246.3	247.5	248.7
42.5°	228.4	229.6	230.8	232.0	233.2	234.5	235.9	237.3	238.6	240.0	241.4
45°	214.4	216.0	217.6	219.2	220.8	222.4	223.9	225.5	227.1	228.7	230.1
47.5°	201.2	202.9	204.5	206.1	207.7	209.5	211.3	213.2	215.0	216.8	218.2
50°	191.6	193.5	195.3	197.1	198.9	200.7	202.6	204.5	206.3	208.1	209.8
52.5°	182.0	183.9	185.7	187.5	189.3	191.3	193.4	195.5	197.6	199.7	201.4
55°	168.0	169.8	171.5	173.3	175.0	177.1	179.6	182.1	184.6	187.1	188.8
57.5°	152.3	154.5	156.6	158.8	161.0	163.3	165.8	168.3	170.7	173.3	175.2
60°	142.1	144.3	146.5	148.6	150.8	153.2	156.0	158.8	161.4	164.2	166.1
62.5°	132.2	134.6	137.0	139.3	141.6	144.3	146.9	149.7	152.5	155.3	157.2
65°	116.2	118.9	121.6	124.2	126.9	129.7	132.5	135.3	138.2	141.0	143.1
67.5°	100.8	103.7	106.5	109.4	112.2	115.1	118.2	121.2	124.2	127.2	129.4
70°	90.4	93.2	96.0	98.9	101.7	104.7	107.9	111.1	114.2	117.4	119.6
72.5°	80.2	83.1	86.0	88.9	91.7	94.9	98.2	101.6	105.0	108.4	110.5
75°	64.5	67.6	70.7	73.8	76.8	80.1	83.7	87.1	90.6	94.1	96.5
77.5°	49.9	53.2	56.4	59.7	62.9	66.4	70.0	73.8	77.4	81.0	83.4
80°	40.9	44.2	47.5	50.9	54.2	57.7	61.4	65.0	68.7	72.4	74.9
82.5°	31.8	35.3	38.8	42.3	45.7	49.3	53.0	56.6	60.3	64.0	66.5
85°	19.9	23.4	26.9	30.3	33.9	37.5	41.3	45.0	48.7	52.5	55.0
87.5°	11.6	15.4	19.2	23.0	26.8	30.6	34.5	38.5	42.4	46.3	49.0
90°	8.4	13.7	19.0	24.3	29.5	34.8	39.8	44.8	49.7	54.7	58.3
92.5°	15.8	18.9	22.0	25.1	28.2	32.3	37.3	42.3	47.3	52.4	55.8
95°	49.0	45.7	42.4	39.1	35.7	35.9	39.5	43.1	46.7	50.3	53.6
97.5°	98.2	104.3	110.4	116.6	122.8	117.6	101.1	84.5	68.0	51.5	53.8
100°	135.8	141.2	146.5	151.9	157.2	149.2	127.9	106.5	85.2	63.8	63.1
102.5°	178.2	182.4	186.6	190.9	195.1	197.3	197.3	197.2	197.2	197.2	166.6
105°	244.9	247.7	250.4	253.2	255.9	259.3	263.2	267.2	271.2	275.2	278.8
107.5°	307.7	309.6	311.5	313.4	315.3	318.3	322.4	326.5	330.7	334.8	337.6
110°	349.7	351.4	353.2	354.8	356.6	359.4	363.4	367.3	371.4	375.3	377.6



