

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: P332524-927

Luminaire Tested: **S124DIP-S350D1035U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332524-927
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-S350D1035U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4040.5 lumens
Efficiency: N/A
Efficacy: 108.3 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

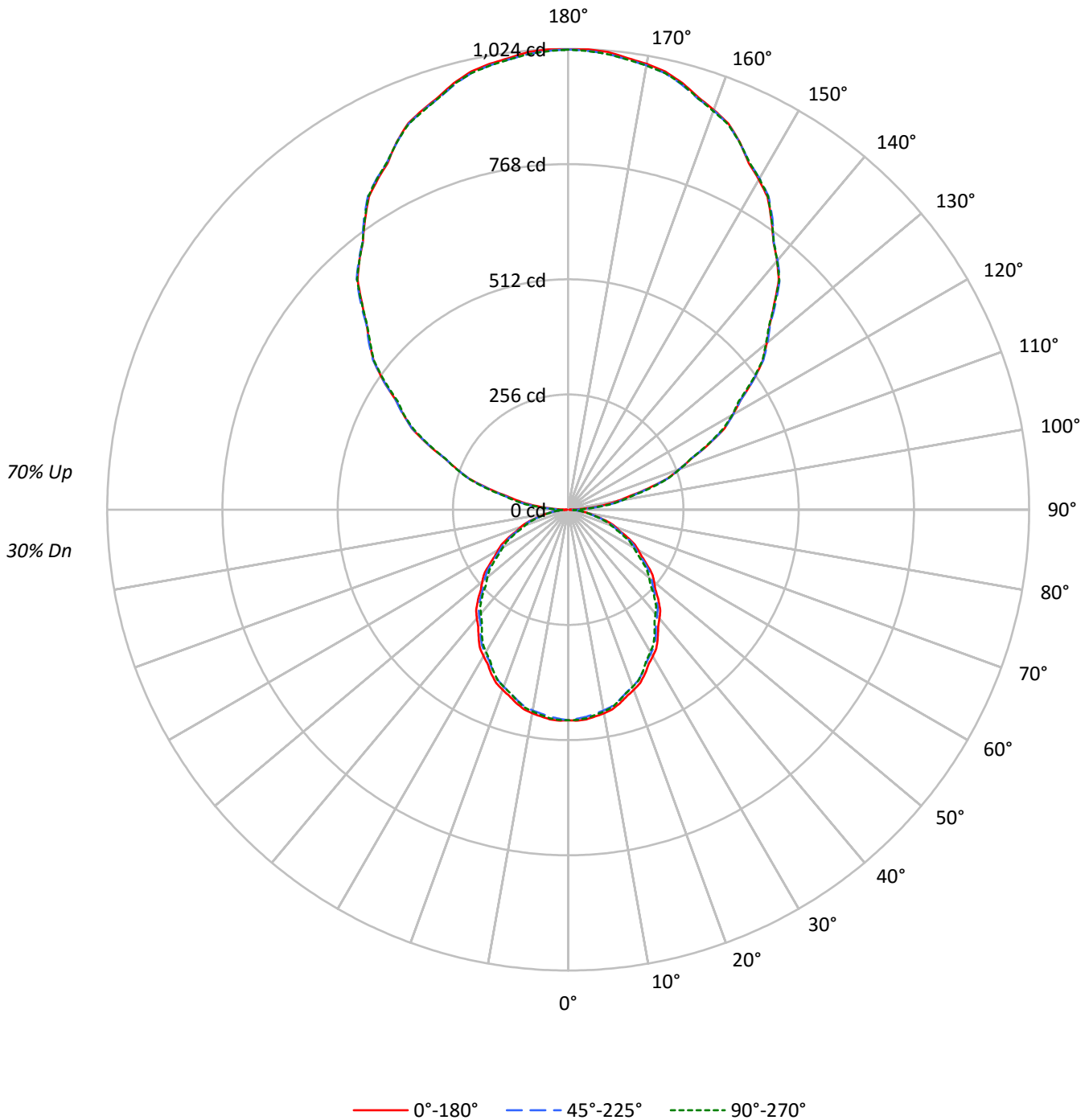
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332524-927

