

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: P332530-927

Luminaire Tested: **S124DIP-S350D1205U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332530-927
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: S124DIP-S350D1205U927-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4446.6 lumens
Efficiency: N/A
Efficacy: 105.4 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

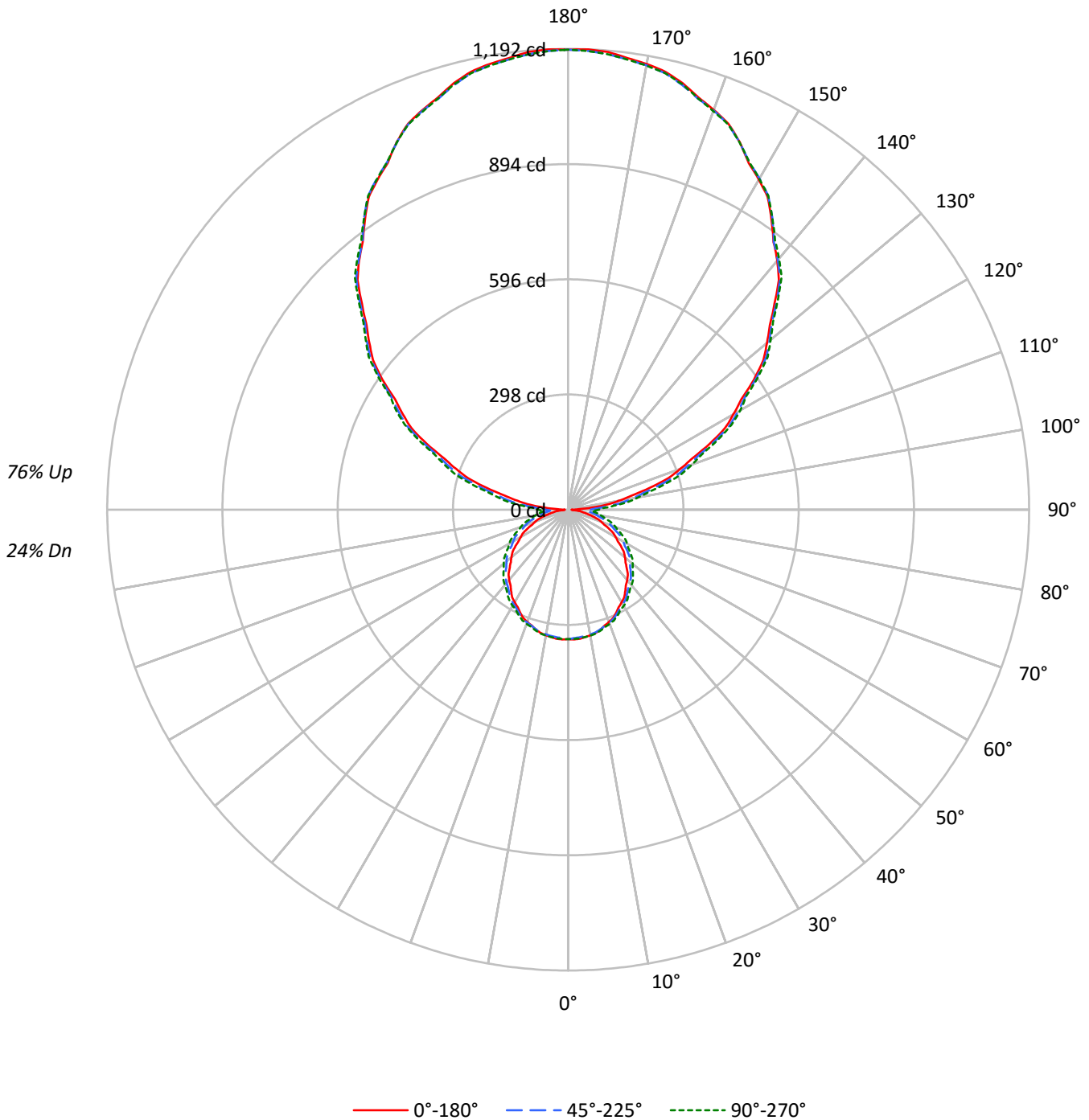
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332530-927

CATALOG NUMBER: S124DIP-S350D1205U927-4F0-1E-UDD-D1

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	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	65	73	67	62	58	52	48	45		37	35	33		24	23	21	16
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	35	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		13	11	9	6
9	46	34	27	22	41	30	24	20	24	19	16		17	14	12		12	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: P332530-927

