

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: P331868-940

Luminaire Tested: **S123DIP-S340D365U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331868-940
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-S340D365U940-4F0-1E-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: 2576.3 lumens
Efficiency: N/A
Efficacy: 126.9 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

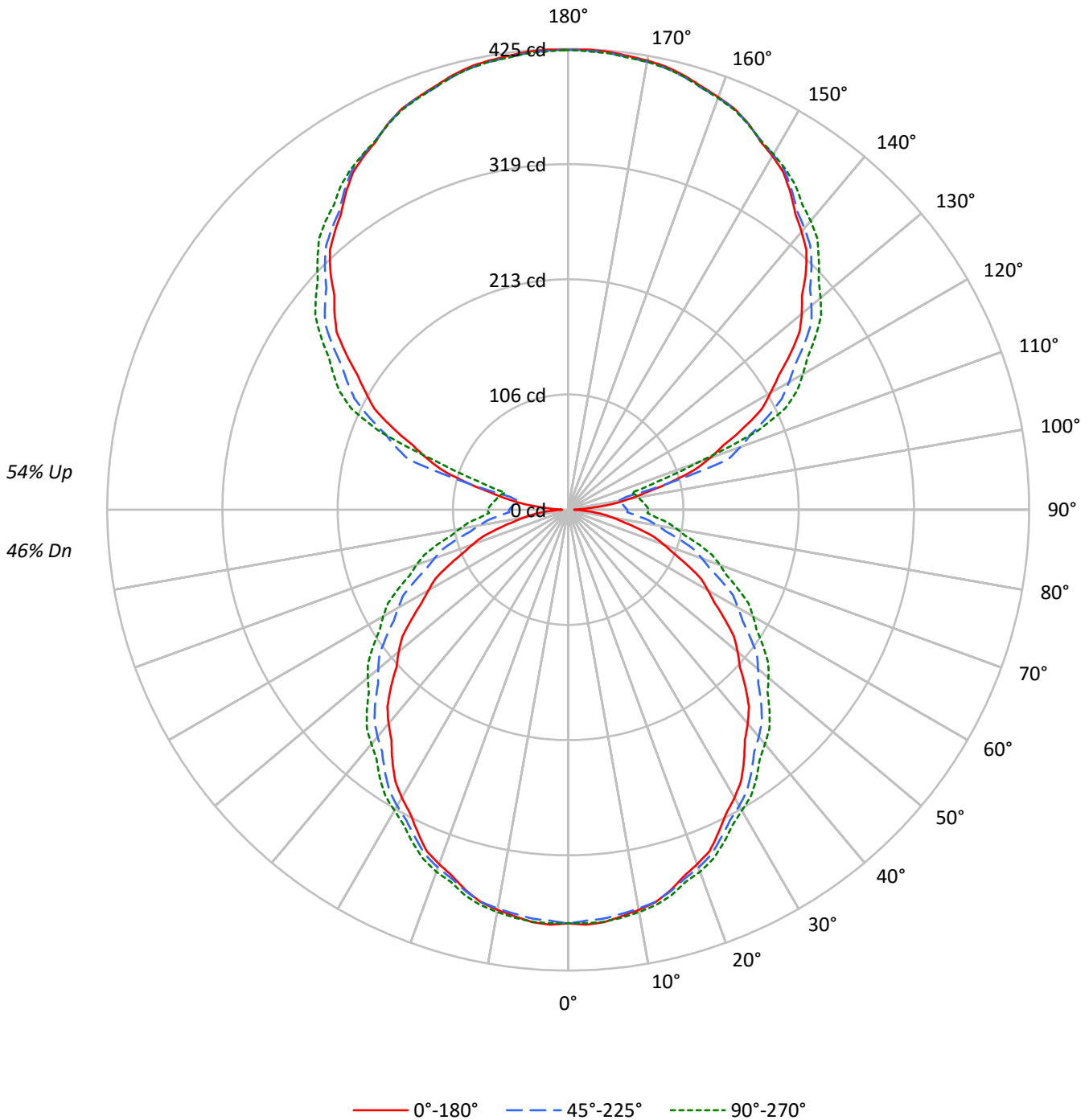
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331868-940

