

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: P331868-935

Luminaire Tested: **S123DIP-S340D365U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331868-935
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-S340D365U935-4F0-1E-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: 2487.6 lumens
Efficiency: N/A
Efficacy: 122.5 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

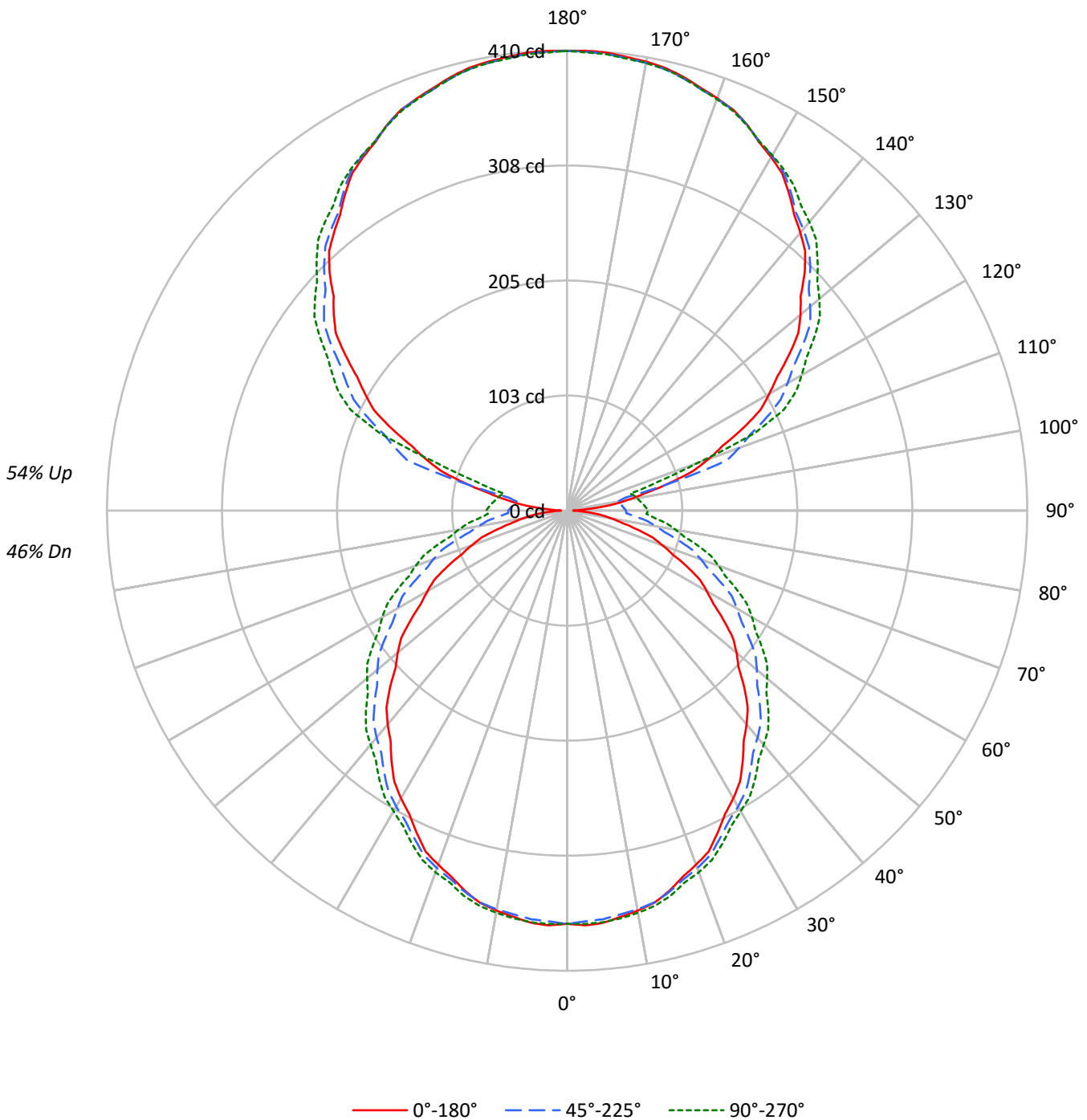
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331868-935