CATALOG NUMBER: S124DIP-S350D1035U927-4F0-1E-UDD-F1

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	50	30	10	0	
RCR																						
0	102	102	102	102	92	92	92	92	72	72	72	54	54	54	38	38	38	30				
1	93	89	85	82	83	80	77	74	63	61	59	47	46	45	33	32	32	25				
2	85	78	72	67	76	70	65	61	55	52	49	42	39	37	29	28	27	21				
3	77	68	61	55	69	61	55	51	49	44	41	37	34	32	26	24	23	18				
4	71	60	53	47	63	54	48	43	43	38	35	33	30	27	23	21	19	15				
5	65	54	46	40	58	48	42	37	38	34	30	29	26	23	21	19	17	13				
6	60	48	40	34	53	43	36	32	35	30	26	26	23	20	19	17	15	12				
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10				
8	51	39	32	26	46	35	29	24	28	24	20	22	18	16	16	13	12	9				
9	47	35	28	23	42	32	26	21	26	21	18	20	17	14	14	12	11	8				
10	44	32	25	21	40	29	23	19	24	19	16	18	15	13	13	11	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3777	3777	3777
5°	3789	3743	3771
10°	3765	3713	3731
15°	3719	3661	3670
20°	3660	3594	3598
25°	3591	3520	3510
30°	3506	3432	3402
35°	3418	3341	3297
40°	3327	3236	3177
45°	3232	3134	3075
50°	3127	3042	2948
55°	3013	2923	2829
60°	2900	2792	2706
65°	2772	2665	2558
70°	2629	2497	2398
75°	2408	2293	2233
80°	2143	2060	2004
85°	1880	1806	1769



TEST NUMBER: P332524-927

CATALOG NUMBER: S124DIP-S350D1035U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	1.1
10°-20°	124.2	3.1
20°-30°	182.8	4.5
30°-40°	212.5	5.3
40°-50°	212.5	5.3
50°-60°	185.9	4.6
60°-70°	138.0	3.4
70°-80°	78.4	1.9
80°-90°	25.7	0.6
90°-100°	67.4	1.7
100°-110°	199.8	4.9
110°-120°	339.1	8.4
120°-130°	447.1	11.1
130°-140°	502.1	12.4
140°-150°	493.4	12.2
150°-160°	415.0	10.3
160°-170°	276.1	6.8
170°-180°	96.7	2.4
0°-30°	351.0	8.7
0°-40°	563.5	13.9
0°-60°	961.8	23.8
0°-90°	1203.9	29.8
90°-120°	606.3	15.0
90°-150°	2048.8	50.7
90°-180°	2837.0	70.2
0°-180°	4040.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	468	466	462	466	465	44
15°	445	443	438	440	439	125
25°	403	400	395	396	394	185
35°	347	344	339	336	334	217
45°	283	280	274	270	269	218
55°	214	213	208	203	201	192
65°	145	143	140	136	134	144
75°	77	75	74	72	72	82
85°	20	20	20	20	19	22
90°	2	11	17	22	24	4
95°	48	54	60	62	62	53
105°	184	185	188	191	193	196
115°	345	345	343	342	342	340
125°	502	502	501	500	498	447
135°	648	652	652	651	648	501
145°	787	790	791	790	788	492
155°	901	901	901	903	901	415
165°	981	979	977	982	979	276
175°	1021	1017	1016	1021	1016	97
180°	1022	1022	1022	1022	1022	