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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	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°	4105	4105	4105
5°	4118	4002	4004
10°	4082	3910	3890
15°	4029	3805	3766
20°	3954	3686	3630
25°	3860	3549	3485
30°	3767	3425	3339
35°	3659	3294	3223
40°	3557	3175	3098
45°	3445	3060	2998
50°	3333	2947	2888
55°	3211	2831	2789
60°	3090	2713	2689
65°	2967	2588	2567
70°	2783	2448	2443
75°	2551	2287	2318
80°	2278	2128	2175
85°	2025	2018	2090



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	1.4
10°-20°	103.1	4.0
20°-30°	154.2	6.0
30°-40°	184.1	7.1
40°-50°	192.6	7.5
50°-60°	180.7	7.0
60°-70°	151.0	5.9
70°-80°	108.0	4.2
80°-90°	65.6	2.5
90°-100°	55.8	2.2
100°-110°	103.2	4.0
110°-120°	196.4	7.6
120°-130°	236.1	9.2
130°-140°	245.3	9.5
140°-150°	225.7	8.8
150°-160°	181.2	7.0
160°-170°	116.9	4.5
170°-180°	40.3	1.6
0°-30°	293.4	11.4
0°-40°	477.5	18.5
0°-60°	850.9	33.0
0°-90°	1175.5	45.6
90°-120°	355.4	13.8
90°-150°	1062.4	41.2
90°-180°	1401.0	54.4
0°-180°	2576.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	381	381	381	381	381	
5°	382	381	378	382	381	36
15°	364	365	364	368	368	102
25°	328	332	334	339	339	151
35°	282	289	295	301	302	177
45°	231	241	251	259	263	178
55°	176	190	205	216	219	158
65°	122	138	156	168	173	120
75°	66	86	106	120	125	71
85°	20	41	63	77	81	21
90°	6	29	54	69	75	5
95°	24	28	51	65	70	27
105°	97	109	100	59	60	103
115°	178	186	203	216	221	176
125°	250	253	265	274	278	223
135°	310	312	317	325	327	239
145°	357	359	360	363	365	223
155°	393	392	393	394	392	181
165°	414	413	413	415	413	117
175°	424	423	423	425	423	40
180°	424	424	424	424	424	



