

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: P331868

Luminaire Tested: **S123DIP-S340D365U835-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331868
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D365U835-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2889.2 lumens
Efficiency: N/A
Efficacy: 142.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

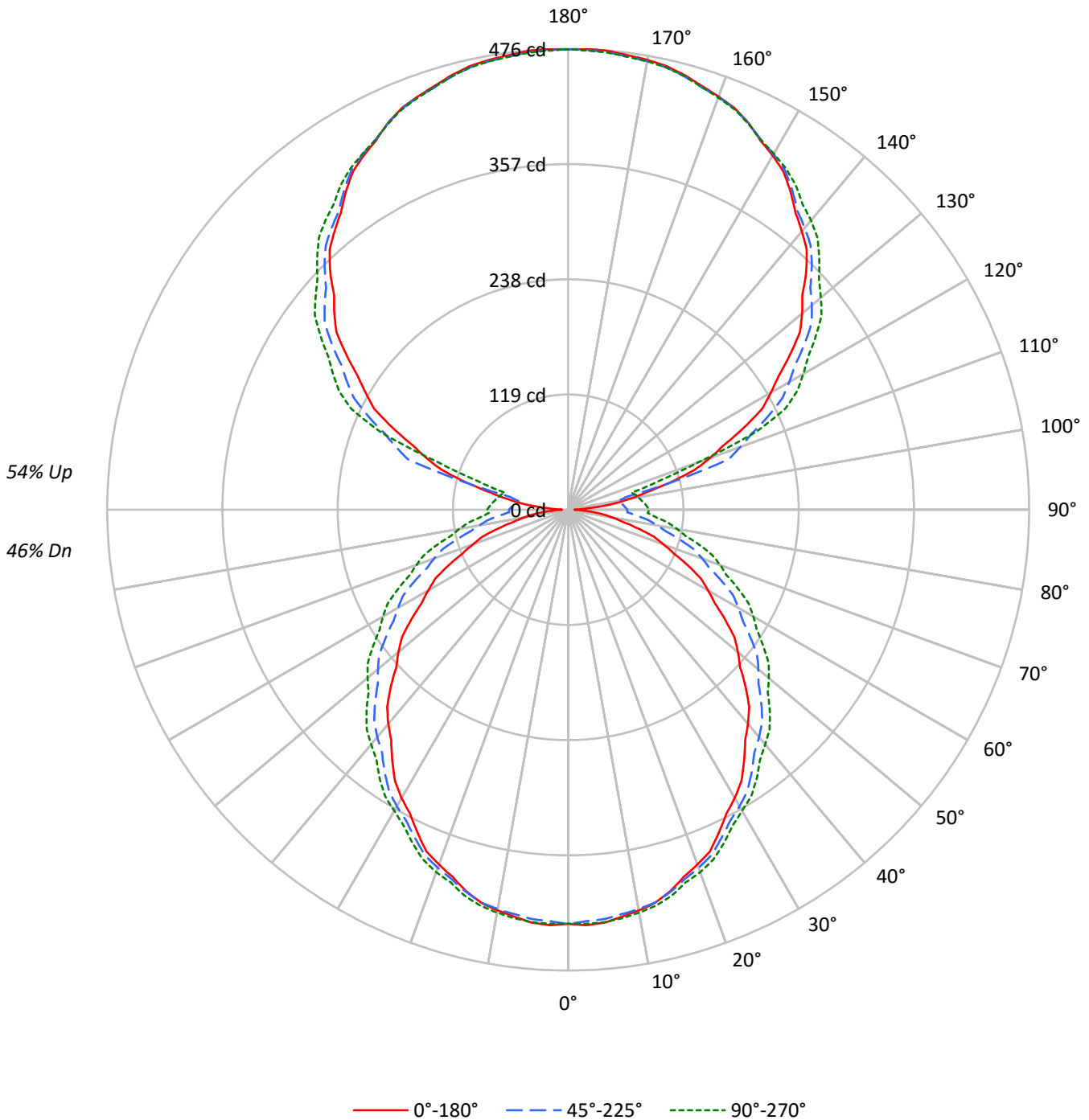
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331868

