

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: P331909-927

Luminaire Tested: **S123DIP-S340D1195U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331909-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1195U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4541.3 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

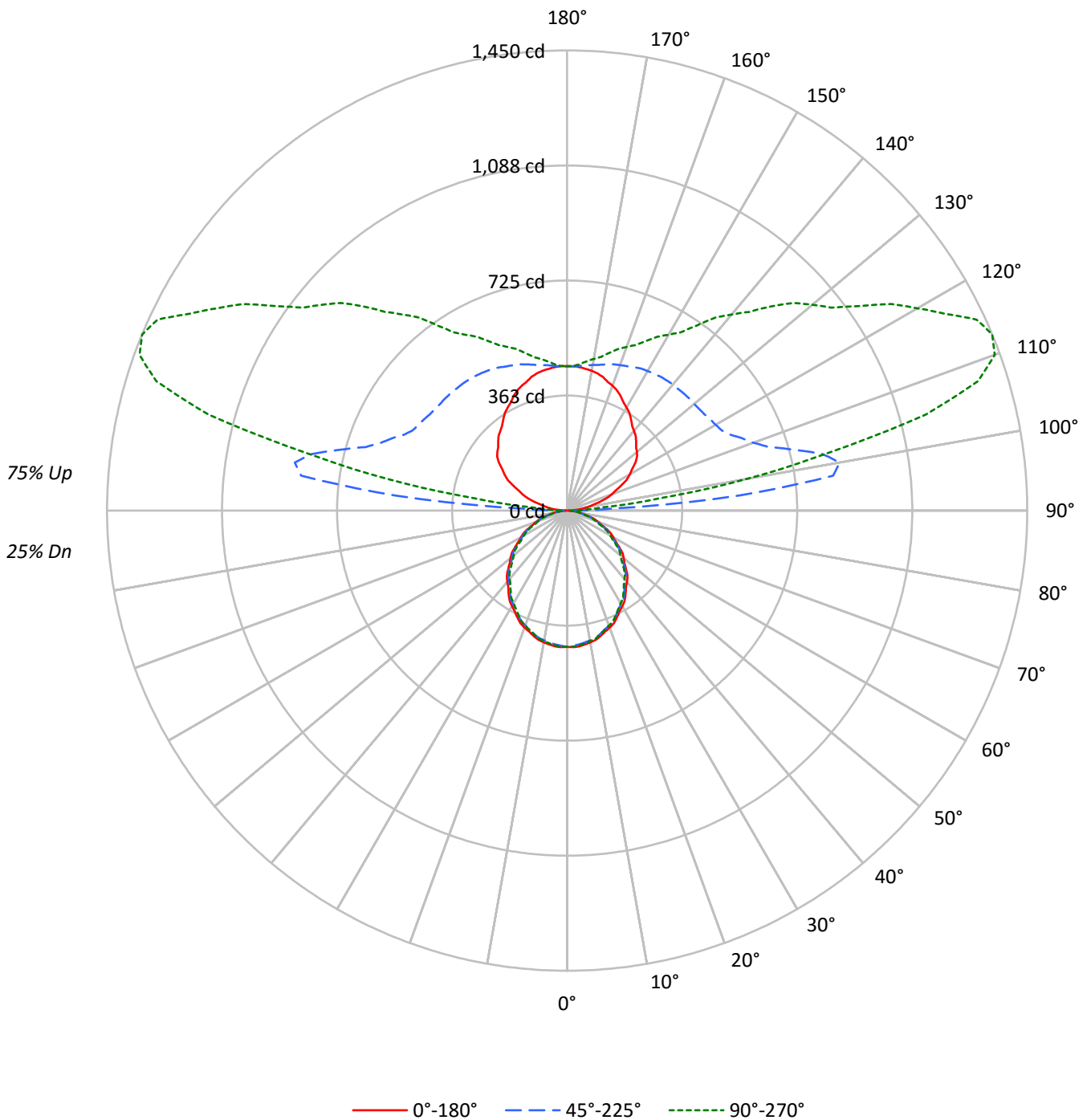
Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331909-927