TEST NUMBER: P332729-927

CATALOG NUMBER: S124DIW-S350D1050U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	390.5	392.5	394.5	396.5	398.5	401.2	404.4	407.7	411.0	414.3	416.1
115°	453.3	454.6	455.9	457.2	458.4	460.3	462.9	465.3	467.8	470.3	472.5
117.5°	510.2	511.4	512.5	513.7	514.9	516.9	519.8	522.7	525.5	528.4	530.0
120°	548.4	549.5	550.4	551.4	552.3	553.9	556.2	558.4	560.6	562.8	564.9
122.5°	584.4	584.9	585.3	585.8	586.3	587.8	590.3	592.9	595.4	597.9	599.8
125°	635.6	636.2	636.8	637.5	638.1	639.3	641.0	642.7	644.4	646.2	648.3
127.5°	684.3	684.4	684.4	684.6	684.7	686.0	688.3	690.8	693.2	695.6	697.0
130°	715.4	715.6	715.7	715.7	715.8	716.8	718.7	720.6	722.4	724.3	726.0
132.5°	744.3	744.6	744.8	745.0	745.3	746.3	748.1	749.8	751.5	753.3	754.9
135°	787.3	787.1	787.0	786.8	786.6	787.2	788.5	789.7	791.1	792.3	794.0
137.5°	825.7	825.7	825.7	825.6	825.6	826.2	827.2	828.3	829.3	830.4	832.0
140°	850.7	851.0	851.3	851.5	851.8	852.2	852.6	853.0	853.5	854.0	855.6
142.5°	872.9	873.5	874.2	874.8	875.4	875.8	876.0	876.2	876.3	876.5	877.8
145°	907.4	907.8	908.2	908.7	909.1	909.3	909.3	909.3	909.3	909.3	910.1
147.5°	934.8	935.7	936.6	937.5	938.4	938.8	938.7	938.5	938.3	938.1	938.3
150°	954.7	955.3	955.9	956.6	957.2	957.4	957.3	957.1	956.9	956.7	956.7
152.5°	971.1	971.6	972.2	972.7	973.3	973.4	973.1	972.8	972.5	972.2	972.4
155°	994.4	994.7	994.8	995.0	995.1	995.0	994.4	994.0	993.4	992.8	993.6
157.5°	1014.2	1014.1	1014.0	1013.8	1013.8	1013.4	1012.8	1012.2	1011.6	1011.0	1011.9
160°	1025.7	1025.2	1024.7	1024.1	1023.6	1023.3	1023.1	1022.9	1022.7	1022.5	1023.6
162.5°	1036.0	1035.4	1034.7	1034.0	1033.3	1032.8	1032.7	1032.5	1032.4	1032.1	1033.2
165°	1049.0	1048.1	1047.3	1046.3	1045.4	1045.0	1045.0	1045.0	1045.0	1045.0	1046.5
167.5°	1059.3	1058.4	1057.5	1056.5	1055.6	1055.1	1054.9	1054.9	1054.8	1054.6	1056.2
170°	1065.1	1064.0	1063.0	1061.8	1060.8	1060.3	1060.5	1060.7	1060.9	1061.0	1062.5
172.5°	1068.9	1067.9	1066.8	1065.7	1064.6	1064.2	1064.4	1064.5	1064.8	1064.9	1066.4
175°	1073.1	1072.1	1071.0	1069.9	1068.8	1068.4	1068.6	1068.7	1068.9	1069.1	1070.7
177.5°	1075.0	1074.0	1073.0	1072.1	1071.0	1070.7	1071.0	1071.3	1071.5	1071.8	1072.9
180°	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1



TEST NUMBER: P332729-927

CATALOG NUMBER: S124DIW-S350D1050U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	333.7	334.1	334.6	334.8	334.8	334.7	334.6	334.5
5°	332.8	333.4	334.1	334.5	334.4	334.2	334.1	334.1
7.5°	331.1	331.8	332.6	332.9	332.8	332.7	332.6	332.6
10°	329.2	329.9	330.7	331.1	331.0	330.9	330.8	330.7
12.5°	326.7	327.4	328.0	328.4	328.4	328.4	328.4	328.3
15°	322.1	322.8	323.6	323.9	323.8	323.8	323.7	323.6
17.5°	316.5	317.3	318.1	318.4	318.3	318.2	318.2	318.1
20°	312.1	313.0	313.8	314.3	314.3	314.3	314.3	314.3
22.5°	307.0	307.8	308.7	309.2	309.3	309.4	309.6	309.7
25°	299.2	300.1	301.0	301.5	301.6	301.7	301.7	301.8
27.5°	290.3	291.2	292.1	292.6	292.6	292.7	292.8	292.9
30°	284.2	285.1	286.0	286.5	286.7	286.9	287.1	287.2
32.5°	277.8	278.9	280.0	280.6	280.7	280.9	281.1	281.2
35°	267.8	268.9	270.1	270.8	271.1	271.3	271.6	271.9
37.5°	257.4	258.5	259.7	260.5	260.7	260.9	261.3	261.5
40°	250.0	251.2	252.5	253.3	253.6	254.0	254.3	254.6
42.5°	242.7	244.2	245.5	246.4	246.6	246.8	247.2	247.4
45°	231.6	233.0	234.4	235.3	235.8	236.1	236.5	236.9
47.5°	219.8	221.2	222.7	223.6	224.2	224.7	225.1	225.7
50°	211.4	213.1	214.8	215.9	216.3	216.8	217.4	217.9
52.5°	203.0	204.7	206.4	207.5	207.9	208.4	209.0	209.5
55°	190.4	192.1	193.8	194.9	195.4	195.8	196.4	196.9
57.5°	177.2	179.2	181.2	182.4	182.8	183.3	183.8	184.3
60°	168.1	170.0	171.9	173.2	173.9	174.5	175.2	175.9
62.5°	159.1	161.0	162.9	164.2	164.9	165.5	166.2	166.8
65°	145.1	147.3	149.3	150.7	151.4	152.0	152.7	153.4
67.5°	131.5	133.6	135.7	137.1	137.8	138.4	139.0	139.7
70°	121.8	124.1	126.4	127.8	128.3	129.0	129.5	130.1
72.5°	112.7	114.9	117.1	118.5	119.1	119.8	120.5	121.1
75°	98.8	101.1	103.5	105.0	105.8	106.5	107.3	108.0
77.5°	85.8	88.2	90.5	92.1	92.9	93.7	94.5	95.3
80°	77.4	79.9	82.4	84.0	84.6	85.3	86.0	86.6
82.5°	69.1	71.7	74.2	75.9	76.6	77.3	78.1	78.8
85°	57.5	60.0	62.5	64.2	65.0	65.8	66.6	67.5
87.5°	51.7	54.3	56.9	58.6	59.4	60.2	61.0	61.8
90°	61.8	65.3	68.8	71.0	72.0	73.0	74.1	75.1
92.5°	59.2	62.6	66.0	68.1	68.8	69.6	70.3	71.1
95°	57.0	60.2	63.5	65.7	66.6	67.6	68.4	69.4
97.5°	56.1	58.4	60.7	62.3	63.1	64.0	65.0	65.8
100°	62.3	61.5	60.7	60.7	61.5	62.2	63.0	63.7
102.5°	136.1	105.6	75.0	60.1	60.8	61.5	62.2	62.9
105°	282.6	286.2	289.9	288.9	283.1	277.3	271.6	265.9
107.5°	340.5	343.3	346.1	348.2	349.4	350.8	352.0	353.3
110°	379.9	382.1	384.4	386.2	387.4	388.6	389.8	390.9