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-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°	3963	3963	3963
5°	3977	3865	3866
10°	3941	3776	3757
15°	3890	3674	3636
20°	3818	3559	3504
25°	3728	3427	3365
30°	3637	3307	3224
35°	3533	3181	3112
40°	3435	3065	2991
45°	3327	2955	2895
50°	3219	2846	2789
55°	3100	2734	2693
60°	2984	2620	2596
65°	2865	2499	2479
70°	2685	2362	2359
75°	2462	2208	2239
80°	2201	2054	2100
85°	1955	1950	2018



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	1.4
10°-20°	99.5	4.0
20°-30°	148.9	6.0
30°-40°	177.8	7.1
40°-50°	186.0	7.5
50°-60°	174.5	7.0
60°-70°	145.8	5.9
70°-80°	104.3	4.2
80°-90°	63.3	2.5
90°-100°	53.9	2.2
100°-110°	99.6	4.0
110°-120°	189.6	7.6
120°-130°	228.0	9.2
130°-140°	236.8	9.5
140°-150°	217.9	8.8
150°-160°	174.9	7.0
160°-170°	112.9	4.5
170°-180°	38.9	1.6
0°-30°	283.3	11.4
0°-40°	461.0	18.5
0°-60°	821.6	33.0
0°-90°	1135.0	45.6
90°-120°	343.1	13.8
90°-150°	1025.9	41.2
90°-180°	1353.0	54.4
0°-180°	2487.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	369	368	366	368	368	35
15°	351	352	352	356	355	99
25°	317	321	322	327	327	146
35°	273	279	284	290	292	171
45°	223	233	243	250	254	172
55°	170	183	198	208	212	152
65°	118	133	151	162	167	116
75°	64	83	103	116	121	68
85°	20	40	61	74	79	21
90°	6	28	53	67	72	4
95°	23	27	49	63	68	26
105°	94	106	97	57	58	99
115°	172	179	196	208	213	170
125°	241	244	256	265	269	215
135°	299	301	306	314	316	230
145°	345	346	347	351	353	216
155°	379	379	379	380	379	175
165°	400	399	399	401	399	113
175°	410	408	408	410	408	39
180°	410	410	410	410	410	