TEST NUMBER: P332524-927

CATALOG NUMBER: S124DIP-S350D1035U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9
2.5°	469.1	469.0	468.7	468.6	468.3	467.9	467.1	466.4	465.7	464.9	465.6
5°	467.5	467.2	466.9	466.6	466.3	465.6	464.7	463.8	462.9	461.9	462.9
7.5°	463.3	462.9	462.6	462.2	461.9	461.2	460.2	459.2	458.2	457.2	457.9
10°	459.3	459.0	458.7	458.4	458.0	457.3	456.2	455.1	454.1	453.0	453.6
12.5°	454.2	453.9	453.6	453.2	452.9	452.2	451.0	449.9	448.7	447.6	448.3
15°	445.0	444.7	444.4	444.1	443.8	443.0	441.7	440.5	439.2	438.0	438.5
17.5°	434.0	433.6	433.2	432.8	432.4	431.6	430.4	429.2	428.0	426.8	427.1
20°	426.0	425.6	425.2	424.7	424.3	423.5	422.2	421.0	419.7	418.4	418.7
22.5°	417.2	416.7	416.1	415.6	415.0	414.2	412.9	411.7	410.4	409.2	409.6
25°	403.1	402.5	402.0	401.3	400.8	399.9	398.7	397.5	396.4	395.2	395.3
27.5°	386.9	386.3	385.7	385.1	384.5	383.7	382.5	381.5	380.4	379.3	379.1
30°	376.1	375.4	374.8	374.1	373.4	372.6	371.5	370.3	369.3	368.2	367.9
32.5°	364.7	364.1	363.5	362.9	362.3	361.4	360.3	359.1	358.0	356.8	356.4
35°	346.8	346.3	345.7	345.1	344.5	343.6	342.5	341.3	340.2	339.0	338.4
37.5°	328.0	327.5	326.9	326.5	325.9	325.0	323.8	322.5	321.2	320.0	319.3
40°	315.7	315.1	314.4	313.7	313.1	312.1	310.9	309.6	308.3	307.1	306.3
42.5°	302.5	302.1	301.7	301.3	301.0	300.0	298.7	297.2	295.9	294.5	293.5
45°	283.1	282.5	281.9	281.4	280.7	279.8	278.5	277.1	275.8	274.5	273.5
47.5°	262.8	262.4	262.0	261.6	261.2	260.4	259.1	257.9	256.7	255.4	254.4
50°	249.0	248.7	248.3	248.0	247.6	246.9	245.7	244.5	243.4	242.2	241.1
52.5°	235.5	235.0	234.6	234.2	233.9	233.1	231.8	230.6	229.3	228.1	227.1
55°	214.1	213.9	213.6	213.3	213.1	212.4	211.2	210.1	208.9	207.7	206.8
57.5°	193.7	193.5	193.1	192.9	192.6	191.9	190.7	189.6	188.4	187.3	186.3
60°	179.6	179.2	178.8	178.3	177.9	177.2	176.1	175.0	174.0	172.9	172.1
62.5°	165.8	165.5	165.1	164.8	164.4	163.7	162.5	161.4	160.2	159.1	158.4
65°	145.1	144.7	144.3	143.9	143.5	142.8	142.0	141.2	140.3	139.5	138.6
67.5°	124.3	123.9	123.5	123.1	122.7	122.2	121.4	120.6	119.8	118.9	118.1
70°	111.4	110.7	110.2	109.6	109.0	108.4	107.7	107.1	106.4	105.8	105.0
72.5°	97.6	97.0	96.4	95.9	95.2	94.7	94.1	93.6	93.1	92.5	92.0
75°	77.2	76.8	76.4	76.0	75.6	75.2	74.8	74.3	73.9	73.5	73.2
77.5°	57.8	57.7	57.4	57.3	57.1	56.8	56.5	56.1	55.7	55.4	55.2
80°	46.1	45.9	45.6	45.4	45.2	44.9	44.8	44.6	44.4	44.3	44.0
82.5°	34.7	34.6	34.5	34.4	34.2	34.1	34.1	34.1	34.1	34.1	34.0
85°	20.3	20.3	20.3	20.3	20.3	20.2	20.0	19.8	19.6	19.5	19.5
87.5°	8.2	8.6	9.0	9.3	9.6	9.8	10.1	10.2	10.5	10.7	10.9
90°	2.4	4.3	6.3	8.2	10.1	11.8	13.2	14.6	16.0	17.4	18.5
92.5°	17.0	19.2	21.3	23.5	25.7	27.4	28.4	29.3	30.3	31.3	31.9
95°	47.5	49.0	50.6	52.2	53.8	55.1	56.4	57.7	58.9	60.1	60.6
97.5°	82.9	84.1	85.4	86.7	87.9	89.3	90.7	92.1	93.6	95.1	95.7
100°	110.7	111.4	112.1	112.8	113.5	114.6	116.2	117.8	119.4	121.0	121.4
102.5°	139.8	140.1	140.4	140.6	140.9	141.8	143.2	144.7	146.1	147.6	148.1
105°	184.3	184.4	184.6	184.7	185.0	185.4	186.1	186.8	187.5	188.2	188.7
107.5°	230.9	231.1	231.3	231.6	231.7	231.9	232.0	232.1	232.2	232.3	232.8
110°	262.5	262.8	263.2	263.6	264.0	264.0	263.8	263.6	263.5	263.3	262.9