CATALOG NUMBER: S123DIP-S340D1195U927-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P331909-927

CATALOG NUMBER: S123DIP-S340D1195U927-4F0-1E-UDD-F4

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	33	33	33	25
1	92	88	84	81	82	78	75	72	60	58	57	44	43	42	29	28	28	21
2	84	77	71	66	74	68	63	59	53	50	47	39	37	35	25	24	23	17
3	76	67	60	55	68	60	54	49	47	43	39	34	31	29	22	21	20	15
4	70	59	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	13
5	64	53	45	39	57	47	41	36	37	32	28	27	24	22	18	16	15	11
6	59	47	39	34	52	42	36	31	33	28	25	24	21	19	16	14	13	10
7	54	42	35	29	48	38	31	27	30	25	22	22	19	16	15	13	11	8
8	50	38	31	26	44	34	28	24	27	22	19	20	17	15	14	12	10	8
9	47	35	28	23	41	31	25	21	25	20	17	18	15	13	13	11	9	7
10	43	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4621	4621	4621
5°	4643	4578	4611
10°	4611	4539	4568
15°	4558	4488	4496
20°	4495	4415	4418
25°	4410	4327	4318
30°	4318	4230	4197
35°	4221	4127	4075
40°	4118	4014	3953
45°	4007	3911	3815
50°	3893	3783	3677
55°	3748	3652	3539
60°	3599	3496	3384
65°	3469	3326	3224
70°	3276	3138	2996
75°	2994	2886	2766
80°	2703	2585	2566
85°	2371	2285	2186



TEST NUMBER: P331909-927

CATALOG NUMBER: S123DIP-S340D1195U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.4	0.9
10°-20°	114.2	2.5
20°-30°	168.7	3.7
30°-40°	197.0	4.3
40°-50°	198.1	4.4
50°-60°	174.0	3.8
60°-70°	129.6	2.9
70°-80°	73.8	1.6
80°-90°	24.7	0.5
90°-100°	253.0	5.6
100°-110°	716.5	15.8
110°-120°	704.8	15.5
120°-130°	562.2	12.4
130°-140°	443.3	9.8
140°-150°	330.8	7.3
150°-160°	230.6	5.1
160°-170°	135.5	3.0
170°-180°	44.1	1.0
0°-30°	323.3	7.1
0°-40°	520.3	11.5
0°-60°	892.4	19.6
0°-90°	1120.6	24.7
90°-120°	1674.3	36.9
90°-150°	3010.6	66.3
90°-180°	3421.0	75.3
0°-180°	4541.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	429	429	429	429	429	
5°	430	428	424	427	427	41
15°	409	407	403	405	404	115
25°	371	369	364	365	364	171
35°	321	319	314	312	310	201
45°	263	262	257	253	251	203
55°	200	199	195	191	189	179
65°	136	134	131	128	127	134
75°	72	70	69	68	66	77
85°	19	18	18	18	18	21
90°	2	11	23	26	27	3
95°	31	102	546	159	107	34
105°	107	158	740	1294	1171	113
115°	189	235	566	1241	1424	187
125°	262	310	528	957	1123	233
135°	307	367	521	788	910	237
145°	351	402	514	647	712	220
155°	398	430	498	566	590	183
165°	435	448	477	506	514	123
175°	454	454	457	464	463	43
180°	455	455	455	455	455	