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CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	383.1	382.9	382.6	382.5	382.2	381.8	381.2	380.6	380.0	379.4	380.0
5°	381.8	381.7	381.5	381.3	381.1	380.8	380.1	379.6	379.1	378.5	379.2
7.5°	378.1	378.2	378.2	378.2	378.3	378.0	377.5	376.9	376.4	375.9	376.7
10°	374.8	375.0	375.1	375.3	375.5	375.4	374.9	374.4	374.0	373.5	374.4
12.5°	370.8	371.0	371.3	371.6	371.8	371.8	371.5	371.1	370.9	370.5	371.4
15°	363.6	363.8	364.1	364.4	364.6	364.8	364.6	364.5	364.4	364.4	365.3
17.5°	354.5	355.0	355.5	356.1	356.6	356.9	356.9	356.8	356.8	356.8	357.6
20°	347.8	348.3	348.8	349.5	350.0	350.4	350.5	350.7	350.9	351.1	352.0
22.5°	340.8	341.3	341.9	342.4	343.0	343.4	343.7	343.9	344.2	344.5	345.5
25°	328.2	329.1	330.1	331.0	331.9	332.5	332.8	333.1	333.3	333.7	334.8
27.5°	315.6	316.6	317.7	318.8	319.9	320.7	321.2	321.8	322.4	323.0	324.0
30°	306.7	307.8	309.1	310.2	311.5	312.4	313.2	313.9	314.6	315.4	316.5
32.5°	296.7	298.0	299.3	300.7	302.0	303.2	304.2	305.1	306.1	307.0	308.3
35°	282.5	284.0	285.5	287.0	288.5	289.8	291.0	292.2	293.4	294.6	296.0
37.5°	267.6	269.2	270.9	272.6	274.2	275.8	277.2	278.7	280.3	281.7	283.3
40°	257.6	259.3	260.9	262.6	264.2	266.0	267.9	269.7	271.5	273.4	275.0
42.5°	246.6	248.7	250.7	252.7	254.8	256.7	258.7	260.6	262.5	264.4	266.2
45°	231.0	233.3	235.4	237.6	239.9	242.1	244.4	246.7	249.1	251.4	253.2
47.5°	214.6	217.1	219.6	222.2	224.7	227.3	229.9	232.6	235.1	237.8	239.8
50°	204.0	206.6	209.2	211.8	214.4	217.0	219.9	222.8	225.7	228.5	230.7
52.5°	192.7	195.5	198.1	200.9	203.7	206.6	209.7	212.9	216.1	219.2	221.4
55°	176.2	179.2	182.3	185.3	188.3	191.5	194.8	198.2	201.5	204.8	207.3
57.5°	160.1	163.2	166.4	169.6	172.7	176.2	179.8	183.4	187.1	190.7	193.2
60°	148.7	152.0	155.4	158.7	162.0	165.6	169.4	173.2	176.9	180.7	183.3
62.5°	138.1	141.5	144.9	148.3	151.7	155.4	159.4	163.5	167.5	171.5	174.0
65°	121.7	125.4	128.9	132.5	136.2	140.0	144.0	148.1	152.1	156.2	159.0
67.5°	105.1	109.0	112.8	116.5	120.4	124.4	128.5	132.7	136.8	141.0	143.9
70°	93.5	97.5	101.4	105.4	109.3	113.6	118.0	122.4	126.9	131.3	134.3
72.5°	82.8	86.9	90.8	94.8	98.7	103.0	107.5	112.2	116.7	121.4	124.4
75°	66.1	70.4	74.7	79.1	83.5	87.9	92.6	97.1	101.7	106.4	109.4
77.5°	51.5	55.8	60.2	64.6	68.9	73.5	78.1	82.8	87.4	92.1	95.3
80°	41.1	45.7	50.2	54.8	59.2	63.9	68.7	73.5	78.3	83.1	86.2
82.5°	32.2	36.7	41.4	45.9	50.6	55.3	60.2	65.0	69.9	74.8	77.9
85°	20.3	25.0	29.6	34.2	38.8	43.6	48.5	53.3	58.2	63.1	66.3
87.5°	11.1	15.9	20.6	25.3	30.1	34.9	39.8	44.7	49.6	54.5	57.6
90°	5.7	11.0	16.1	21.4	26.6	32.0	37.6	43.2	48.9	54.5	58.0
92.5°	11.0	14.8	18.7	22.6	26.5	31.0	36.4	41.7	47.0	52.3	55.9
95°	23.8	24.5	25.2	25.9	26.8	29.7	35.0	40.3	45.6	50.9	54.2
97.5°	42.7	44.7	46.6	48.6	50.6	51.2	50.5	49.8	49.0	48.3	51.6
100°	57.0	61.3	65.7	70.1	74.4	73.2	66.6	59.9	53.2	46.5	49.8
102.5°	73.3	77.0	80.6	84.3	87.9	86.0	78.2	70.4	62.7	54.9	55.7
105°	97.2	100.2	103.2	106.2	109.1	109.5	107.2	104.9	102.5	100.1	90.3
107.5°	122.1	124.6	127.1	129.6	132.1	135.7	140.4	145.2	150.0	154.7	148.1
110°	138.7	140.8	143.0	145.3	147.5	150.9	155.3	159.8	164.3	168.7	168.8



