

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: P331872-927

Luminaire Tested: **S123DIP-S340D365U927-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331872-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D365U927-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2105.5 lumens
Efficiency: N/A
Efficacy: 103.7 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: General Diffuse

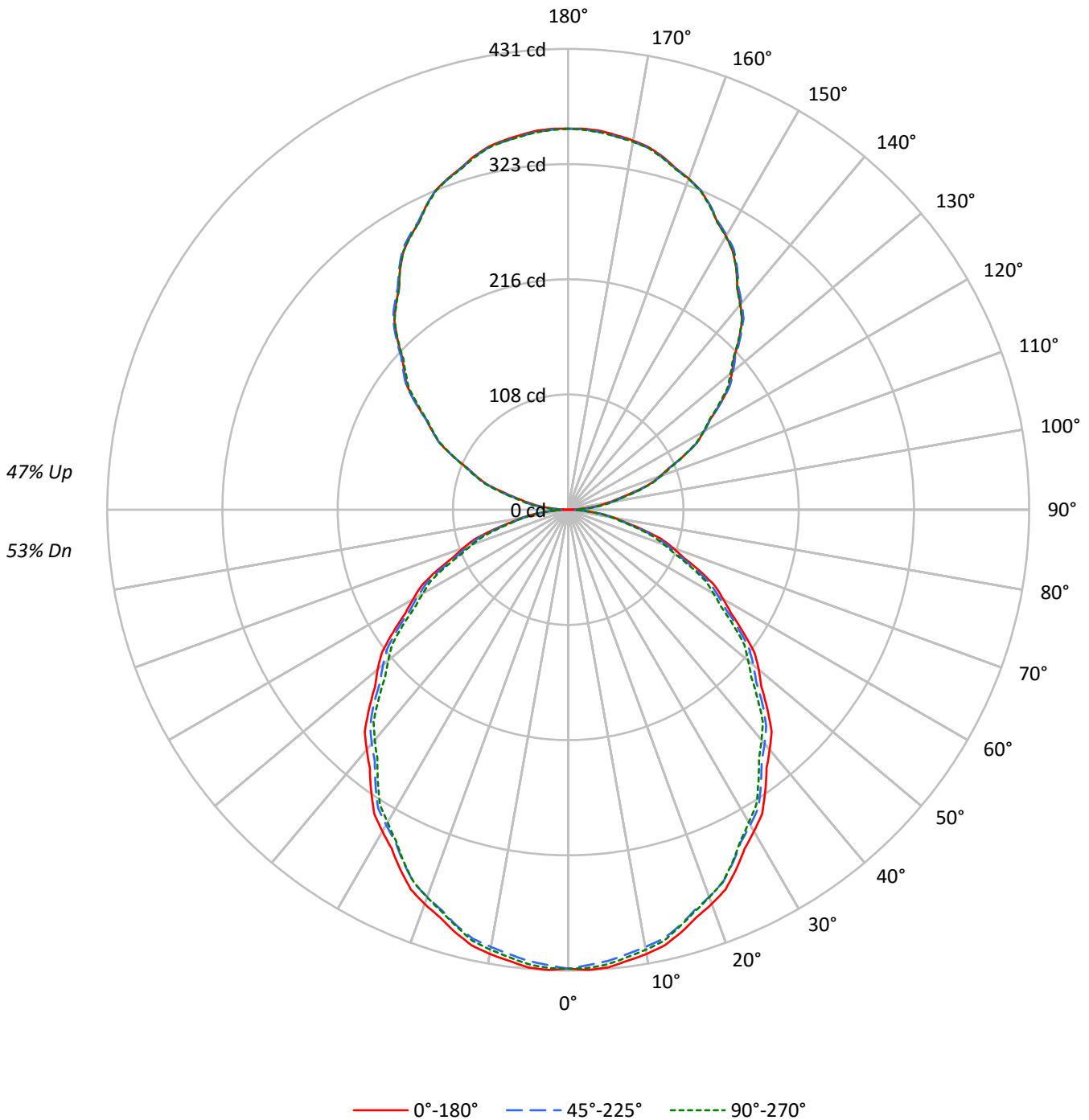
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331872-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331872-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F1

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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	98	94	90	87	91	87	84	81	74	72	70	63	61	59	52	51	50	45
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42	37
3	82	72	65	59	75	67	61	55	58	53	48	49	45	42	40	38	36	32
4	75	64	56	50	69	59	52	47	51	46	41	43	39	36	36	33	31	27
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27	23
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	30	26	23	21
7	58	46	38	32	54	43	36	31	37	32	27	32	27	24	27	24	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	22	19	23	19	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	17	21	18	15	13

