

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: P331868-930

Luminaire Tested: **S123DIP-S340D365U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331868-930
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-S340D365U930-4F0-1E-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: 2355.6 lumens
Efficiency: N/A
Efficacy: 116.0 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

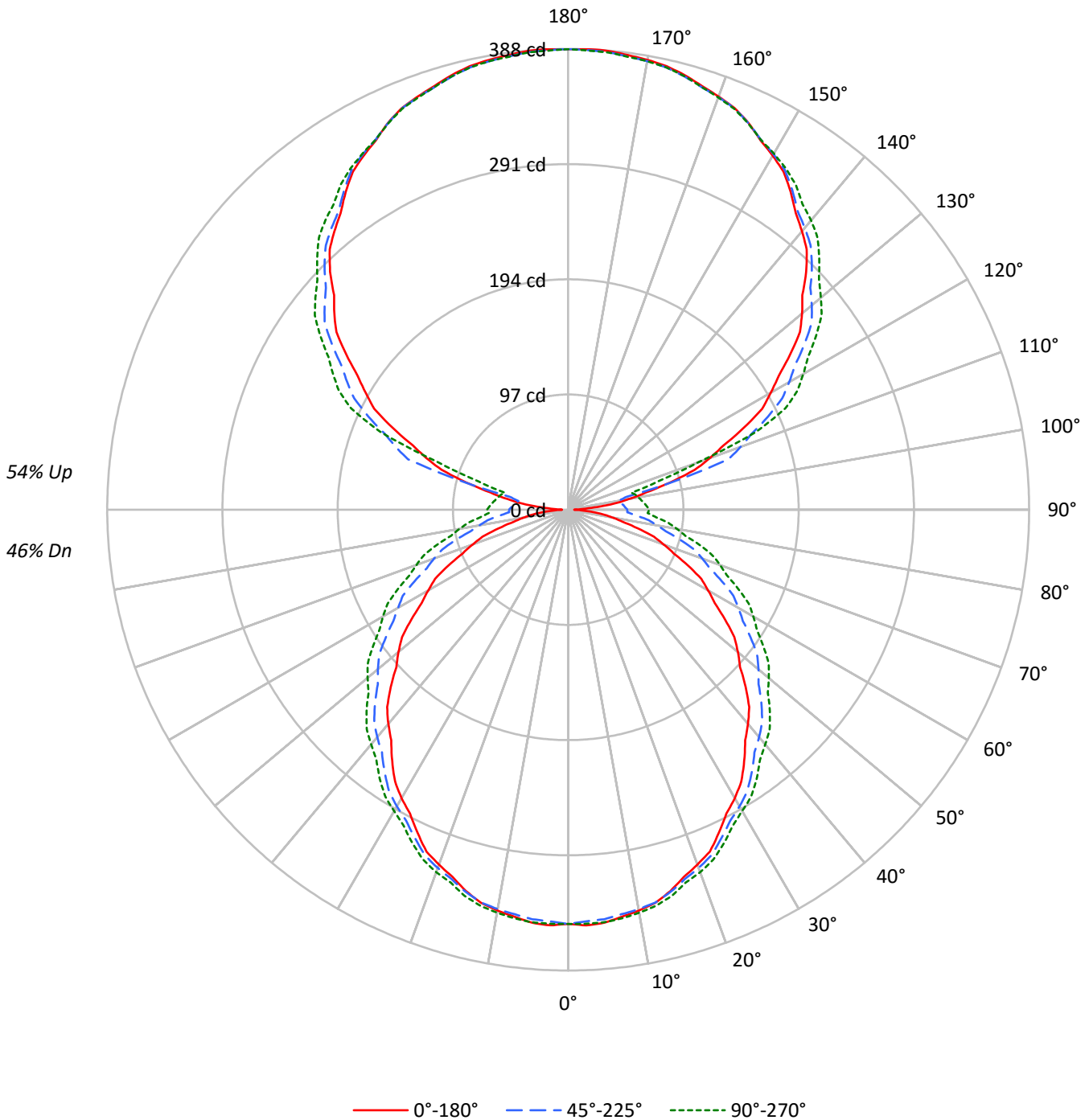
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331868-930

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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°	3753	3753	3753
5°	3765	3659	3661
10°	3732	3575	3556
15°	3684	3479	3443
20°	3615	3370	3318
25°	3530	3245	3186
30°	3444	3132	3053
35°	3345	3012	2946
40°	3252	2903	2833
45°	3149	2798	2741
50°	3047	2695	2641
55°	2936	2589	2550
60°	2826	2482	2458
65°	2714	2366	2347
70°	2542	2237	2234
75°	2331	2092	2120
80°	2084	1946	1988
85°	1855	1845	1910



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.1	1.4
10°-20°	94.2	4.0
20°-30°	141.0	6.0
30°-40°	168.3	7.1
40°-50°	176.1	7.5
50°-60°	165.3	7.0
60°-70°	138.0	5.9
70°-80°	98.8	4.2
80°-90°	60.0	2.5
90°-100°	51.1	2.2
100°-110°	94.4	4.0
110°-120°	179.5	7.6
120°-130°	215.9	9.2
130°-140°	224.2	9.5
140°-150°	206.3	8.8
150°-160°	165.7	7.0
160°-170°	106.9	4.5
170°-180°	36.8	1.6
0°-30°	268.3	11.4
0°-40°	436.6	18.5
0°-60°	778.0	33.0
0°-90°	1074.7	45.6
90°-120°	324.9	13.8
90°-150°	971.4	41.2
90°-180°	1281.0	54.4
0°-180°	2355.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	349	349	349	349	349	
5°	349	348	346	349	349	33
15°	332	333	333	337	337	94
25°	300	304	305	310	310	138
35°	258	264	269	275	276	162
45°	211	220	230	237	240	163
55°	161	174	187	197	201	144
65°	111	126	143	154	158	110
75°	60	78	97	109	114	64
85°	19	38	58	70	74	20
90°	5	27	50	63	68	4
95°	22	26	47	60	64	25
105°	89	100	92	54	55	94
115°	163	170	186	197	202	161
125°	228	231	243	251	254	204
135°	283	285	290	297	299	218
145°	326	328	329	332	334	204
155°	359	359	359	360	359	165
165°	379	378	378	380	378	107
175°	388	386	387	388	386	37
180°	388	388	388	388	388	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	350.3	350.1	349.8	349.7	349.4	349.1	348.5	348.0	347.5	346.9	347.5
