

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: P331873-927

Luminaire Tested: **S123DIP-S340D365U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331873-927
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-S340D365U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2158.6 lumens
Efficiency: N/A
Efficacy: 106.3 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

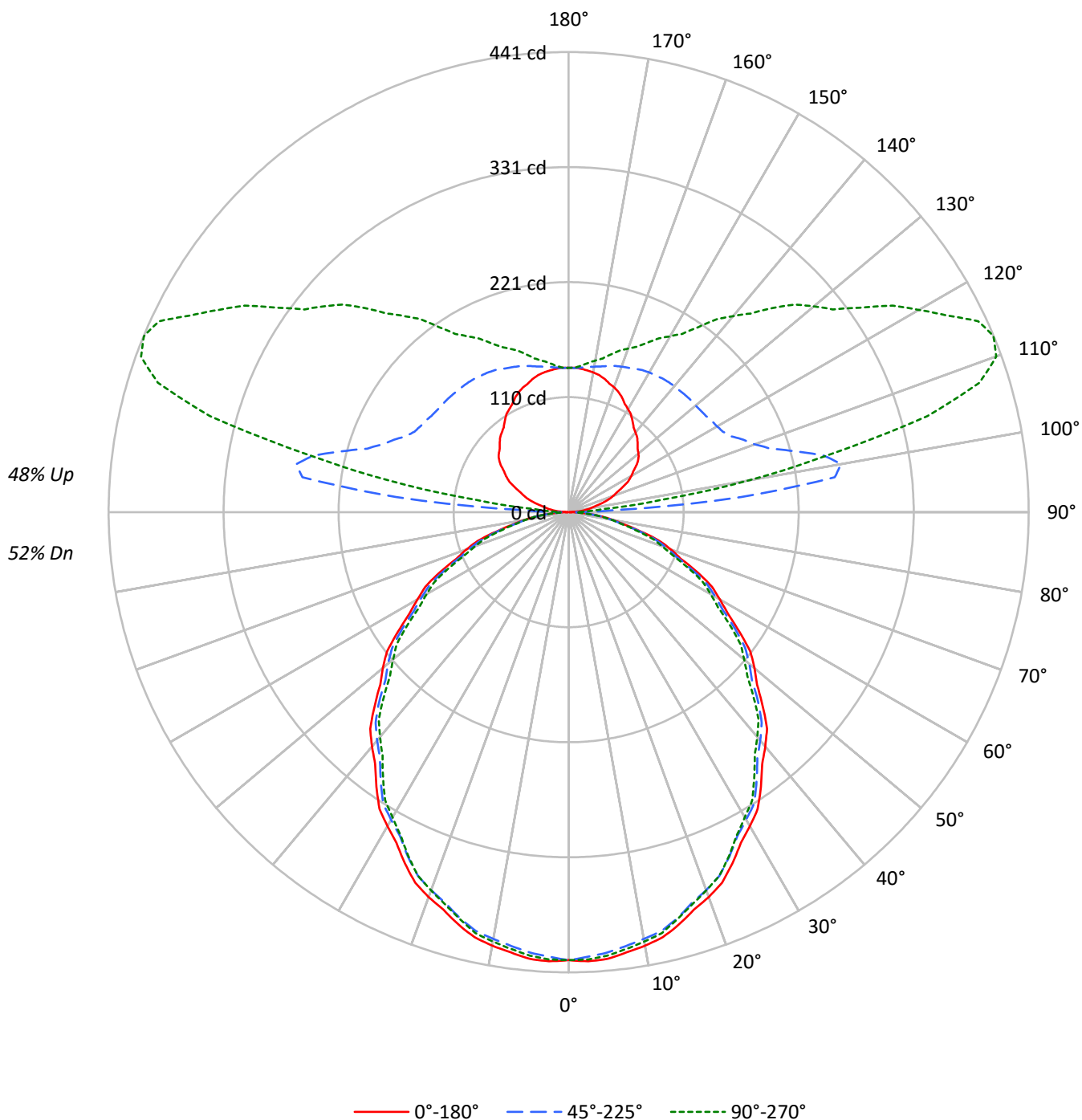
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331873-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F4

Luminous Intensity Polar Plot



TEST NUMBER: P331873-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F4

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58
1	98	94	90	86	91	87	83	80	74	71	69	62	60	59	51	50	49
2	89	82	76	70	82	76	70	66	65	61	57	54	51	49	45	43	41
3	81	72	65	59	75	67	60	55	57	52	48	48	44	41	40	37	35
4	75	64	56	50	69	59	52	47	51	45	41	43	39	35	35	32	30
5	68	57	48	42	63	53	45	40	45	40	35	38	34	31	32	29	26
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	26	23	20
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	21	18
9	50	38	31	25	47	36	29	24	31	25	22	27	22	19	22	19	17
10	47	35	28	23	44	33	26	22	29	23	19	25	20	17	21	17	15