TEST NUMBER: P331868-935

CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	369.9	369.7	369.5	369.3	369.0	368.7	368.1	367.5	367.0	366.4	367.0
5°	368.7	368.5	368.3	368.2	368.0	367.6	367.0	366.5	366.0	365.5	366.2
7.5°	365.1	365.2	365.2	365.2	365.2	365.0	364.5	363.9	363.4	362.9	363.8
10°	361.9	362.1	362.2	362.4	362.6	362.5	362.0	361.5	361.1	360.7	361.5
12.5°	358.0	358.3	358.5	358.8	359.0	359.0	358.7	358.3	358.1	357.7	358.6
15°	351.0	351.3	351.5	351.8	352.1	352.2	352.1	352.0	351.9	351.8	352.8
17.5°	342.2	342.8	343.3	343.8	344.3	344.6	344.6	344.5	344.5	344.5	345.3
20°	335.8	336.3	336.8	337.4	337.9	338.3	338.5	338.6	338.8	339.0	339.8
22.5°	329.1	329.6	330.1	330.6	331.2	331.6	331.8	332.1	332.3	332.6	333.6
25°	316.9	317.8	318.7	319.6	320.5	321.1	321.3	321.6	321.8	322.2	323.3
27.5°	304.7	305.7	306.8	307.8	308.8	309.6	310.1	310.7	311.3	311.9	312.9
30°	296.1	297.2	298.4	299.5	300.7	301.6	302.4	303.1	303.8	304.5	305.6
32.5°	286.5	287.7	289.0	290.3	291.6	292.7	293.7	294.6	295.6	296.4	297.6
35°	272.8	274.2	275.7	277.1	278.5	279.8	280.9	282.1	283.3	284.5	285.8
37.5°	258.4	259.9	261.6	263.2	264.8	266.3	267.7	269.1	270.6	272.0	273.5
40°	248.7	250.4	251.9	253.6	255.1	256.8	258.6	260.5	262.2	264.0	265.5
42.5°	238.2	240.1	242.0	244.0	246.0	247.9	249.8	251.6	253.5	255.3	257.0
45°	223.1	225.2	227.3	229.5	231.6	233.8	236.0	238.2	240.5	242.7	244.4
47.5°	207.2	209.7	212.1	214.6	217.0	219.5	222.0	224.5	227.0	229.6	231.5
50°	197.0	199.5	202.0	204.5	207.0	209.6	212.3	215.2	217.9	220.7	222.7
52.5°	186.1	188.7	191.3	194.0	196.7	199.5	202.5	205.6	208.6	211.6	213.8
55°	170.1	173.1	176.0	178.9	181.8	184.9	188.1	191.4	194.6	197.8	200.2
57.5°	154.5	157.6	160.7	163.8	166.8	170.1	173.6	177.1	180.6	184.2	186.6
60°	143.6	146.8	150.1	153.3	156.4	159.9	163.6	167.2	170.8	174.5	177.0
62.5°	133.4	136.6	139.9	143.2	146.5	150.1	153.9	157.8	161.7	165.6	168.0
65°	117.5	121.1	124.5	127.9	131.5	135.2	139.1	143.0	146.9	150.8	153.5
67.5°	101.5	105.2	108.9	112.5	116.2	120.1	124.1	128.1	132.1	136.1	139.0
70°	90.2	94.1	97.9	101.8	105.6	109.7	113.9	118.2	122.5	126.7	129.7
72.5°	80.0	83.9	87.6	91.5	95.3	99.4	103.8	108.3	112.7	117.2	120.1
75°	63.8	68.0	72.2	76.4	80.6	84.9	89.4	93.8	98.2	102.7	105.6
77.5°	49.7	53.9	58.1	62.3	66.6	70.9	75.4	79.9	84.4	88.9	92.0
80°	39.7	44.1	48.5	52.9	57.2	61.7	66.3	70.9	75.6	80.2	83.3
82.5°	31.1	35.5	40.0	44.3	48.8	53.4	58.1	62.8	67.5	72.2	75.3
85°	19.6	24.1	28.6	33.1	37.5	42.1	46.8	51.5	56.2	61.0	64.0
87.5°	10.8	15.3	19.9	24.5	29.0	33.7	38.4	43.1	47.9	52.6	55.6
90°	5.5	10.6	15.6	20.7	25.7	30.9	36.3	41.8	47.2	52.6	56.0
92.5°	10.6	14.3	18.1	21.8	25.6	30.0	35.1	40.3	45.4	50.5	54.0
95°	23.0	23.7	24.4	25.1	25.8	28.7	33.8	38.9	44.0	49.2	52.3
97.5°	41.2	43.1	45.0	46.9	48.8	49.4	48.7	48.0	47.4	46.7	49.9
100°	55.0	59.2	63.5	67.7	71.8	70.7	64.3	57.9	51.4	44.9	48.0
102.5°	70.8	74.3	77.8	81.4	84.9	83.0	75.5	68.0	60.5	53.0	53.8
105°	93.8	96.8	99.6	102.5	105.4	105.7	103.5	101.3	98.9	96.7	87.2
107.5°	117.9	120.3	122.7	125.1	127.5	131.0	135.6	140.2	144.8	149.4	143.0
110°	133.9	136.0	138.1	140.3	142.4	145.7	150.0	154.3	158.6	162.9	163.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	149.4	151.2	153.0	154.8	156.6	159.6	163.8	168.0	172.1	176.3	178.6
115°	172.1	173.6	175.0	176.5	178.0	180.6	184.4	188.3	192.1	195.9	198.7
117.5°	194.3	195.5	196.7	197.8	199.0	201.2	204.6	207.8	211.2	214.5	217.1
120°	207.8	209.0	210.0	211.0	212.1	214.2	217.3	220.5	223.6	226.8	229.4
122.5°	222.0	222.7	223.4	224.2	224.9	226.8	229.9	232.9	236.0	239.0	241.4
125°	241.0	241.5	242.0	242.5	243.1	244.8	247.7	250.6	253.4	256.2	258.2
127.5°	259.7	260.1	260.6	261.1	261.5	262.9	265.4	267.9	270.4	272.9	274.8
130°	271.4	271.8	272.2	272.8	273.2	274.4	276.5	278.5	280.6	282.7	284.6