5°	349.1	348.9	348.8	348.6	348.5	348.1	347.6	347.1	346.6	346.1	346.7
7.5°	345.7	345.8	345.8	345.8	345.8	345.6	345.1	344.6	344.1	343.6	344.5
10°	342.7	342.8	343.0	343.2	343.3	343.2	342.8	342.3	341.9	341.5	342.3
12.5°	339.0	339.2	339.5	339.7	340.0	339.9	339.7	339.3	339.1	338.8	339.6
15°	332.4	332.6	332.9	333.1	333.4	333.5	333.4	333.3	333.2	333.1	334.0
17.5°	324.1	324.6	325.1	325.5	326.0	326.3	326.3	326.2	326.2	326.2	326.9
20°	318.0	318.5	318.9	319.5	320.0	320.3	320.5	320.7	320.8	321.0	321.8
22.5°	311.6	312.1	312.6	313.1	313.6	314.0	314.2	314.5	314.7	315.0	315.9
25°	300.1	300.9	301.8	302.6	303.5	304.0	304.3	304.5	304.8	305.1	306.1
27.5°	288.5	289.5	290.5	291.5	292.4	293.2	293.7	294.2	294.8	295.3	296.3
30°	280.4	281.4	282.6	283.6	284.8	285.6	286.3	287.0	287.6	288.4	289.3
32.5°	271.3	272.5	273.7	274.9	276.1	277.2	278.1	279.0	279.9	280.7	281.8
35°	258.3	259.7	261.1	262.4	263.7	265.0	266.0	267.2	268.2	269.4	270.6
37.5°	244.7	246.1	247.7	249.2	250.7	252.2	253.5	254.9	256.2	257.6	259.0
40°	235.5	237.1	238.6	240.1	241.6	243.2	244.9	246.6	248.3	250.0	251.4
42.5°	225.5	227.4	229.2	231.1	232.9	234.7	236.5	238.2	240.0	241.7	243.4
45°	211.2	213.3	215.2	217.3	219.3	221.4	223.5	225.6	227.7	229.8	231.5
47.5°	196.2	198.5	200.8	203.2	205.5	207.8	210.2	212.6	215.0	217.4	219.2
50°	186.5	188.9	191.3	193.6	196.0	198.4	201.1	203.7	206.4	209.0	210.9
52.5°	176.2	178.7	181.2	183.7	186.2	188.9	191.8	194.7	197.5	200.4	202.4
55°	161.1	163.9	166.6	169.4	172.2	175.1	178.1	181.2	184.3	187.3	189.6
57.5°	146.3	149.2	152.1	155.1	157.9	161.1	164.4	167.7	171.0	174.4	176.7
60°	136.0	139.0	142.1	145.1	148.1	151.4	154.9	158.3	161.8	165.3	167.6
62.5°	126.3	129.4	132.5	135.6	138.7	142.1	145.8	149.4	153.1	156.8	159.1
65°	111.3	114.6	117.9	121.2	124.5	128.0	131.7	135.4	139.1	142.8	145.4
67.5°	96.1	99.6	103.1	106.6	110.1	113.7	117.5	121.3	125.1	128.9	131.6
70°	85.4	89.1	92.7	96.4	100.0	103.9	107.9	111.9	116.0	120.0	122.8
72.5°	75.7	79.4	83.0	86.7	90.3	94.2	98.3	102.6	106.7	111.0	113.7
75°	60.4	64.4	68.3	72.3	76.3	80.4	84.6	88.8	93.0	97.3	100.0
77.5°	47.0	51.0	55.0	59.0	63.0	67.2	71.4	75.7	79.9	84.2	87.2
80°	37.6	41.7	45.9	50.1	54.1	58.5	62.8	67.2	71.6	76.0	78.8
82.5°	29.4	33.6	37.8	42.0	46.2	50.5	55.0	59.4	63.9	68.4	71.3