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: P331872-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.4	1.9
10°-20°	114.2	5.4
20°-30°	168.7	8.0
30°-40°	197.0	9.4
40°-50°	198.1	9.4
50°-60°	174.0	8.3
60°-70°	129.6	6.2
70°-80°	73.8	3.5
80°-90°	22.3	1.1
90°-100°	23.2	1.1
100°-110°	69.5	3.3
110°-120°	118.2	5.6
120°-130°	155.5	7.4
130°-140°	174.7	8.3
140°-150°	171.8	8.2
150°-160°	144.6	6.9
160°-170°	96.3	4.6
170°-180°	33.7	1.6
0°-30°	323.3	15.4
0°-40°	520.3	24.7
0°-60°	892.4	42.4
0°-90°	1118.1	53.1
90°-120°	210.9	10.0
90°-150°	712.8	33.9
90°-180°	987.0	46.9
0°-180°	2105.5	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°	0	3	7	8	8	2
95°	17	18	21	22	22	19
105°	63	64	66	66	67	67
115°	119	120	119	120	119	118
125°	174	175	174	173	172	155
135°	226	228	227	226	226	174
145°	274	275	275	275	274	171
155°	314	314	314	315	313	144
165°	342	341	341	342	341	96
175°	356	354	354	356	354	34
180°	356	356	356	356	356	



TEST NUMBER: P331872-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F1

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°	7.8	7.7	7.6	7.5	7.4	7.4	7.5	7.7	7.8	7.8	7.8
90°	0.3	0.9	1.5	2.1	2.8	3.5	4.3	5.1	5.9	6.7	7.0
92.5°	6.8	7.2	7.6	8.1	8.5	8.9	9.3	9.8	10.3	10.8	10.9
95°	16.6	17.0	17.3	17.8	18.2	18.7	19.3	19.7	20.2	20.8	21.0
97.5°	29.3	29.6	30.0	30.3	30.7	31.0	31.4	31.7	32.1	32.4	32.7
100°	38.1	38.4	38.8	39.2	39.5	39.9	40.2	40.6	40.9	41.1	41.4
102.5°	48.2	48.4	48.6	48.8	49.0	49.4	49.7	50.2	50.6	51.0	51.2
105°	63.0	63.1	63.2	63.4	63.5	63.8	64.4	65.0	65.5	66.1	66.1
107.5°	80.2	80.3	80.4	80.5	80.6	80.6	80.9	81.1	81.4	81.6	81.8
110°	91.0	91.1	91.3	91.3	91.5	91.6	91.7	91.9	92.0	92.1	92.4



TEST NUMBER: P331872-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	102.2	102.3	102.3	102.4	102.5	102.5	102.6	102.6	102.6	102.7	102.9
115°	119.0	119.1	119.4	119.5	119.7	119.8	119.6	119.5	119.4	119.2	119.3
117.5°	135.9	136.0	136.2	136.3	136.4	136.3	136.2	136.0	135.9	135.7	135.7
120°	146.4	146.8	147.2	147.5	147.9	147.9	147.7	147.3	147.0	146.7	146.6
122.5°	157.4	157.6	158.0	158.2	158.5	158.5	158.4	158.2	158.0	157.9	157.7
125°	174.1	174.3	174.5	174.7	174.9	174.9	174.8	174.7	174.5	174.4	174.1
127.5°	189.6	190.0	190.4	190.8	191.2	191.3	191.2	191.0	190.9	190.8	190.4
130°	199.9	200.3	200.9	201.4	201.8	202.0	201.8	201.7	201.5	201.3	201.1
132.5°	210.2	210.7	211.2	211.7	212.1	212.4	212.2	212.1	211.9	211.8	211.5
135°	225.9	226.3	226.6	227.0	227.4	227.6	227.5	227.4	227.4	227.4	227.0
137.5°	240.5	240.8	241.1	241.4	241.7	241.9	242.1	242.2	242.4	242.6	242.3
140°	250.6	250.9	251.2	251.5	251.8	252.0	252.1	252.1	252.2	252.2	252.2
142.5°	259.8	260.1	260.4	260.7	260.9	261.2	261.3	261.4	261.5	261.7	261.6
145°	274.1	274.2	274.3	274.4	274.6	274.7	274.9	275.1	275.3	275.4	275.4
147.5°	286.6	286.8	287.1	287.3	287.5	287.7	287.9	288.0	288.2	288.4	288.4
150°	295.3	295.5	295.6	295.7	295.9	296.0	296.1	296.2	296.4	296.4	296.4
152.5°	302.5	302.7	302.9	303.0	303.2	303.3	303.4	303.5	303.6	303.6	303.7
155°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	314.0	314.1	314.3
157.5°	323.4	323.4	323.3	323.2	323.1	323.1	323.2	323.2	323.3	323.4	323.6
160°	329.5	329.4	329.2	329.2	329.0	328.9	328.9	328.9	328.9	328.9	329.2
162.5°	334.9	334.7	334.5	334.4	334.1	334.1	334.1	334.2	334.3	334.3	334.6
165°	341.8	341.7	341.4	341.3	341.0	341.0	341.0	341.0	341.0	341.0	341.4
167.5°	347.4	347.1	346.9	346.6	346.3	346.3	346.3	346.3	346.4	346.5	346.8
170°	350.5	350.2	350.0	349.7	349.5	349.4	349.4	349.4	349.4	349.4	349.8
172.5°	353.0	352.7	352.4	352.2	352.0	351.8	351.8	351.8	351.8	351.8	352.2
175°	355.5	355.3	355.1	354.8	354.6	354.4	354.4	354.4	354.4	354.4	354.8
177.5°	356.6	356.4	356.2	356.0	355.8	355.7	355.7	355.7	355.7	355.7	356.0
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4