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CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	154.7	156.6	158.5	160.3	162.2	165.3	169.6	174.0	178.3	182.6	184.9
115°	178.3	179.8	181.3	182.8	184.3	187.1	191.0	195.0	198.9	202.9	205.8
117.5°	201.3	202.5	203.7	204.8	206.1	208.4	211.9	215.3	218.7	222.1	224.9
120°	215.3	216.4	217.5	218.6	219.6	221.9	225.1	228.4	231.6	234.9	237.6
122.5°	229.9	230.7	231.4	232.2	232.9	234.9	238.1	241.2	244.4	247.5	250.0
125°	249.6	250.1	250.7	251.2	251.8	253.5	256.5	259.5	262.4	265.4	267.4
127.5°	268.9	269.4	269.9	270.4	270.8	272.3	274.9	277.4	280.0	282.6	284.6
130°	281.1	281.5	282.0	282.5	282.9	284.2	286.3	288.5	290.6	292.7	294.8
132.5°	292.3	292.8	293.4	293.9	294.5	295.6	297.3	299.0	300.7	302.4	304.3
135°	310.0	310.3	310.6	310.9	311.3	312.1	313.3	314.7	315.9	317.3	319.1
137.5°	325.0	325.5	325.9	326.4	326.8	327.4	328.1	328.9	329.6	330.3	332.1
140°	334.7	335.2	335.6	336.0	336.4	336.9	337.3	337.9	338.3	338.9	340.5
142.5°	344.1	344.4	344.7	345.1	345.4	345.7	346.0	346.3	346.5	346.8	348.3
145°	357.1	357.5	357.9	358.3	358.7	359.0	359.1	359.3	359.4	359.5	360.4
147.5°	369.0	369.3	369.6	370.0	370.2	370.5	370.7	370.8	371.0	371.0	371.4
150°	376.6	376.7	376.9	377.2	377.4	377.6	377.7	377.8	378.0	378.1	378.3
152.5°	383.3	383.4	383.5	383.6	383.7	383.9	383.9	384.0	384.1	384.1	384.4
155°	393.0	392.8	392.6	392.5	392.4	392.4	392.4	392.4	392.5	392.6	393.0
157.5°	400.4	400.4	400.4	400.3	400.3	400.3	400.2	400.1	400.0	400.0	400.4
160°	404.9	404.8	404.7	404.7	404.7	404.6	404.5	404.4	404.4	404.3	404.7
162.5°	409.2	409.0	408.8	408.7	408.5	408.3	408.2	408.2	408.1	408.0	408.5
165°	414.4	414.1	413.9	413.8	413.5	413.4	413.3	413.2	413.1	413.1	413.7
167.5°	418.4	418.1	417.9	417.6	417.2	417.1	417.1	417.1	417.1	417.1	417.7
170°	420.6	420.4	420.1	419.8	419.5	419.4	419.4	419.4	419.4	419.4	420.0
172.5°	422.1	421.9	421.5	421.2	420.8	420.7	420.7	420.8	420.9	420.9	421.5
175°	424.1	423.7	423.4	423.1	422.8	422.6	422.7	422.8	422.8	422.8	423.4
177.5°	424.6	424.4	424.1	423.8	423.5	423.4	423.5	423.5	423.6	423.7	424.1
180°	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	380.6	381.2	381.8	382.0	382.0	381.9	381.8	381.7
5°	380.0	380.8	381.5	381.8	381.7	381.6	381.5	381.4
7.5°	377.7	378.6	379.5	380.0	379.9	379.7	379.6	379.5
10°	375.4	376.3	377.2	377.6	377.4	377.2	377.0	376.8
12.5°	372.2	373.1	373.9	374.3	374.1	373.9	373.7	373.5
15°	366.2	367.1	368.1	368.5	368.4	368.3	368.2	368.1
17.5°	358.4	359.3	360.1	360.4	360.3	360.2	360.1	359.9
20°	352.8	353.6	354.5	354.9	355.0	355.1	355.2	355.3
22.5°	346.5	347.6	348.7	349.2	349.1	349.0	349.0	348.9
25°	336.0	337.2	338.4	339.0	339.0	339.0	339.0	339.0
27.5°	325.0	326.1	327.2	327.7	327.8	327.9	327.9	328.0
30°	317.5	318.7	319.8	320.3	320.3	320.3	320.3	320.3
32.5°	309.4	310.6	311.7	312.5	312.7	312.9	313.2	313.3
35°	297.4	298.7	300.1	301.0	301.4	301.8	302.1	302.5
37.5°	284.8	286.4	288.0	288.9	289.2	289.5	289.8	290.1
40°	276.5	278.1	279.6	280.6	281.0	281.4	281.8	282.1
42.5°	267.9	269.6	271.3	272.4	273.0	273.4	273.9	274.5
45°	254.9	256.6	258.4	259.7	260.4	261.1	261.9	262.6
47.5°	241.7	243.8	245.8	247.0	247.5	248.2	248.7	249.3
50°	232.7	234.9	237.0	238.4	239.1	239.7	240.3	241.0
52.5°	223.6	225.8	228.0	229.5	230.3	231.1	231.8	232.6
55°	209.8	212.3	214.8	216.4	217.1	217.9	218.6	219.4
57.5°	195.7	198.2	200.7	202.4	203.3	204.2	205.1	205.9
60°	185.9	188.5	191.1	192.9	193.9	194.9	195.9	197.0
62.5°	176.6	179.1	181.7	183.5	184.5	185.4	186.4	187.3
65°	161.8	164.5	167.3	169.2	170.0	171.0	171.9	172.8
67.5°	147.0	150.0	153.0	155.0	155.7	156.5	157.3	158.0
70°	137.2	140.2	143.1	145.1	146.0	146.9	147.8	148.7
72.5°	127.3	130.4	133.4	135.5	136.3	137.2	138.2	139.1
75°	112.4	115.5	118.6	120.6	121.7	122.9	123.9	125.1
77.5°	98.5	101.7	105.0	106.9	107.8	108.7	109.5	110.4
80°	89.3	92.6	95.7	97.6	98.6	99.5	100.5	101.4
82.5°	81.1	84.2	87.4	89.3	90.3	91.2	92.1	93.1
85°	69.5	72.6	75.7	77.8	78.6	79.6	80.5	81.4
87.5°	60.8	64.0	67.2	69.3	70.3	71.2	72.1	73.1
90°	61.3	64.7	68.2	70.4	71.5	72.6	73.7	74.7
92.5°	59.4	62.9	66.4	68.7	69.6	70.5	71.4	72.4
95°	57.6	61.0	64.3	66.4	67.4	68.3	69.2	70.2
97.5°	54.9	58.2	61.5	63.7	64.6	65.6	66.7	67.7
100°	53.1	56.3	59.5	61.6	62.6	63.6	64.6	65.6
102.5°	56.6	57.5	58.3	59.3	60.4	61.4	62.4	63.5
105°	80.5	70.7	60.9	56.5	57.5	58.5	59.4	60.4
107.5°	141.5	134.9	128.3	120.7	112.2	103.6	95.1	86.6
110°	168.9	169.0	169.1	164.4	155.2	145.9	136.6	127.3