85°	18.6	22.8	27.1	31.3	35.5	39.9	44.4	48.8	53.2	57.7	60.6
87.5°	10.2	14.5	18.8	23.2	27.5	31.9	36.4	40.8	45.3	49.8	52.7
90°	5.2	10.0	14.8	19.6	24.3	29.3	34.4	39.5	44.7	49.8	53.0
92.5°	10.0	13.5	17.1	20.6	24.2	28.4	33.3	38.2	43.0	47.9	51.1
95°	21.8	22.4	23.1	23.7	24.5	27.1	32.0	36.9	41.7	46.6	49.6
97.5°	39.1	40.8	42.6	44.4	46.2	46.8	46.1	45.5	44.8	44.2	47.2
100°	52.1	56.1	60.1	64.1	68.0	66.9	60.9	54.8	48.7	42.6	45.5
102.5°	67.0	70.4	73.7	77.0	80.4	78.6	71.5	64.4	57.3	50.2	51.0
105°	88.9	91.6	94.3	97.1	99.8	100.1	98.0	95.9	93.7	91.6	82.6
107.5°	111.6	113.9	116.2	118.5	120.7	124.1	128.4	132.7	137.1	141.5	135.4
110°	126.8	128.7	130.8	132.8	134.9	137.9	142.0	146.1	150.2	154.3	154.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	141.5	143.2	144.9	146.6	148.3	151.2	155.1	159.1	163.0	167.0	169.1
115°	163.0	164.4	165.8	167.1	168.5	171.0	174.6	178.3	181.9	185.5	188.2
117.5°	184.0	185.2	186.2	187.3	188.4	190.5	193.7	196.8	200.0	203.1	205.6
120°	196.8	197.9	198.9	199.8	200.8	202.8	205.8	208.8	211.7	214.7	217.2
122.5°	210.2	210.9	211.6	212.3	213.0	214.7	217.7	220.5	223.5	226.3	228.6
125°	228.2	228.7	229.2	229.7	230.2	231.8	234.6	237.3	239.9	242.6	244.5
127.5°	245.9	246.3	246.8	247.2	247.6	249.0	251.4	253.6	256.0	258.4	260.2
130°	257.0	257.4	257.8	258.3	258.7	259.8	261.8	263.7	265.7	267.7	269.5
132.5°	267.3	267.7	268.2	268.7	269.3	270.3	271.8	273.4	274.9	276.5	278.3
135°	283.4	283.7	284.0	284.3	284.6	285.4	286.5	287.7	288.9	290.1	291.8
137.5°	297.2	297.6	298.0	298.4	298.8	299.4	300.0	300.7	301.3	302.0	303.6
140°	306.1	306.5	306.8	307.2	307.6	308.0	308.4	308.9	309.3	309.8	311.3
142.5°	314.6	314.9	315.2	315.5	315.8	316.1	316.3	316.6	316.8	317.1	318.5
145°	326.5	326.9	327.3	327.6	328.0	328.2	328.3	328.5	328.6	328.7	329.5
147.5°	337.4	337.7	337.9	338.3	338.5	338.8	338.9	339.0	339.2	339.2	339.6
150°	344.3	344.5	344.6	344.9	345.0	345.2	345.4	345.4	345.6	345.7	345.8
152.5°	350.5	350.6	350.7	350.7	350.8	351.0	351.0	351.1	351.1	351.2	351.5
155°	359.3	359.1	359.0	358.9	358.7	358.7	358.8	358.8	358.9	359.0	359.3
157.5°	366.1	366.1	366.1	366.0	366.0	366.0	365.9	365.8	365.7	365.7	366.1
160°	370.2	370.1	370.1	370.0	370.0	369.9	369.8	369.7	369.7	369.7	370.0
162.5°	374.1	374.0	373.8	373.7	373.5	373.3	373.2	373.2	373.2	373.1	373.5