132.5°	282.2	282.8	283.3	283.8	284.4	285.4	287.1	288.7	290.3	292.0	293.9
135°	299.3	299.6	299.9	300.2	300.6	301.4	302.6	303.8	305.1	306.3	308.2
137.5°	313.8	314.3	314.7	315.1	315.6	316.2	316.8	317.5	318.2	318.9	320.6
140°	323.2	323.6	324.0	324.4	324.9	325.3	325.7	326.2	326.7	327.2	328.7
142.5°	332.3	332.5	332.9	333.2	333.6	333.8	334.1	334.3	334.6	334.8	336.3
145°	344.8	345.2	345.6	345.9	346.4	346.6	346.7	346.9	347.0	347.2	348.0
147.5°	356.3	356.6	356.9	357.2	357.5	357.7	357.9	358.0	358.2	358.3	358.6
150°	363.6	363.8	363.9	364.2	364.4	364.5	364.7	364.8	365.0	365.1	365.2
152.5°	370.1	370.2	370.3	370.4	370.5	370.7	370.7	370.7	370.8	370.9	371.2
155°	379.4	379.3	379.1	379.0	378.8	378.8	378.9	378.9	379.0	379.1	379.4
157.5°	386.6	386.6	386.6	386.5	386.5	386.5	386.4	386.3	386.2	386.2	386.6
160°	391.0	390.9	390.8	390.7	390.7	390.6	390.5	390.5	390.5	390.4	390.7
162.5°	395.1	394.9	394.8	394.6	394.4	394.3	394.2	394.2	394.1	394.0	394.4
165°	400.1	399.8	399.7	399.5	399.2	399.2	399.1	399.0	398.9	398.9	399.4
167.5°	404.0	403.7	403.5	403.2	402.9	402.8	402.8	402.8	402.8	402.8	403.3
170°	406.1	405.9	405.6	405.4	405.1	404.9	404.9	404.9	404.9	404.9	405.5
172.5°	407.6	407.3	407.0	406.7	406.3	406.2	406.2	406.3	406.4	406.4	407.0
175°	409.5	409.1	408.8	408.5	408.2	408.0	408.1	408.2	408.2	408.3	408.8
177.5°	410.0	409.7	409.5	409.2	408.9	408.8	408.9	408.9	409.0	409.1	409.5
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	367.5	368.1	368.7	368.9	368.9	368.8	368.7	368.6
5°	366.9	367.6	368.3	368.7	368.6	368.4	368.3	368.2
7.5°	364.7	365.6	366.4	366.9	366.8	366.6	366.5	366.4
10°	362.5	363.3	364.2	364.5	364.4	364.2	364.0	363.9
12.5°	359.4	360.2	361.0	361.4	361.2	361.0	360.8	360.7
15°	353.6	354.5	355.4	355.8	355.7	355.6	355.5	355.4
17.5°	346.0	346.9	347.7	348.0	347.8	347.8	347.7	347.5
20°	340.6	341.4	342.2	342.7	342.8	342.9	342.9	343.0
22.5°	334.6	335.6	336.7	337.2	337.1	337.0	337.0	336.9
25°	324.4	325.6	326.7	327.4	327.4	327.4	327.4	327.4
27.5°	313.8	314.9	315.9	316.4	316.5	316.6	316.6	316.7
30°	306.6	307.7	308.8	309.3	309.3	309.3	309.3	309.3
32.5°	298.8	299.9	301.0	301.7	302.0	302.1	302.4	302.6
35°	287.1	288.4	289.8	290.7	291.0	291.4	291.7	292.1
37.5°	275.0	276.6	278.1	279.0	279.2	279.6	279.8	280.1
40°	267.0	268.5	270.0	271.0	271.3	271.7	272.1	272.4
42.5°	258.6	260.3	261.9	263.0	263.6	264.0	264.5	265.0
45°	246.1	247.8	249.5	250.7	251.4	252.1	252.9	253.6
47.5°	233.4	235.4	237.3	238.5	239.0	239.6	240.1	240.7
50°	224.7	226.8	228.9	230.2	230.8	231.4	232.0	232.7
52.5°	215.9	218.0	220.2	221.6	222.4	223.2	223.9	224.6
55°	202.6	205.0	207.4	209.0	209.7	210.4	211.1	211.8
57.5°	189.0	191.4	193.8	195.4	196.3	197.2	198.0	198.8
60°	179.5	182.0	184.5	186.2	187.2	188.2	189.2	190.2
62.5°	170.5	173.0	175.5	177.2	178.1	179.0	179.9	180.9
65°	156.2	158.9	161.5	163.3	164.2	165.1	166.0	166.9
67.5°	141.9	144.8	147.7	149.6	150.3	151.1	151.9	152.6
70°	132.5	135.3	138.2	140.1	140.9	141.8	142.8	143.6
72.5°	123.0	125.9	128.8	130.8	131.6	132.5	133.5	134.3
75°	108.6	111.5	114.5	116.5	117.5	118.6	119.7	120.8
77.5°	95.1	98.2	101.3	103.2	104.1	105.0	105.7	106.6
80°	86.3	89.4	92.4	94.3	95.2	96.1	97.0	97.9
82.5°	78.3	81.3	84.4	86.3	87.2	88.1	88.9	89.9
85°	67.1	70.1	73.1	75.1	75.9	76.9	77.7	78.6
87.5°	58.7	61.8	64.9	66.9	67.8	68.8	69.7	70.6
90°	59.2	62.5	65.9	68.0	69.1	70.1	71.1	72.2
92.5°	57.3	60.7	64.1	66.3	67.2	68.1	69.0	69.9
95°	55.6	58.9	62.1	64.1	65.1	66.0	66.8	67.8
97.5°	53.0	56.2	59.4	61.5	62.4	63.4	64.4	65.3
100°	51.2	54.3	57.4	59.5	60.4	61.4	62.3	63.4
102.5°	54.7	55.5	56.3	57.3	58.3	59.3	60.3	61.3
105°	77.7	68.3	58.8	54.6	55.5	56.5	57.3	58.3
107.5°	136.6	130.3	123.9	116.6	108.3	100.0	91.9	83.6
110°	163.1	163.2	163.2	158.8	149.8	140.9	131.9	123.0