CATALOG NUMBER: S124DIP-S350D1205U927-4F0-1E-UDD-D1

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	4.0
50°-60°	165.4	3.7
60°-70°	137.2	3.1
70°-80°	96.4	2.2
80°-90°	58.0	1.3
90°-100°	110.8	2.5
100°-110°	256.5	5.8
110°-120°	410.7	9.2
120°-130°	529.4	11.9
130°-140°	588.3	13.2
140°-150°	575.1	12.9
150°-160°	483.0	10.9
160°-170°	321.4	7.2
170°-180°	112.5	2.5
0°-30°	259.9	5.8
0°-40°	426.1	9.6
0°-60°	767.2	17.3
0°-90°	1058.8	23.8
90°-120°	778.0	17.5
90°-150°	2470.9	55.6
90°-180°	3388.0	76.2
0°-180°	4446.6	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°	9	34	57	73	79	7
95°	60	81	103	115	119	65
105°	218	227	244	256	262	231
115°	404	407	417	424	426	398
125°	586	586	594	599	600	522
135°	755	760	763	767	766	584
145°	916	919	920	922	920	573
155°	1049	1049	1048	1052	1048	483
165°	1142	1139	1138	1143	1139	322
175°	1188	1184	1183	1188	1183	113
180°	1190	1190	1190	1190	1190	



TEST NUMBER: P332530-927

CATALOG NUMBER: S124DIP-S350D1205U927-4F0-1E-UDD-D1

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	15.5	19.3	23.2	27.0	31.0	34.9	38.9	42.9	46.9	49.5
90°	8.8	14.3	20.0	25.5	31.1	36.5	41.7	46.9	52.1	57.4	61.0
92.5°	25.4	31.0	36.5	42.1	47.7	52.8	57.6	62.3	67.0	71.8	74.9
95°	60.1	64.7	69.3	73.8	78.4	83.2	88.0	92.8	97.8	102.6	105.4
97.5°	100.8	104.7	108.5	112.4	116.2	120.6	125.7	130.8	135.9	140.9	143.9
100°	133.0	135.9	138.9	142.0	144.9	148.9	154.1	159.1	164.2	169.3	172.0
102.5°	166.8	169.1	171.3	173.5	175.8	179.3	184.2	189.0	193.8	198.8	201.5
105°	217.9	219.7	221.6	223.4	225.3	228.1	232.1	236.0	239.9	243.8	246.5
107.5°	272.0	273.6	275.3	276.9	278.5	280.8	283.8	286.9	289.9	292.9	295.6
110°	308.6	310.1	311.7	313.3	314.9	317.0	319.7	322.4	325.1	327.9	329.4



TEST NUMBER: P332530-927

CATALOG NUMBER: S124DIP-S350D1205U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	346.6	347.7	348.8	349.9	351.0	352.8	355.2	357.6	360.0	362.4	364.2
115°	403.5	404.3	405.0	405.8	406.5	408.1	410.3	412.6	414.8	417.1	418.7
117.5°	457.6	458.2	458.8	459.4	460.0	461.4	463.6	465.8	468.0	470.2	471.3
120°	493.4	494.4	495.5	496.5	497.6	499.1	500.8	502.6	504.5	506.3	506.9
122.5°	530.9	531.2	531.6	532.0	532.4	533.6	535.6	537.6	539.6	541.6	542.6
125°	585.9	585.8	585.7	585.7	585.6	586.5	588.4	590.3	592.2	594.0	595.2
127.5°	636.1	636.6	637.2	637.7	638.3	639.1	640.4	641.7	642.9	644.2	645.3
130°	671.1	671.7	672.2	672.7	673.3	674.2	675.5	676.8	678.2	679.5	680.6
132.5°	707.3	707.6	708.0	708.3	708.7	709.3	710.2	711.1	712.0	713.0	714.0
135°	754.6	755.7	757.0	758.2	759.5	760.3	760.9	761.5	762.1	762.6	763.6
137.5°	806.4	806.9	807.4	807.9	808.4	808.9	809.5	810.2	810.8	811.4	812.1
140°	841.1	841.4	841.7	842.0	842.3	842.6	842.6	842.7	842.8	842.9	843.8
142.5°	872.4	872.8	873.1	873.5	873.9	874.0	873.9	873.6	873.4	873.2	874.1
145°	916.2	916.9	917.6	918.3	919.1	919.6	919.7	920.0	920.1	920.4	920.7
147.5°	959.6	960.4	961.4	962.3	963.1	963.5	963.4	963.2	963.1	962.9	962.8
150°	986.1	986.8	987.5	988.2	989.0	989.4	989.4	989.4	989.4	989.4	989.4
152.5°	1010.8	1011.3	1011.8	1012.3	1012.7	1013.0	1013.2	1013.4	1013.5	1013.7	1014.2
155°	1049.2	1049.2	1049.2	1049.2	1049.2	1049.1	1048.9	1048.7	1048.5	1048.3	1049.1
157.5°	1081.6	1081.2	1080.9	1080.5	1080.1	1079.9	1079.9	1079.8	1079.8	1079.7	1080.4
160°	1100.7	1100.6	1100.3	1100.1	1099.9	1099.7	1099.5	1099.3	1099.1	1098.9	1099.5
162.5°	1118.4	1117.8	1117.4	1116.8	1116.3	1115.9	1115.7	1115.6	1115.3	1115.1	1116.2
165°	1142.2	1141.5	1140.9	1140.3	1139.7	1139.2	1138.8	1138.4	1138.0	1137.6	1138.8
167.5°	1160.4	1159.5	1158.6	1157.8	1157.0	1156.5	1156.6	1156.6	1156.7	1156.7	1157.9
170°	1170.7	1169.7	1168.6	1167.6	1166.6	1166.2	1166.4	1166.6	1166.8	1167.0	1168.2
172.5°	1178.1	1177.2	1176.3	1175.4	1174.6	1174.2	1174.3	1174.3	1174.3	1174.4	1175.8
175°	1188.2	1187.2	1186.1	1185.1	1184.1	1183.4	1183.3	1183.0	1182.9	1182.6	1184.1
177.5°	1191.5	1190.6	1189.9	1189.1	1188.2	1187.8	1187.8	1187.8	1187.8	1187.8	1189.0
180°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0