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CATALOG NUMBER: S123DIP-S340D365U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	187.3	189.7	192.1	192.6	191.3	190.0	188.7	187.3
115°	208.7	211.6	214.5	216.5	217.6	218.6	219.5	220.6
117.5°	227.7	230.4	233.2	235.0	235.8	236.5	237.3	238.1
120°	240.2	242.9	245.6	247.3	247.9	248.6	249.2	249.9
122.5°	252.4	254.9	257.3	259.0	259.6	260.3	261.0	261.7
125°	269.6	271.6	273.7	275.1	275.9	276.7	277.5	278.3
127.5°	286.7	288.7	290.8	292.0	292.5	293.0	293.5	294.0
130°	296.8	298.8	300.9	302.1	302.5	302.9	303.4	303.7
132.5°	306.3	308.3	310.2	311.5	311.9	312.3	312.7	313.2
135°	321.0	322.9	324.8	325.8	326.1	326.3	326.5	326.8
137.5°	333.9	335.7	337.5	338.6	338.9	339.2	339.6	339.8
140°	342.1	343.8	345.4	346.5	346.8	347.1	347.4	347.8
142.5°	349.7	351.2	352.7	353.6	353.8	354.1	354.4	354.6
145°	361.3	362.2	363.0	363.6	364.1	364.4	364.8	365.2
147.5°	371.8	372.1	372.6	372.7	372.7	372.7	372.7	372.7
150°	378.4	378.5	378.7	378.7	378.7	378.7	378.7	378.6
152.5°	384.7	385.0	385.2	385.1	384.9	384.6	384.3	384.1
155°	393.3	393.7	394.0	394.0	393.6	393.2	392.7	392.3
157.5°	400.8	401.3	401.7	401.6	401.1	400.6	399.9	399.4
160°	405.1	405.6	406.0	405.9	405.5	404.9	404.5	403.9
162.5°	409.0	409.5	409.9	410.0	409.6	409.1	408.7	408.2
165°	414.2	414.8	415.4	415.4	414.9	414.4	413.9	413.4
167.5°	418.2	418.8	419.4	419.4	418.8	418.2	417.7	417.1
170°	420.5	421.1	421.6	421.6	421.1	420.5	420.0	419.4
172.5°	422.0	422.6	423.1	423.1	422.5	421.9	421.2	420.6
175°	423.8	424.4	424.8	424.8	424.3	423.7	423.1	422.6
177.5°	424.5	425.0	425.4	425.3	424.8	424.3	423.7	423.1
180°	424.1	424.1	424.1	424.1	424.1	424.1	424.1	424.1

(END OF REPORT)