TEST NUMBER: P331909-927

CATALOG NUMBER: S123DIP-S340D1195U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	429.3	429.3	429.3	429.3	429.3	429.3	429.3	429.3	429.3	429.3	429.3
2.5°	430.8	430.5	430.2	430.0	429.7	429.2	428.5	427.8	427.1	426.4	427.0
5°	429.7	429.2	428.8	428.4	428.0	427.4	426.4	425.6	424.6	423.7	424.5
7.5°	425.5	425.0	424.6	424.2	423.8	423.1	422.2	421.3	420.3	419.4	420.1
10°	421.9	421.5	421.0	420.6	420.3	419.5	418.4	417.4	416.3	415.3	416.0
12.5°	417.2	416.8	416.5	416.1	415.8	415.1	414.2	413.1	412.1	411.1	411.7
15°	409.0	408.7	408.3	408.0	407.7	406.9	405.9	404.8	403.8	402.7	403.4
17.5°	399.4	399.0	398.6	398.2	397.8	397.0	395.9	394.9	393.8	392.8	393.2
20°	392.4	391.9	391.4	390.9	390.4	389.6	388.6	387.5	386.4	385.4	385.7
22.5°	384.4	383.9	383.4	382.9	382.5	381.7	380.6	379.5	378.4	377.4	377.6
25°	371.3	370.8	370.3	369.9	369.4	368.6	367.5	366.5	365.4	364.3	364.4
27.5°	357.4	356.9	356.4	355.9	355.5	354.7	353.6	352.4	351.3	350.1	350.1
30°	347.4	346.9	346.5	346.1	345.7	344.9	343.8	342.6	341.5	340.3	340.3
32.5°	337.3	336.8	336.2	335.6	335.2	334.4	333.5	332.6	331.8	330.9	330.4
35°	321.2	320.7	320.1	319.6	319.2	318.4	317.3	316.2	315.2	314.1	313.6
37.5°	304.6	304.0	303.3	302.7	302.1	301.3	300.2	299.0	298.0	296.9	296.4
40°	293.1	292.6	292.1	291.6	291.1	290.3	289.1	288.0	286.8	285.7	285.0
42.5°	281.5	281.0	280.4	279.9	279.3	278.5	277.3	276.2	275.0	273.9	273.2
45°	263.2	262.8	262.5	262.2	261.9	261.2	260.1	259.0	257.9	256.9	256.0
47.5°	244.9	244.5	244.0	243.5	243.0	242.3	241.3	240.3	239.3	238.3	237.3
50°	232.5	232.1	231.7	231.3	230.9	230.1	229.1	228.1	227.0	225.9	225.0
52.5°	219.5	219.3	219.0	218.7	218.4	217.7	216.6	215.5	214.4	213.2	212.5
55°	199.7	199.6	199.6	199.5	199.4	198.8	197.7	196.6	195.6	194.6	193.6
57.5°	180.8	180.5	180.2	180.0	179.7	179.1	178.2	177.4	176.6	175.7	174.9
60°	167.2	167.2	167.1	167.0	166.9	166.4	165.3	164.4	163.4	162.4	161.7
62.5°	155.1	154.9	154.7	154.5	154.2	153.7	152.7	151.7	150.7	149.7	149.0
65°	136.2	135.8	135.4	135.0	134.6	134.0	133.2	132.3	131.5	130.6	130.0
67.5°	116.2	115.8	115.5	115.1	114.8	114.2	113.7	113.0	112.4	111.8	111.2
70°	104.1	103.6	103.1	102.6	102.1	101.6	101.2	100.6	100.1	99.7	99.1
72.5°	91.4	91.0	90.7	90.3	89.9	89.5	89.0	88.4	87.9	87.3	86.7
75°	72.0	71.6	71.3	71.0	70.7	70.3	70.1	69.9	69.6	69.4	69.0
77.5°	54.7	54.6	54.4	54.3	54.0	53.8	53.6	53.2	52.9	52.6	52.4
80°	43.6	43.3	43.1	42.9	42.5	42.4	42.2	42.1	41.9	41.7	41.6
82.5°	32.6	32.6	32.6	32.5	32.4	32.4	32.3	32.3	32.3	32.2	32.1
85°	19.2	19.0	18.9	18.7	18.5	18.5	18.5	18.5	18.5	18.5	18.3
87.5°	8.1	8.2	8.4	8.7	9.0	9.2	9.7	10.1	10.6	11.1	10.9
90°	1.8	3.6	5.5	8.3	10.1	12.0	14.7	17.5	20.3	23.0	22.1
92.5°	11.4	17.0	24.6	31.8	39.6	53.2	77.3	116.9	155.7	141.6	106.8
95°	31.3	34.1	44.2	59.8	83.7	119.6	197.9	335.0	486.0	545.8	442.7
97.5°	53.4	54.3	62.2	75.8	99.4	138.2	213.0	367.6	619.2	845.8	904.9
100°	68.1	69.0	75.5	88.3	110.4	146.3	210.8	347.0	589.1	871.6	1053.0
102.5°	83.6	85.2	90.9	103.1	122.9	155.9	213.7	329.3	544.9	823.8	1060.3
105°	106.8	109.6	115.0	126.1	143.5	172.1	221.8	316.6	490.6	740.0	1004.2
107.5°	131.4	134.2	139.5	150.4	166.8	193.3	236.9	315.7	456.0	666.0	905.9
110°	149.1	151.9	156.5	166.6	182.2	208.0	249.5	319.4	442.7	624.0	844.0