TEST NUMBER: P332530-927

CATALOG NUMBER: S124DIP-S350D1205U927-4F0-1E-UDD-D1

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°	52.2	54.8	57.5	59.3	60.0	60.9	61.7	62.5
90°	64.6	68.3	71.9	74.3	75.4	76.4	77.6	78.6
92.5°	78.0	81.0	84.1	86.1	87.1	87.9	88.9	89.8
95°	108.3	111.1	114.0	115.8	116.6	117.3	118.1	118.8
97.5°	146.8	149.6	152.6	154.4	155.1	155.8	156.5	157.2
100°	174.6	177.3	180.0	181.6	182.1	182.8	183.3	183.9
102.5°	204.2	207.0	209.8	211.5	212.4	213.2	214.0	214.8
105°	249.2	251.9	254.6	256.6	257.9	259.1	260.4	261.7
107.5°	298.3	300.9	303.5	305.1	305.6	306.2	306.7	307.3
110°	330.9	332.4	333.9	335.3	336.5	337.9	339.1	340.4



TEST NUMBER: P332530-927

CATALOG NUMBER: S124DIP-S350D1205U927-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	366.0	367.7	369.5	370.7	371.5	372.3	373.1	373.9
115°	420.3	421.9	423.6	424.6	424.9	425.3	425.7	426.1
117.5°	472.3	473.3	474.4	475.0	475.3	475.5	475.8	476.0
120°	507.6	508.2	508.8	509.7	510.8	511.8	512.9	514.0
122.5°	543.5	544.5	545.5	545.9	545.7	545.6	545.5	545.3
125°	596.4	597.5	598.7	599.4	599.4	599.5	599.6	599.7
127.5°	646.4	647.5	648.6	649.3	649.5	649.7	650.0	650.2
130°	681.7	682.8	683.9	684.3	684.0	683.7	683.3	683.0
132.5°	714.9	716.0	717.0	717.6	717.8	718.0	718.1	718.4
135°	764.5	765.4	766.4	766.8	766.7	766.5	766.4	766.3
137.5°	812.8	813.4	814.1	814.8	815.2	815.8	816.3	816.9
140°	844.6	845.5	846.4	846.9	847.2	847.4	847.6	847.8
142.5°	875.0	875.9	876.9	877.4	877.7	878.1	878.4	878.7
145°	920.9	921.2	921.5	921.5	921.2	921.0	920.7	920.4
147.5°	962.7	962.6	962.5	962.5	962.5	962.6	962.7	962.7
150°	989.4	989.4	989.4	989.3	989.0	988.9	988.6	988.5
152.5°	1014.6	1015.2	1015.7	1015.7	1015.1	1014.5	1014.0	1013.5
155°	1050.0	1050.8	1051.5	1051.5	1050.8	1050.0	1049.1	1048.3
157.5°	1081.0	1081.6	1082.2	1082.2	1081.5	1080.8	1080.1	1079.4
160°	1100.1	1100.7	1101.4	1101.1	1100.1	1099.1	1098.1	1097.1
162.5°	1117.3	1118.4	1119.5	1119.6	1118.6	1117.5	1116.5	1115.5
165°	1140.0	1141.2	1142.5	1142.6	1141.9	1141.1	1140.2	1139.4
167.5°	1159.1	1160.4	1161.6	1161.6	1160.3	1159.0	1157.8	1156.5
170°	1169.5	1170.7	1172.0	1171.8	1170.4	1168.9	1167.5	1166.1
172.5°	1177.2	1178.5	1180.0	1180.0	1178.5	1177.0	1175.6	1174.2
175°	1185.5	1186.9	1188.4	1188.4	1186.9	1185.5	1184.1	1182.6
177.5°	1190.1	1191.3	1192.4	1192.3	1191.0	1189.7	1188.4	1187.1
180°	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0	1190.0

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