CATALOG NUMBER: S123DIP-S340D365U835-4F0-1E-UDD-D

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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	96	91	87	83	88	84	80	77	69	67	64	56	55	53	45	43	42	36
2	87	79	73	67	79	73	67	62	60	56	53	49	46	43	39	37	35	30
3	79	69	61	55	72	63	57	51	53	48	44	43	39	36	34	31	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	42	37	42	36	32	34	30	27	27	24	21	18
6	61	48	40	34	55	45	37	32	37	32	27	31	26	23	24	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	25	21	18	20	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	23	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	17	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4604	4604	4604
5°	4618	4488	4490
10°	4577	4385	4363
15°	4518	4267	4223
20°	4434	4133	4070
25°	4330	3980	3908
30°	4224	3841	3744
35°	4103	3694	3614
40°	3990	3560	3474
45°	3864	3432	3362
50°	3739	3305	3239
55°	3601	3175	3128
60°	3466	3044	3015
65°	3328	2903	2878
70°	3120	2744	2740
75°	2859	2565	2600
80°	2556	2387	2438
85°	2274	2264	2344



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	1.4
10°-20°	115.6	4.0
20°-30°	172.9	6.0
30°-40°	206.5	7.1
40°-50°	216.0	7.5
50°-60°	202.7	7.0
60°-70°	169.3	5.9
70°-80°	121.1	4.2
80°-90°	73.6	2.5
90°-100°	62.6	2.2
100°-110°	115.7	4.0
110°-120°	220.2	7.6
120°-130°	264.8	9.2
130°-140°	275.1	9.5
140°-150°	253.1	8.8
150°-160°	203.2	7.0
160°-170°	131.1	4.5
170°-180°	45.2	1.6
0°-30°	329.0	11.4
0°-40°	535.5	18.5
0°-60°	954.2	33.0
0°-90°	1318.2	45.6
90°-120°	398.5	13.8
90°-150°	1191.5	41.2
90°-180°	1571.0	54.4
0°-180°	2889.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	427	424	428	428	41
15°	408	409	409	413	413	115
25°	368	373	374	380	380	170
35°	317	324	330	337	339	198
45°	259	270	282	290	294	200
55°	198	213	230	242	246	177
65°	136	155	175	189	194	135
75°	74	96	119	134	140	79
85°	23	46	71	86	91	24
90°	6	33	61	78	84	5
95°	27	32	57	73	79	31
105°	109	123	112	66	68	115
115°	200	208	228	242	247	197
125°	280	283	298	308	312	250
135°	348	350	356	365	366	267
145°	400	402	403	407	410	251
155°	441	440	440	442	440	203
165°	465	464	463	466	464	131
175°	476	474	474	476	474	45
180°	476	476	476	476	476	