TEST NUMBER: P332729-927

CATALOG NUMBER: S124DIW-S350D1050U927-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	417.9	419.6	421.4	422.9	424.3	425.6	427.0	428.3
115°	474.7	476.9	479.0	480.5	481.0	481.6	482.2	482.8
117.5°	531.7	533.4	535.0	536.1	536.8	537.3	538.0	538.6
120°	566.9	568.9	570.9	572.1	572.4	572.7	573.1	573.4
122.5°	601.7	603.6	605.5	606.6	606.8	607.0	607.3	607.5
125°	650.4	652.5	654.7	656.1	656.7	657.4	658.1	658.8
127.5°	698.4	699.8	701.2	702.1	702.5	702.9	703.4	703.8
130°	727.6	729.4	731.0	732.1	732.6	733.1	733.6	734.1
132.5°	756.5	758.1	759.7	760.7	761.0	761.4	761.8	762.2
135°	795.7	797.4	799.1	800.4	801.2	802.1	803.0	803.8
137.5°	833.7	835.3	836.9	837.8	838.1	838.4	838.8	839.1
140°	857.1	858.8	860.4	861.5	862.1	862.7	863.3	863.9
142.5°	879.2	880.5	881.9	882.6	883.0	883.4	883.8	884.2
145°	910.7	911.4	912.1	912.8	913.5	914.2	914.8	915.5
147.5°	938.5	938.7	939.0	939.3	939.7	940.2	940.6	941.0
150°	956.7	956.7	956.7	956.8	957.0	957.2	957.4	957.5
152.5°	972.7	973.0	973.3	973.4	973.3	973.1	973.0	973.0
155°	994.3	995.0	995.7	995.8	995.2	994.7	994.2	993.6
157.5°	1012.8	1013.8	1014.7	1014.7	1013.8	1012.8	1011.9	1011.0
160°	1024.7	1025.7	1026.8	1026.8	1025.7	1024.7	1023.6	1022.5
162.5°	1034.3	1035.4	1036.4	1036.4	1035.1	1034.0	1032.8	1031.5
165°	1047.9	1049.3	1050.8	1050.6	1049.0	1047.4	1045.8	1044.2
167.5°	1057.8	1059.4	1060.9	1060.8	1059.1	1057.2	1055.5	1053.7
170°	1063.9	1065.3	1066.8	1066.6	1064.8	1063.0	1061.2	1059.5
172.5°	1067.8	1069.2	1070.6	1070.4	1068.4	1066.5	1064.6	1062.6
175°	1072.3	1073.9	1075.5	1075.2	1073.1	1071.0	1068.8	1066.7
177.5°	1074.1	1075.2	1076.4	1076.1	1074.4	1072.7	1071.0	1069.3
180°	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1	1073.1

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