TEST NUMBER: P331909-927

CATALOG NUMBER: S123DIP-S340D1195U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	165.3	168.1	172.7	182.8	198.4	223.5	262.0	326.8	435.4	596.0	790.3
115°	188.7	192.3	197.9	207.1	222.8	247.6	282.6	338.7	432.6	566.0	725.2
117.5°	212.1	216.3	220.9	229.3	246.8	269.9	304.4	354.5	434.3	548.3	686.0
120°	228.2	231.0	235.6	244.9	262.3	285.3	318.5	366.3	437.2	540.3	665.4
122.5°	242.2	245.0	249.6	259.5	276.3	300.8	333.2	377.4	442.4	535.1	648.5
125°	262.3	264.2	269.7	279.8	297.3	322.1	354.3	394.8	450.0	528.3	626.8
127.5°	277.6	280.4	287.2	297.5	316.8	341.7	372.7	409.2	458.9	525.0	607.7
130°	287.2	289.9	298.2	309.3	328.6	353.4	383.8	418.7	464.8	522.8	597.3
132.5°	294.5	298.0	307.0	320.3	339.6	363.8	393.4	427.6	469.2	522.0	587.8
135°	307.4	311.1	321.2	335.0	354.3	379.2	407.7	439.0	475.9	520.9	575.3
137.5°	319.6	323.4	333.4	348.1	367.3	390.2	417.6	447.5	480.3	518.9	564.4
140°	327.6	332.2	341.4	356.2	374.6	397.6	424.3	451.9	483.2	518.2	557.8
142.5°	336.5	340.4	350.3	363.5	382.0	403.5	429.4	456.3	485.4	516.7	551.8
145°	350.7	353.4	361.7	375.5	391.2	412.3	436.3	461.1	486.9	514.5	544.0
147.5°	365.0	366.7	374.8	386.7	401.9	419.9	441.8	464.1	486.9	511.0	536.2
150°	374.6	375.5	382.9	394.8	407.7	424.3	445.4	464.8	486.9	508.0	531.1
152.5°	384.2	384.4	391.7	402.2	413.6	429.4	447.7	466.3	484.7	504.4	525.2
155°	398.5	398.5	404.1	413.3	423.3	436.3	451.9	466.7	482.3	498.0	516.3
157.5°	410.0	410.7	415.1	423.2	431.8	441.8	454.3	467.5	479.2	492.3	506.4
160°	418.7	418.7	422.5	429.8	436.3	445.4	456.5	467.5	477.7	487.8	499.8
162.5°	425.4	425.4	428.3	434.3	440.0	447.7	457.2	466.8	474.8	483.4	493.1
165°	435.4	434.4	436.3	440.8	444.6	451.0	458.4	464.8	470.3	476.7	484.1
167.5°	442.9	441.8	442.7	446.2	448.8	452.8	458.2	463.3	465.9	470.2	475.5
170°	447.3	445.4	446.4	449.2	451.0	452.8	457.4	461.1	463.0	465.7	470.3
172.5°	450.3	449.2	449.3	451.4	452.5	453.6	457.4	460.4	460.7	462.0	465.2
175°	453.8	452.8	451.9	453.8	453.8	454.7	456.5	458.4	457.4	457.4	459.3
177.5°	455.4	454.7	453.9	454.7	454.7	454.7	455.4	456.9	455.4	454.7	455.4
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7