TEST NUMBER: P331868

CATALOG NUMBER: S123DIP-S340D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	429.6	429.4	429.1	428.9	428.6	428.2	427.5	426.8	426.2	425.5	426.2
5°	428.2	428.0	427.8	427.6	427.4	427.0	426.3	425.7	425.1	424.5	425.3
7.5°	424.0	424.1	424.1	424.1	424.2	423.9	423.3	422.7	422.1	421.5	422.5
10°	420.3	420.5	420.7	420.9	421.1	421.0	420.4	419.9	419.4	418.9	419.9
12.5°	415.8	416.1	416.4	416.7	417.0	416.9	416.6	416.2	415.9	415.5	416.5
15°	407.7	408.0	408.3	408.6	408.9	409.1	408.9	408.8	408.7	408.6	409.7
17.5°	397.5	398.1	398.7	399.3	399.9	400.2	400.2	400.1	400.1	400.1	401.0
20°	390.0	390.6	391.2	391.9	392.5	392.9	393.1	393.3	393.5	393.7	394.7
22.5°	382.2	382.8	383.4	384.0	384.7	385.1	385.4	385.7	386.0	386.3	387.5
25°	368.1	369.1	370.2	371.2	372.2	372.9	373.2	373.5	373.8	374.2	375.5
27.5°	353.9	355.1	356.3	357.5	358.7	359.6	360.2	360.9	361.6	362.2	363.4
30°	343.9	345.2	346.6	347.9	349.3	350.3	351.2	352.0	352.8	353.7	354.9
32.5°	332.7	334.2	335.7	337.2	338.7	340.0	341.1	342.2	343.3	344.3	345.7
35°	316.8	318.5	320.2	321.8	323.5	325.0	326.3	327.7	329.0	330.4	331.9
37.5°	300.1	301.9	303.8	305.7	307.5	309.3	310.9	312.6	314.3	315.9	317.7
40°	288.9	290.8	292.6	294.5	296.3	298.3	300.4	302.5	304.5	306.6	308.4
42.5°	276.6	278.9	281.1	283.4	285.7	287.9	290.1	292.2	294.4	296.5	298.5
45°	259.1	261.6	264.0	266.5	269.0	271.5	274.1	276.7	279.3	281.9	283.9
47.5°	240.7	243.5	246.3	249.2	252.0	254.9	257.8	260.8	263.7	266.7	268.9
50°	228.8	231.7	234.6	237.5	240.4	243.4	246.6	249.9	253.1	256.3	258.7
52.5°	216.1	219.2	222.2	225.3	228.4	231.7	235.2	238.8	242.3	245.8	248.3
55°	197.6	201.0	204.4	207.8	211.2	214.8	218.5	222.3	226.0	229.7	232.5
57.5°	179.5	183.0	186.6	190.2	193.7	197.6	201.6	205.7	209.8	213.9	216.7
60°	166.8	170.5	174.3	178.0	181.7	185.7	190.0	194.2	198.4	202.7	205.6
62.5°	154.9	158.7	162.5	166.3	170.1	174.3	178.8	183.3	187.8	192.3	195.1
65°	136.5	140.6	144.6	148.6	152.7	157.0	161.5	166.1	170.6	175.2	178.3
67.5°	117.9	122.2	126.5	130.7	135.0	139.5	144.1	148.8	153.4	158.1	161.4
70°	104.8	109.3	113.7	118.2	122.6	127.4	132.3	137.3	142.3	147.2	150.6
72.5°	92.9	97.4	101.8	106.3	110.7	115.5	120.6	125.8	130.9	136.1	139.5
75°	74.1	79.0	83.8	88.7	93.6	98.6	103.8	108.9	114.1	119.3	122.7
77.5°	57.7	62.6	67.5	72.4	77.3	82.4	87.6	92.8	98.0	103.3	106.9
80°	46.1	51.2	56.3	61.4	66.4	71.7	77.0	82.4	87.8	93.2	96.7
82.5°	36.1	41.2	46.4	51.5	56.7	62.0	67.5	72.9	78.4	83.9	87.4
85°	22.8	28.0	33.2	38.4	43.5	48.9	54.4	59.8	65.3	70.8	74.3
87.5°	12.5	17.8	23.1	28.4	33.7	39.1	44.6	50.1	55.6	61.1	64.6
90°	6.4	12.3	18.1	24.0	29.8	35.9	42.2	48.5	54.8	61.1	65.0
92.5°	12.3	16.6	21.0	25.3	29.7	34.8	40.8	46.8	52.7	58.7	62.7
95°	26.7	27.5	28.3	29.1	30.0	33.3	39.3	45.2	51.1	57.1	60.8
97.5°	47.9	50.1	52.3	54.5	56.7	57.4	56.6	55.8	55.0	54.2	57.9
100°	63.9	68.8	73.7	78.6	83.4	82.1	74.7	67.2	59.7	52.2	55.8
102.5°	82.2	86.3	90.4	94.5	98.6	96.4	87.7	79.0	70.3	61.6	62.5
105°	109.0	112.4	115.7	119.1	122.4	122.8	120.2	117.6	114.9	112.3	101.3
107.5°	136.9	139.7	142.5	145.3	148.1	152.2	157.5	162.8	168.2	173.5	166.1
110°	155.5	157.9	160.4	162.9	165.4	169.2	174.2	179.2	184.2	189.2	189.3