165°	378.9	378.6	378.5	378.3	378.1	378.0	377.9	377.8	377.7	377.7	378.2
167.5°	382.5	382.3	382.0	381.8	381.5	381.4	381.4	381.4	381.4	381.4	381.9
170°	384.6	384.3	384.1	383.8	383.6	383.4	383.4	383.4	383.4	383.4	384.0
172.5°	386.0	385.7	385.4	385.1	384.7	384.7	384.7	384.7	384.8	384.8	385.4
175°	387.8	387.4	387.1	386.9	386.5	386.4	386.5	386.5	386.5	386.6	387.1
177.5°	388.2	388.0	387.8	387.5	387.2	387.1	387.2	387.2	387.3	387.3	387.8
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	348.0	348.5	349.1	349.3	349.3	349.2	349.1	349.0
5°	347.4	348.1	348.8	349.1	349.0	348.9	348.8	348.7
7.5°	345.4	346.2	347.0	347.4	347.3	347.2	347.1	347.0
10°	343.2	344.1	344.9	345.2	345.0	344.9	344.7	344.5
12.5°	340.3	341.1	341.9	342.2	342.0	341.9	341.7	341.5
15°	334.8	335.7	336.6	336.9	336.8	336.7	336.6	336.6
17.5°	327.7	328.5	329.2	329.5	329.4	329.3	329.2	329.1
20°	322.5	323.3	324.1	324.5	324.6	324.7	324.7	324.8
22.5°	316.8	317.8	318.8	319.3	319.2	319.1	319.1	319.0
25°	307.2	308.3	309.4	310.0	310.0	310.0	310.0	310.0
27.5°	297.2	298.2	299.1	299.6	299.7	299.8	299.8	299.9
30°	290.3	291.4	292.4	292.9	292.9	292.9	292.9	292.9
32.5°	282.9	284.0	285.0	285.7	285.9	286.1	286.3	286.5
35°	271.9	273.1	274.4	275.2	275.6	275.9	276.2	276.5
37.5°	260.4	261.9	263.3	264.2	264.4	264.7	265.0	265.2
40°	252.8	254.3	255.7	256.6	256.9	257.3	257.6	258.0
42.5°	244.9	246.5	248.0	249.1	249.6	250.0	250.5	250.9
45°	233.0	234.6	236.3	237.4	238.1	238.7	239.5	240.1
47.5°	221.0	222.9	224.7	225.8	226.3	226.9	227.4	228.0
50°	212.8	214.7	216.7	218.0	218.6	219.2	219.7	220.4
52.5°	204.5	206.4	208.5	209.9	210.6	211.3	212.0	212.7
55°	191.8	194.1	196.4	197.9	198.5	199.3	199.9	200.6
57.5°	179.0	181.2	183.5	185.1	185.9	186.7	187.5	188.3
60°	170.0	172.4	174.7	176.3	177.2	178.2	179.1	180.1
62.5°	161.4	163.8	166.2	167.8	168.7	169.5	170.4	171.3
65°	147.9	150.4	153.0	154.7	155.5	156.4	157.2	158.0
67.5°	134.4	137.1	139.9	141.7	142.4	143.1	143.8	144.5
70°	125.5	128.2	130.9	132.6	133.5	134.3	135.2	136.0
72.5°	116.4	119.2	122.0	123.8	124.7	125.5	126.4	127.2
75°	102.8	105.6	108.4	110.3	111.3	112.3	113.3	114.4
77.5°	90.1	93.0	96.0	97.8	98.6	99.4	100.1	100.9
80°	81.7	84.6	87.5	89.3	90.2	91.0	91.9	92.7
82.5°	74.1	77.0	79.9	81.7	82.6	83.4	84.2	85.1