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CATALOG NUMBER: S123DIP-S340D365U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	180.9	183.1	185.5	186.0	184.7	183.5	182.2	180.9
115°	201.6	204.3	207.2	209.1	210.1	211.0	212.0	213.0
117.5°	219.8	222.5	225.2	226.9	227.6	228.3	229.1	229.9
120°	232.0	234.5	237.1	238.8	239.4	240.0	240.6	241.3
122.5°	243.7	246.2	248.5	250.0	250.6	251.3	252.0	252.7
125°	260.3	262.3	264.2	265.6	266.4	267.2	267.9	268.7
127.5°	276.8	278.8	280.8	282.0	282.4	282.9	283.4	283.9
130°	286.5	288.5	290.5	291.7	292.1	292.5	292.9	293.3
132.5°	295.8	297.6	299.5	300.7	301.2	301.5	302.0	302.4
135°	310.0	311.8	313.6	314.6	314.9	315.0	315.3	315.6
137.5°	322.4	324.2	325.9	326.9	327.2	327.5	327.9	328.1
140°	330.4	332.0	333.6	334.6	334.8	335.2	335.4	335.8
142.5°	337.7	339.1	340.5	341.4	341.6	341.9	342.2	342.4
145°	348.9	349.7	350.5	351.1	351.5	351.9	352.2	352.6
147.5°	359.0	359.3	359.7	359.9	359.9	359.9	359.9	359.9
150°	365.4	365.5	365.7	365.7	365.7	365.7	365.7	365.6
152.5°	371.4	371.7	372.0	371.9	371.6	371.3	371.1	370.8
155°	379.8	380.1	380.5	380.4	380.0	379.6	379.2	378.8
157.5°	387.0	387.4	387.9	387.8	387.3	386.8	386.2	385.6
160°	391.2	391.6	392.0	391.9	391.5	391.0	390.5	390.0
162.5°	394.9	395.4	395.8	395.9	395.5	395.0	394.6	394.2
165°	399.9	400.5	401.1	401.1	400.6	400.1	399.7	399.2
167.5°	403.8	404.4	404.9	404.9	404.4	403.8	403.3	402.8
170°	406.0	406.6	407.1	407.1	406.6	406.0	405.5	404.9
172.5°	407.5	408.0	408.5	408.5	407.9	407.3	406.7	406.1
175°	409.2	409.7	410.2	410.2	409.7	409.1	408.5	408.0
177.5°	409.9	410.4	410.8	410.7	410.2	409.7	409.1	408.5
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5

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