TEST NUMBER: P331872-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F1

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°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
90°	7.2	7.4	7.7	7.9	8.0	8.2	8.2	8.4
92.5°	11.2	11.3	11.6	11.6	11.6	11.5	11.4	11.3
95°	21.2	21.5	21.7	21.9	21.9	21.9	21.9	21.9
97.5°	33.0	33.3	33.6	33.7	33.7	33.7	33.6	33.6
100°	41.5	41.7	41.9	42.1	42.1	42.3	42.5	42.5
102.5°	51.4	51.6	51.7	51.8	51.8	51.8	51.7	51.7
105°	66.1	66.1	66.1	66.1	66.2	66.4	66.5	66.6
107.5°	82.0	82.1	82.4	82.5	82.4	82.3	82.2	82.1
110°	92.6	92.8	93.1	93.2	93.0	92.9	92.8	92.7



TEST NUMBER: P331872-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	103.2	103.5	103.9	103.9	103.9	103.9	103.9	103.9
115°	119.4	119.5	119.5	119.5	119.5	119.4	119.3	119.2
117.5°	135.7	135.7	135.7	135.5	135.4	135.2	135.1	134.9
120°	146.6	146.5	146.5	146.3	146.2	146.1	146.0	145.8
122.5°	157.6	157.4	157.2	157.1	156.9	156.7	156.5	156.4
125°	173.9	173.6	173.4	173.2	172.9	172.7	172.4	172.1
127.5°	190.0	189.7	189.3	189.0	188.8	188.5	188.2	187.9
130°	200.8	200.5	200.3	199.9	199.6	199.1	198.7	198.2
132.5°	211.2	210.9	210.6	210.3	209.9	209.6	209.3	209.0
135°	226.8	226.6	226.3	226.2	226.0	225.9	225.8	225.6
137.5°	242.1	241.9	241.5	241.3	241.1	240.8	240.6	240.3
140°	252.1	252.1	252.0	251.8	251.3	250.9	250.4	250.0
142.5°	261.5	261.4	261.4	261.2	260.9	260.5	260.2	259.8
145°	275.4	275.3	275.2	275.0	274.8	274.6	274.3	274.1
147.5°	288.4	288.4	288.4	288.2	287.9	287.5	287.1	286.7
150°	296.4	296.4	296.4	296.3	295.9	295.6	295.2	294.8
152.5°	303.8	304.0	304.0	303.9	303.6	303.2	302.9	302.6
155°	314.6	314.8	315.1	315.0	314.6	314.1	313.7	313.2
157.5°	323.8	324.2	324.4	324.3	324.0	323.7	323.3	323.0
160°	329.5	329.9	330.2	330.2	329.9	329.7	329.5	329.2
162.5°	334.9	335.3	335.6	335.5	335.1	334.7	334.3	333.9
165°	341.7	342.1	342.5	342.5	342.0	341.6	341.1	340.7
167.5°	347.2	347.6	348.0	348.0	347.6	347.2	346.8	346.5
170°	350.2	350.7	351.1	351.1	350.7	350.2	349.8	349.4
172.5°	352.6	353.0	353.4	353.4	352.9	352.5	352.0	351.6
175°	355.1	355.5	355.9	355.8	355.5	355.0	354.6	354.1
177.5°	356.3	356.6	356.9	356.9	356.6	356.2	355.8	355.5
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4

(END OF REPORT)