TEST NUMBER: P331868

CATALOG NUMBER: S123DIP-S340D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.5	175.6	177.7	179.8	181.9	185.4	190.2	195.1	199.9	204.8	207.4
115°	199.9	201.6	203.3	205.0	206.7	209.8	214.2	218.7	223.1	227.5	230.8
117.5°	225.7	227.1	228.4	229.7	231.1	233.7	237.6	241.4	245.3	249.1	252.2
120°	241.4	242.7	243.9	245.1	246.3	248.8	252.4	256.1	259.7	263.4	266.4
122.5°	257.8	258.7	259.5	260.4	261.2	263.4	267.0	270.5	274.1	277.6	280.4
125°	279.9	280.5	281.1	281.7	282.4	284.3	287.7	291.0	294.3	297.6	299.9
127.5°	301.6	302.1	302.7	303.2	303.7	305.4	308.3	311.1	314.0	316.9	319.2
130°	315.2	315.7	316.2	316.8	317.3	318.7	321.1	323.5	325.9	328.3	330.6
132.5°	327.8	328.4	329.0	329.6	330.3	331.5	333.4	335.3	337.2	339.1	341.3
135°	347.6	348.0	348.3	348.7	349.1	350.0	351.4	352.9	354.3	355.8	357.9
137.5°	364.5	365.0	365.5	366.0	366.5	367.2	368.0	368.8	369.6	370.4	372.4
140°	375.4	375.9	376.3	376.8	377.3	377.8	378.3	378.9	379.4	380.0	381.8
142.5°	385.9	386.2	386.6	387.0	387.4	387.7	388.0	388.3	388.6	388.9	390.6
145°	400.5	400.9	401.4	401.8	402.3	402.6	402.7	402.9	403.0	403.2	404.2
147.5°	413.8	414.2	414.5	414.9	415.2	415.5	415.7	415.8	416.0	416.1	416.5
150°	422.3	422.5	422.7	423.0	423.2	423.4	423.6	423.7	423.9	424.0	424.2
152.5°	429.9	430.0	430.1	430.2	430.3	430.5	430.5	430.6	430.7	430.8	431.1
155°	440.7	440.5	440.3	440.2	440.0	440.0	440.1	440.1	440.2	440.3	440.7
157.5°	449.0	449.0	449.0	448.9	448.9	448.9	448.8	448.7	448.6	448.6	449.0
160°	454.1	454.0	453.9	453.8	453.8	453.7	453.6	453.5	453.5	453.4	453.8
162.5°	458.9	458.7	458.5	458.3	458.1	457.9	457.8	457.8	457.7	457.6	458.1
165°	464.7	464.4	464.2	464.0	463.7	463.6	463.5	463.4	463.3	463.3	463.9
167.5°	469.2	468.9	468.6	468.3	467.9	467.8	467.8	467.8	467.8	467.8	468.4
170°	471.7	471.4	471.1	470.8	470.5	470.3	470.3	470.3	470.3	470.3	471.0
172.5°	473.4	473.1	472.7	472.3	471.9	471.8	471.8	471.9	472.0	472.0	472.7
175°	475.6	475.2	474.8	474.5	474.1	473.9	474.0	474.1	474.1	474.2	474.8
177.5°	476.2	475.9	475.6	475.3	474.9	474.8	474.9	474.9	475.0	475.1	475.6
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	426.8	427.5	428.2	428.4	428.4	428.3	428.2	428.1
5°	426.1	427.0	427.8	428.2	428.1	427.9	427.8	427.7
7.5°	423.6	424.6	425.6	426.1	426.0	425.8	425.7	425.6
10°	421.0	422.0	423.0	423.4	423.2	423.0	422.8	422.6
12.5°	417.4	418.4	419.3	419.7	419.5	419.3	419.1	418.9
15°	410.7	411.7	412.8	413.2	413.1	413.0	412.9	412.8
17.5°	401.9	402.9	403.8	404.2	404.0	403.9	403.8	403.6
20°	395.6	396.5	397.5	398.0	398.1	398.2	398.3	398.4
22.5°	388.6	389.8	391.0	391.6	391.5	391.4	391.4	391.3
25°	376.8	378.2	379.5	380.2	380.2	380.2	380.2	380.2
27.5°	364.5	365.7	366.9	367.5	367.6	367.7	367.7	367.8
30°	356.1	357.4	358.6	359.2	359.2	359.2	359.2	359.2
32.5°	347.0	348.3	349.6	350.4	350.7	350.9	351.2	351.4
35°	333.5	335.0	336.6	337.6	338.0	338.4	338.8	339.2
37.5°	319.4	321.2	323.0	324.0	324.3	324.7	325.0	325.3
40°	310.1	311.9	313.6	314.7	315.1	315.6	316.0	316.4
42.5°	300.4	302.3	304.2	305.5	306.1	306.6	307.2	307.8
45°	285.8	287.8	289.8	291.2	292.0	292.8	293.7	294.5
47.5°	271.1	273.4	275.6	277.0	277.6	278.3	278.9	279.6
50°	261.0	263.4	265.8	267.4	268.1	268.8	269.5	270.3
52.5°	250.8	253.2	255.7	257.4	258.3	259.2	260.0	260.9
55°	235.3	238.1	240.9	242.7	243.5	244.4	245.2	246.0
57.5°	219.5	222.3	225.1	227.0	228.0	229.0	230.0	230.9
60°	208.5	211.4	214.3	216.3	217.4	218.6	219.7	220.9
62.5°	198.0	200.9	203.8	205.8	206.9	207.9	209.0	210.1
65°	181.4	184.5	187.6	189.7	190.7	191.8	192.8	193.8
67.5°	164.8	168.2	171.6	173.8	174.6	175.5	176.4	177.2
70°	153.9	157.2	160.5	162.7	163.7	164.7	165.8	166.8
72.5°	142.8	146.2	149.6	151.9	152.9	153.9	155.0	156.0
75°	126.1	129.5	133.0	135.3	136.5	137.8	139.0	140.3
77.5°	110.5	114.1	117.7	119.9	120.9	121.9	122.8	123.8
80°	100.2	103.8	107.3	109.5	110.6	111.6	112.7	113.7
82.5°	90.9	94.4	98.0	100.2	101.3	102.3	103.3	104.4
85°	77.9	81.4	84.9	87.2	88.2	89.3	90.3	91.3
87.5°	68.2	71.8	75.4	77.7	78.8	79.9	80.9	82.0
90°	68.8	72.6	76.5	79.0	80.2	81.4	82.6	83.8
92.5°	66.6	70.5	74.5	77.0	78.0	79.1	80.1	81.2
95°	64.6	68.4	72.1	74.5	75.6	76.6	77.6	78.7
97.5°	61.6	65.3	69.0	71.4	72.5	73.6	74.8	75.9
100°	59.5	63.1	66.7	69.1	70.2	71.3	72.4	73.6
102.5°	63.5	64.5	65.4	66.5	67.7	68.9	70.0	71.2
105°	90.3	79.3	68.3	63.4	64.5	65.6	66.6	67.7
107.5°	158.7	151.3	143.9	135.4	125.8	116.2	106.7	97.1
110°	189.4	189.5	189.6	184.4	174.0	163.6	153.2	142.8