85°	63.5	66.4	69.2	71.1	71.9	72.8	73.6	74.4
87.5°	55.6	58.5	61.5	63.3	64.2	65.1	66.0	66.9
90°	56.1	59.2	62.4	64.4	65.4	66.4	67.3	68.3
92.5°	54.3	57.5	60.7	62.8	63.6	64.5	65.3	66.2
95°	52.7	55.8	58.8	60.7	61.6	62.5	63.3	64.2
97.5°	50.2	53.2	56.3	58.2	59.1	60.0	61.0	61.9
100°	48.5	51.4	54.4	56.3	57.2	58.1	59.0	60.0
102.5°	51.8	52.6	53.3	54.2	55.2	56.2	57.1	58.0
105°	73.6	64.7	55.7	51.7	52.6	53.5	54.3	55.2
107.5°	129.4	123.4	117.3	110.4	102.6	94.7	87.0	79.2
110°	154.4	154.5	154.6	150.3	141.9	133.4	124.9	116.4



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CATALOG NUMBER: S123DIP-S340D365U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	171.3	173.4	175.6	176.1	174.9	173.7	172.5	171.3
115°	190.9	193.5	196.2	198.0	198.9	199.8	200.7	201.7
117.5°	208.1	210.7	213.2	214.8	215.6	216.2	217.0	217.7
120°	219.6	222.1	224.5	226.1	226.7	227.3	227.9	228.4
122.5°	230.8	233.1	235.3	236.8	237.3	238.0	238.6	239.3
125°	246.5	248.3	250.2	251.5	252.3	253.0	253.7	254.5
127.5°	262.1	264.0	265.9	267.0	267.4	267.9	268.3	268.8
130°	271.3	273.2	275.1	276.2	276.5	277.0	277.4	277.7
132.5°	280.1	281.8	283.6	284.8	285.2	285.5	285.9	286.3
135°	293.5	295.2	296.9	297.9	298.2	298.3	298.6	298.8
137.5°	305.3	307.0	308.6	309.6	309.8	310.1	310.5	310.7
140°	312.8	314.4	315.8	316.8	317.1	317.4	317.6	318.0
142.5°	319.8	321.1	322.5	323.3	323.5	323.8	324.0	324.2
145°	330.4	331.2	331.9	332.5	332.9	333.2	333.5	333.9
147.5°	339.9	340.2	340.6	340.8	340.8	340.8	340.8	340.8
150°	346.0	346.1	346.3	346.3	346.3	346.3	346.3	346.2
152.5°	351.7	352.0	352.2	352.1	351.9	351.6	351.4	351.1
155°	359.6	360.0	360.3	360.2	359.9	359.5	359.1	358.7
157.5°	366.5	366.9	367.3	367.2	366.7	366.2	365.7	365.2
160°	370.4	370.8	371.2	371.1	370.7	370.2	369.8	369.3
162.5°	374.0	374.4	374.8	374.9	374.5	374.1	373.7	373.2
165°	378.7	379.3	379.8	379.8	379.4	378.9	378.5	378.0
167.5°	382.4	382.9	383.4	383.4	382.9	382.4	381.9	381.4
170°	384.5	385.0	385.5	385.5	385.0	384.5	384.0	383.4
172.5°	385.9	386.4	386.9	386.9	386.3	385.7	385.1	384.6
175°	387.5	388.0	388.4	388.4	387.9	387.3	386.9	386.4
177.5°	388.2	388.6	389.0	388.9	388.4	387.9	387.3	386.9
180°	387.8	387.8	387.8	387.8	387.8	387.8	387.8	387.8

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