TEST NUMBER: P332524-927

CATALOG NUMBER: S124DIP-S350D1035U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	295.4	295.5	295.6	295.6	295.7	295.6	295.2	294.9	294.6	294.3	294.2
115°	344.8	344.8	344.8	344.8	344.8	344.6	344.2	343.9	343.5	343.2	343.0
117.5°	391.3	391.4	391.5	391.7	391.8	391.7	391.5	391.3	391.0	390.8	390.1
120°	422.2	422.9	423.7	424.4	425.1	425.2	424.6	424.1	423.6	423.0	422.2
122.5°	454.5	454.8	455.0	455.3	455.6	455.7	455.4	455.1	454.9	454.6	454.1
125°	502.1	502.1	502.1	502.1	502.1	502.0	501.8	501.7	501.5	501.3	501.0
127.5°	545.3	545.8	546.3	546.8	547.4	547.5	547.2	546.9	546.7	546.4	546.1
130°	575.6	576.2	576.7	577.2	577.7	578.0	578.0	578.0	578.0	578.0	577.7
132.5°	606.7	607.0	607.4	607.8	608.2	608.3	608.2	608.0	607.8	607.8	607.4
135°	647.6	648.6	649.7	650.8	651.8	652.4	652.4	652.4	652.4	652.4	652.0
137.5°	692.2	692.7	693.2	693.6	694.2	694.5	694.8	695.1	695.4	695.7	695.2
140°	721.9	722.2	722.6	722.9	723.3	723.5	723.5	723.5	723.5	723.5	723.3
142.5°	749.1	749.5	749.8	750.2	750.5	750.6	750.5	750.4	750.2	750.0	750.0
145°	786.7	787.4	788.1	788.9	789.6	790.0	790.2	790.4	790.5	790.7	790.5
147.5°	824.1	824.9	825.8	826.6	827.4	827.8	827.7	827.5	827.4	827.3	827.1
150°	846.8	847.6	848.3	849.0	849.7	850.0	850.0	850.0	850.0	850.0	850.0
152.5°	868.4	868.8	869.2	869.7	870.1	870.3	870.4	870.6	870.8	870.8	871.3
155°	901.4	901.4	901.4	901.4	901.4	901.3	901.1	900.9	900.8	900.6	901.3
157.5°	929.2	928.9	928.6	928.3	928.0	927.8	927.7	927.7	927.7	927.6	928.2
160°	945.7	945.5	945.3	945.2	945.0	944.8	944.6	944.4	944.3	944.1	944.6
162.5°	960.8	960.4	960.0	959.5	959.0	958.7	958.5	958.4	958.2	958.0	958.9
165°	981.3	980.7	980.2	979.7	979.1	978.7	978.3	978.0	977.6	977.3	978.3
167.5°	997.0	996.2	995.5	994.7	994.0	993.6	993.6	993.7	993.7	993.8	994.8
170°	1005.8	1004.9	1004.0	1003.1	1002.3	1001.9	1002.1	1002.3	1002.4	1002.6	1003.7
172.5°	1012.1	1011.4	1010.7	1009.9	1009.2	1008.8	1008.8	1008.8	1008.9	1008.9	1010.1
175°	1020.8	1019.9	1019.1	1018.2	1017.3	1016.8	1016.6	1016.4	1016.2	1016.1	1017.3
177.5°	1023.7	1022.9	1022.2	1021.5	1020.8	1020.5	1020.5	1020.5	1020.5	1020.5	1021.4
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4



TEST NUMBER: P332524-927

CATALOG NUMBER: S124DIP-S350D1035U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9
2.5°	466.3	467.0	467.6	467.9	467.9	467.8	467.7	467.6
5°	463.8	464.7	465.6	466.0	465.8	465.6	465.5	465.3
7.5°	458.6	459.4	460.1	460.4	460.3	460.2	460.1	460.0
10°	454.3	455.0	455.7	455.9	455.7	455.5	455.3	455.2
12.5°	449.0	449.7	450.5	450.8	450.5	450.3	450.0	449.8
15°	438.9	439.4	440.0	440.1	439.8	439.6	439.3	439.1
17.5°	427.5	427.8	428.1	428.2	428.0	427.9	427.7	427.5
20°	419.0	419.2	419.5	419.5	419.3	419.1	419.0	418.8
22.5°	410.0	410.5	411.0	411.1	410.7	410.4	410.1	409.9
25°	395.4	395.5	395.5	395.5	395.1	394.7	394.4	394.1
27.5°	378.9	378.7	378.5	378.2	377.8	377.4	376.9	376.5
30°	367.6	367.3	366.9	366.5	366.1	365.7	365.3	364.9
32.5°	356.0	355.6	355.2	354.8	354.4	353.9	353.6	353.2
35°	337.8	337.2	336.6	336.1	335.7	335.3	334.9	334.5
37.5°	318.7	318.1	317.4	316.9	316.3	315.8	315.2	314.7
40°	305.5	304.6	303.8	303.2	302.7	302.3	301.9	301.5
42.5°	292.6	291.6	290.7	290.0	289.7	289.5	289.1	288.9
45°	272.7	271.7	270.8	270.2	270.0	269.7	269.5	269.3
47.5°	253.3	252.3	251.3	250.5	249.9	249.2	248.6	248.0
50°	239.9	238.8	237.6	236.7	236.2	235.8	235.2	234.7
52.5°	226.1	225.1	224.0	223.2	222.5	221.9	221.3	220.6
55°	205.7	204.7	203.7	203.0	202.5	202.0	201.5	201.0
57.5°	185.4	184.4	183.5	182.8	182.3	181.8	181.3	180.8
60°	171.3	170.6	169.8	169.3	168.9	168.4	168.0	167.6
62.5°	157.7	157.0	156.3	155.7	155.3	155.0	154.6	154.1
65°	137.8	137.0	136.2	135.5	135.1	134.7	134.3	133.9
67.5°	117.3	116.5	115.7	115.3	115.2	115.0	114.9	114.8
70°	104.4	103.8	103.1	102.6	102.3	102.1	101.9	101.6
72.5°	91.5	90.9	90.4	90.0	89.8	89.5	89.3	89.0
75°	72.8	72.5	72.2	71.9	71.9	71.8	71.7	71.6
77.5°	55.1	55.1	55.0	54.8	54.6	54.3	54.1	53.9
80°	43.9	43.7	43.6	43.5	43.3	43.3	43.2	43.1
82.5°	33.8	33.7	33.7	33.6	33.5	33.4	33.3	33.2
85°	19.5	19.5	19.5	19.5	19.4	19.3	19.2	19.1
87.5°	11.1	11.3	11.5	11.6	11.7	11.8	11.9	12.0
90°	19.5	20.6	21.6	22.3	22.7	23.1	23.4	23.7
92.5°	32.6	33.2	33.8	34.3	34.5	34.7	34.9	35.1
95°	61.2	61.7	62.2	62.5	62.5	62.5	62.5	62.5
97.5°	96.3	97.0	97.6	97.9	97.9	97.9	97.9	97.9
100°	121.7	122.0	122.4	122.6	122.6	122.6	122.6	122.6
102.5°	148.5	149.0	149.5	149.8	150.0	150.1	150.3	150.4
105°	189.3	189.8	190.3	190.8	191.3	191.9	192.4	192.9
107.5°	233.3	233.8	234.2	234.5	234.5	234.4	234.4	234.3
110°	262.6	262.2	261.9	262.0	262.5	263.0	263.6	264.1