TEST NUMBER: P331909-927

CATALOG NUMBER: S123DIP-S340D1195U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	429.3	429.3	429.3	429.3	429.3	429.3	429.3	429.3
2.5°	427.6	428.3	429.0	429.3	429.2	429.1	429.0	429.0
5°	425.4	426.2	427.1	427.4	427.2	427.1	426.8	426.7
7.5°	420.9	421.6	422.3	422.6	422.6	422.5	422.4	422.2
10°	416.8	417.5	418.2	418.5	418.4	418.2	418.0	417.9
12.5°	412.2	412.7	413.3	413.5	413.4	413.3	413.2	413.1
15°	404.0	404.6	405.4	405.4	404.9	404.4	403.9	403.5
17.5°	393.6	394.1	394.6	394.7	394.5	394.3	394.2	394.0
20°	386.0	386.3	386.7	386.7	386.4	386.2	386.0	385.7
22.5°	377.9	378.2	378.4	378.4	378.1	377.8	377.5	377.2
25°	364.5	364.6	364.6	364.6	364.3	364.1	363.8	363.6
27.5°	350.2	350.3	350.3	350.2	349.9	349.6	349.3	349.0
30°	340.3	340.3	340.3	340.0	339.5	338.9	338.3	337.7
32.5°	329.9	329.5	329.1	328.7	328.4	328.0	327.7	327.4
35°	313.1	312.7	312.1	311.7	311.3	310.9	310.5	310.1
37.5°	295.7	295.2	294.5	294.1	293.9	293.6	293.3	293.1
40°	284.4	283.8	283.0	282.6	282.3	281.9	281.6	281.3
42.5°	272.6	271.9	271.2	270.8	270.5	270.1	269.8	269.4
45°	254.9	254.0	252.9	252.3	251.8	251.4	251.0	250.6
47.5°	236.4	235.4	234.4	233.8	233.4	233.1	232.7	232.3
50°	224.1	223.2	222.3	221.6	221.1	220.6	220.1	219.6
52.5°	211.7	210.9	210.1	209.5	209.0	208.5	208.0	207.6
55°	192.7	191.8	190.9	190.3	189.9	189.4	189.0	188.6
57.5°	174.1	173.3	172.5	171.8	171.3	170.9	170.4	169.9
60°	161.0	160.2	159.5	158.9	158.4	158.0	157.6	157.2
62.5°	148.2	147.5	146.8	146.2	146.0	145.7	145.4	145.1
65°	129.4	128.7	128.0	127.6	127.4	127.1	126.8	126.6
67.5°	110.6	110.0	109.5	109.0	108.7	108.3	108.0	107.7
70°	98.5	97.9	97.4	96.9	96.5	96.1	95.6	95.2
72.5°	86.3	85.7	85.2	84.8	84.7	84.4	84.2	84.0
75°	68.6	68.1	67.7	67.4	67.2	66.9	66.7	66.5
77.5°	52.0	51.8	51.5	51.4	51.4	51.4	51.4	51.4
80°	41.5	41.4	41.4	41.4	41.4	41.4	41.4	41.4
82.5°	32.0	31.8	31.7	31.5	31.5	31.4	31.4	31.3
85°	18.1	18.0	17.8	17.7	17.7	17.7	17.7	17.7
87.5°	10.9	11.1	11.2	11.6	11.3	11.6	11.7	11.6
90°	23.0	23.9	24.9	26.7	25.7	26.7	27.6	26.7
92.5°	77.5	61.5	54.3	49.5	47.8	45.1	46.0	44.4
95°	331.4	224.6	175.8	142.7	125.2	116.9	110.4	106.8
97.5°	825.9	661.6	542.9	432.8	364.9	323.4	298.6	290.7
100°	1085.1	1010.6	902.9	772.2	679.2	612.0	576.2	577.1
102.5°	1171.3	1168.9	1106.1	1023.3	950.9	897.8	867.8	846.6
105°	1196.5	1288.6	1306.1	1282.1	1239.8	1204.8	1175.4	1170.8
107.5°	1123.9	1273.4	1354.1	1386.9	1387.6	1375.8	1365.9	1357.4
110°	1054.8	1224.2	1340.1	1404.5	1430.3	1437.7	1435.8	1434.0