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: P331873-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.4	1.9
10°-20°	114.2	5.3
20°-30°	168.7	7.8
30°-40°	197.0	9.1
40°-50°	198.1	9.2
50°-60°	174.0	8.1
60°-70°	129.6	6.0
70°-80°	73.8	3.4
80°-90°	22.3	1.0
90°-100°	77.0	3.6
100°-110°	217.9	10.1
110°-120°	214.4	9.9
120°-130°	171.0	7.9
130°-140°	134.8	6.2
140°-150°	100.6	4.7
150°-160°	70.1	3.2
160°-170°	41.2	1.9
170°-180°	13.4	0.6
0°-30°	323.3	15.0
0°-40°	520.3	24.1
0°-60°	892.4	41.3
0°-90°	1118.1	51.8
90°-120°	509.3	23.6
90°-150°	915.7	42.4
90°-180°	1040.0	48.2
0°-180°	2158.6	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°	1	3	7	8	8	2
95°	10	31	166	48	32	10
105°	32	48	225	394	356	35
115°	57	72	172	378	433	57
125°	80	94	161	291	342	71
135°	94	112	158	240	277	72
145°	107	122	156	197	216	67
155°	121	131	152	172	179	56
165°	132	136	145	154	156	37
175°	138	138	139	141	141	13
180°	138	138	138	138	138	

TEST NUMBER: P331873-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-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°	7.8	7.7	7.6	7.6	7.5	7.5	7.6	7.7	7.8	7.9	7.8
90°	0.6	1.1	1.7	2.5	3.1	3.6	4.5	5.3	6.2	7.0	6.7
92.5°	3.5	5.1	7.5	9.7	12.0	16.2	23.5	35.6	47.4	43.0	32.5
95°	9.5	10.4	13.5	18.2	25.5	36.4	60.2	101.9	147.8	166.0	134.7
97.5°	16.2	16.5	18.9	23.1	30.3	42.1	64.8	111.8	188.4	257.3	275.2
100°	20.8	21.0	23.0	26.9	33.6	44.5	64.1	105.5	179.2	265.1	320.3
102.5°	25.4	25.9	27.6	31.4	37.4	47.5	65.0	100.1	165.7	250.6	322.5
105°	32.5	33.4	35.0	38.3	43.6	52.4	67.5	96.3	149.2	225.1	305.4
107.5°	40.0	40.8	42.5	45.7	50.7	58.8	72.1	96.0	138.7	202.6	275.5
110°	45.3	46.2	47.6	50.7	55.5	63.3	75.9	97.1	134.7	189.8	256.7

TEST NUMBER: P331873-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	50.3	51.1	52.5	55.6	60.4	68.0	79.7	99.4	132.4	181.3	240.3
115°	57.4	58.5	60.2	63.0	67.7	75.3	86.0	103.0	131.6	172.1	220.6
117.5°	64.5	65.8	67.2	69.8	75.1	82.1	92.6	107.8	132.1	166.8	208.7
120°	69.4	70.3	71.7	74.5	79.8	86.7	96.9	111.4	133.0	164.3	202.4
122.5°	73.7	74.5	75.9	79.0	84.1	91.5	101.3	114.8	134.5	162.8	197.3
125°	79.8	80.3	82.0	85.1	90.4	98.0	107.8	120.1	136.9	160.7	190.7
127.5°	84.4	85.2	87.4	90.5	96.3	103.9	113.4	124.5	139.6	159.7	184.8
130°	87.4	88.2	90.7	94.0	100.0	107.5	116.8	127.4	141.4	159.0	181.6
132.5°	89.6	90.6	93.4	97.4	103.3	110.7	119.6	130.1	142.8	158.8	178.8
135°	93.5	94.6	97.7	101.9	107.8	115.3	124.0	133.6	144.7	158.4	175.0
137.5°	97.2	98.4	101.4	105.8	111.7	118.7	127.1	136.1	146.1	157.8	171.7
140°	99.7	101.1	103.9	108.4	113.9	121.0	129.0	137.4	146.9	157.6	169.6
142.5°	102.3	103.5	106.5	110.6	116.2	122.7	130.6	138.8	147.7	157.2	167.9
145°	106.6	107.5	110.0	114.2	119.0	125.4	132.7	140.2	148.1	156.5	165.4
147.5°	111.1	111.5	114.0	117.6	122.2	127.7	134.4	141.2	148.1	155.4	163.1
150°	113.9	114.2	116.5	120.1	124.0	129.0	135.5	141.4	148.1	154.6	161.5
152.5°	116.8	116.9	119.1	122.3	125.8	130.6	136.2	141.8	147.4	153.4	159.7
155°	121.2	121.2	122.9	125.7	128.8	132.7	137.4	142.0	146.7	151.5	157.0
157.5°	124.7	124.9	126.3	128.7	131.3	134.4	138.2	142.2	145.8	149.7	154.0
160°	127.4	127.4	128.5	130.7	132.7	135.5	138.9	142.2	145.3	148.4	152.0
162.5°	129.4	129.4	130.3	132.1	133.8	136.2	139.1	142.0	144.4	147.0	150.0
165°	132.4	132.1	132.7	134.1	135.2	137.2	139.4	141.4	143.1	145.0	147.3
167.5°	134.7	134.4	134.7	135.7	136.5	137.8	139.3	140.9	141.7	143.0	144.7
170°	136.0	135.5	135.8	136.6	137.2	137.8	139.1	140.2	140.9	141.6	143.1
172.5°	137.0	136.6	136.7	137.3	137.6	137.9	139.1	140.1	140.1	140.5	141.5
175°	138.0	137.8	137.4	138.0	138.0	138.3	138.9	139.4	139.1	139.1	139.7
177.5°	138.6	138.3	138.1	138.3	138.3	138.3	138.6	138.9	138.6	138.3	138.6
180°	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3