TEST NUMBER: P332524-927

CATALOG NUMBER: S124DIP-S350D1035U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	294.1	294.1	294.1	294.1	294.1	294.2	294.4	294.5
115°	342.8	342.6	342.5	342.3	342.1	341.9	341.7	341.6
117.5°	389.6	389.0	388.4	387.9	387.5	387.2	386.8	386.5
120°	421.3	420.4	419.5	419.2	419.6	419.9	420.3	420.6
122.5°	453.4	452.9	452.3	451.6	451.0	450.4	449.7	449.1
125°	500.6	500.3	499.9	499.6	499.2	498.8	498.5	498.1
127.5°	545.7	545.3	544.9	544.6	544.4	544.1	543.8	543.5
130°	577.3	576.9	576.6	576.1	575.4	574.6	573.9	573.2
132.5°	607.0	606.7	606.3	606.0	605.7	605.5	605.1	604.9
135°	651.6	651.3	650.9	650.5	650.0	649.4	648.9	648.4
137.5°	694.7	694.3	693.9	693.6	693.8	693.9	694.0	694.1
140°	723.2	722.9	722.8	722.6	722.5	722.2	722.1	721.9
142.5°	750.0	750.0	750.0	749.9	749.9	749.8	749.8	749.7
145°	790.4	790.2	790.0	789.6	789.1	788.6	788.1	787.5
147.5°	827.0	826.8	826.6	826.5	826.3	826.2	826.0	825.9
150°	850.0	850.0	850.0	849.9	849.8	849.5	849.4	849.2
152.5°	871.7	872.1	872.6	872.6	872.1	871.6	871.2	870.7
155°	902.1	902.7	903.4	903.4	902.7	902.1	901.3	900.6
157.5°	928.7	929.2	929.8	929.7	929.2	928.5	928.0	927.3
160°	945.2	945.7	946.2	946.0	945.2	944.3	943.4	942.5
162.5°	959.9	960.8	961.8	961.9	961.0	960.1	959.3	958.3
165°	979.5	980.5	981.5	981.7	981.0	980.3	979.6	978.9
167.5°	995.9	997.0	998.0	998.0	996.9	995.8	994.7	993.6
170°	1004.7	1005.8	1006.9	1006.7	1005.5	1004.2	1003.1	1001.8
172.5°	1011.3	1012.5	1013.8	1013.7	1012.5	1011.2	1010.0	1008.8
175°	1018.5	1019.8	1021.0	1021.0	1019.8	1018.5	1017.3	1016.1
177.5°	1022.5	1023.4	1024.5	1024.4	1023.3	1022.1	1021.0	1019.9
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4

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