TEST NUMBER: P331909-927

CATALOG NUMBER: S123DIP-S340D1195U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	986.3	1159.4	1289.3	1372.1	1419.3	1442.1	1449.1	1449.5
115°	895.6	1055.7	1191.0	1291.3	1360.3	1400.8	1419.3	1423.9
117.5°	829.8	968.0	1089.6	1191.4	1263.4	1309.7	1336.3	1342.5
120°	795.2	919.5	1029.9	1122.9	1195.6	1247.1	1269.2	1274.8
122.5°	767.9	880.4	982.8	1069.1	1133.8	1180.1	1204.4	1211.4
125°	731.7	832.0	920.4	994.0	1053.0	1093.4	1116.4	1122.9
127.5°	700.1	789.5	869.2	936.2	988.7	1023.3	1044.1	1050.0
130°	680.2	763.0	837.6	900.2	949.0	982.1	1001.4	1008.8
132.5°	661.8	738.0	807.4	867.0	912.8	945.9	963.1	968.3
135°	636.9	702.3	762.1	814.5	859.7	887.2	903.8	910.3
137.5°	614.3	667.8	719.4	764.9	802.8	830.8	844.7	849.0
140°	601.0	647.9	692.1	731.7	766.7	792.5	807.2	806.3
142.5°	588.5	628.8	667.1	701.6	731.3	754.2	767.4	766.5
145°	573.4	603.8	633.3	659.9	682.9	702.3	709.6	711.5
147.5°	561.1	585.2	609.0	627.9	645.4	658.5	665.4	666.1
150°	552.2	573.4	592.7	610.2	624.0	634.1	639.7	639.7
152.5°	544.2	562.4	579.5	594.1	604.9	614.3	617.6	617.6
155°	532.0	546.7	560.5	571.6	579.9	587.2	589.1	589.9
157.5°	519.1	531.5	542.1	550.7	557.9	563.5	564.9	564.7
160°	511.7	521.9	531.1	537.5	544.0	549.5	549.5	548.6
162.5°	502.9	511.6	520.0	525.7	530.0	534.7	534.7	533.9
165°	491.5	497.0	503.4	508.0	511.7	515.4	514.5	514.5
167.5°	481.6	485.8	489.5	492.8	494.4	497.0	496.1	496.1
170°	474.9	477.7	481.3	483.2	484.1	486.0	485.1	485.1
172.5°	469.1	471.0	474.0	475.1	475.3	477.1	475.5	474.8
175°	461.1	462.0	463.9	463.9	463.9	464.8	463.9	463.0
177.5°	456.1	456.9	457.6	457.6	456.9	457.6	456.1	456.1
180°	454.7	454.7	454.7	454.7	454.7	454.7	454.7	454.7

(END OF REPORT)