TEST NUMBER: P331873-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-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°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
90°	7.0	7.3	7.5	8.1	7.8	8.1	8.4	8.1
92.5°	23.6	18.7	16.5	15.1	14.6	13.7	14.0	13.5
95°	100.8	68.3	53.5	43.4	38.1	35.6	33.6	32.5
97.5°	251.2	201.2	165.1	131.7	111.0	98.4	90.8	88.4
100°	330.0	307.4	274.6	234.9	206.6	186.2	175.2	175.5
102.5°	356.2	355.5	336.4	311.2	289.2	273.1	264.0	257.5
105°	363.9	391.9	397.2	390.0	377.1	366.5	357.5	356.1
107.5°	341.8	387.3	411.9	421.8	422.1	418.4	415.4	412.9
110°	320.8	372.3	407.6	427.2	435.1	437.3	436.7	436.2

TEST NUMBER: P331873-927

CATALOG NUMBER: S123DIP-S340D365U927-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	300.0	352.6	392.1	417.3	431.7	438.6	440.8	440.8
115°	272.4	321.1	362.3	392.8	413.8	426.0	431.7	433.1
117.5°	252.4	294.5	331.4	362.3	384.3	398.4	406.4	408.3
120°	241.9	279.6	313.2	341.5	363.6	379.3	386.0	387.7
122.5°	233.6	267.8	298.9	325.2	344.8	358.9	366.3	368.4
125°	222.5	253.1	280.0	302.4	320.3	332.6	339.6	341.5
127.5°	212.9	240.1	264.4	284.8	300.7	311.2	317.6	319.3
130°	206.8	232.1	254.8	273.8	288.6	298.7	304.6	306.8
132.5°	201.3	224.4	245.6	263.7	277.7	287.7	292.9	294.5
135°	193.7	213.6	231.8	247.7	261.5	269.9	274.9	276.9
137.5°	186.8	203.1	218.8	232.7	244.2	252.7	256.9	258.3
140°	182.8	197.1	210.5	222.5	233.2	241.1	245.5	245.3
142.5°	179.0	191.2	202.9	213.3	222.4	229.4	233.4	233.1
145°	174.4	183.6	192.6	200.7	207.7	213.6	215.9	216.4
147.5°	170.6	178.0	185.2	191.0	196.3	200.3	202.4	202.6
150°	167.9	174.4	180.3	185.6	189.8	192.9	194.6	194.6
152.5°	165.5	171.0	176.3	180.7	183.9	186.8	187.8	187.8
155°	161.8	166.3	170.5	173.8	176.3	178.6	179.2	179.4
157.5°	157.9	161.6	164.9	167.5	169.7	171.3	171.8	171.7
160°	155.7	158.8	161.5	163.5	165.4	167.2	167.2	166.8
162.5°	153.0	155.6	158.2	159.9	161.2	162.6	162.6	162.4
165°	149.5	151.1	153.1	154.6	155.7	156.8	156.5	156.5
167.5°	146.5	147.7	148.9	149.9	150.4	151.1	150.9	150.9
170°	144.4	145.3	146.4	146.9	147.3	147.8	147.5	147.5
172.5°	142.7	143.3	144.2	144.5	144.6	145.1	144.7	144.4
175°	140.2	140.5	141.1	141.1	141.1	141.4	141.1	140.9
177.5°	138.7	138.9	139.2	139.2	138.9	139.2	138.7	138.7
180°	138.3	138.3	138.3	138.3	138.3	138.3	138.3	138.3

(END OF REPORT)