TEST NUMBER: P331868

CATALOG NUMBER: S123DIP-S340D365U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	210.1	212.7	215.4	216.0	214.5	213.1	211.6	210.1
115°	234.1	237.3	240.6	242.8	244.0	245.1	246.2	247.4
117.5°	255.3	258.4	261.5	263.5	264.4	265.2	266.1	267.0
120°	269.4	272.4	275.4	277.3	278.0	278.8	279.5	280.2
122.5°	283.1	285.9	288.6	290.4	291.1	291.9	292.7	293.5
125°	302.3	304.6	306.9	308.5	309.4	310.3	311.2	312.1
127.5°	321.5	323.8	326.1	327.5	328.0	328.6	329.1	329.7
130°	332.8	335.1	337.4	338.8	339.2	339.7	340.2	340.6
132.5°	343.5	345.7	347.9	349.3	349.8	350.2	350.7	351.2
135°	360.0	362.1	364.2	365.4	365.7	365.9	366.2	366.5
137.5°	374.5	376.5	378.5	379.7	380.0	380.4	380.8	381.1
140°	383.7	385.6	387.4	388.6	388.9	389.3	389.6	390.0
142.5°	392.2	393.9	395.5	396.5	396.8	397.1	397.4	397.7
145°	405.2	406.2	407.1	407.8	408.3	408.7	409.1	409.5
147.5°	416.9	417.3	417.8	418.0	418.0	418.0	418.0	418.0
150°	424.4	424.5	424.7	424.7	424.7	424.7	424.7	424.6
152.5°	431.4	431.7	432.0	431.9	431.6	431.3	431.0	430.7
155°	441.1	441.5	441.9	441.8	441.4	440.9	440.4	439.9
157.5°	449.5	450.0	450.5	450.4	449.8	449.2	448.5	447.9
160°	454.3	454.8	455.3	455.2	454.7	454.1	453.6	453.0
162.5°	458.7	459.2	459.7	459.8	459.3	458.8	458.3	457.8
165°	464.5	465.2	465.8	465.8	465.3	464.7	464.2	463.6
167.5°	469.0	469.7	470.3	470.3	469.7	469.0	468.4	467.8
170°	471.6	472.2	472.8	472.8	472.2	471.6	471.0	470.3
172.5°	473.3	473.9	474.5	474.5	473.8	473.1	472.4	471.7
175°	475.3	475.9	476.4	476.4	475.8	475.1	474.5	473.9
177.5°	476.1	476.6	477.1	477.0	476.4	475.8	475.1	474.5
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6

(END OF REPORT)