

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: P331868-830

Luminaire Tested: **S123DIP-S340D365U830-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331868-830
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-S340D365U830-4F0-1E-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: 2723.2 lumens
Efficiency: N/A
Efficacy: 134.1 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

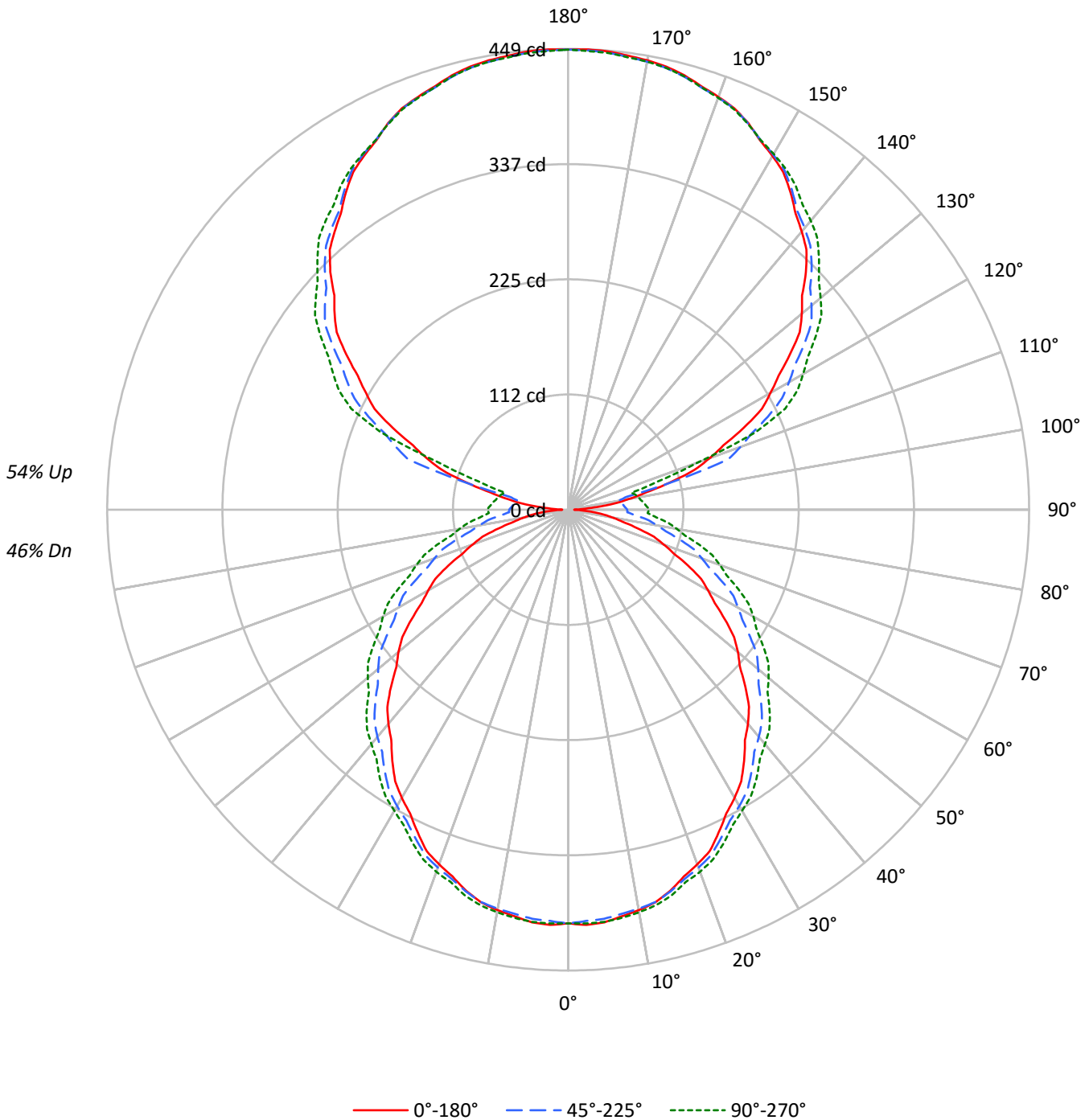
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331868-830

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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°	4339	4339	4339
5°	4353	4230	4232
10°	4315	4133	4112
15°	4259	4022	3980
20°	4179	3896	3836
25°	4080	3751	3684
30°	3980	3620	3529
35°	3867	3481	3406
40°	3760	3356	3274
45°	3641	3235	3169
50°	3525	3116	3054
55°	3393	2993	2948
60°	3266	2869	2842
65°	3138	2736	2714
70°	2941	2586	2582
75°	2693	2416	2450
80°	2412	2249	2299
85°	2145	2133	2211



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	1.4
10°-20°	108.9	4.0
20°-30°	163.0	6.0
30°-40°	194.6	7.1
40°-50°	203.6	7.5
50°-60°	191.1	7.0
60°-70°	159.6	5.9
70°-80°	114.2	4.2
80°-90°	69.3	2.5
90°-100°	59.0	2.2
100°-110°	109.1	4.0
110°-120°	207.5	7.6
120°-130°	249.6	9.2
130°-140°	259.2	9.5
140°-150°	238.6	8.8
150°-160°	191.5	7.0
160°-170°	123.6	4.5
170°-180°	42.6	1.6
0°-30°	310.1	11.4
0°-40°	504.7	18.5
0°-60°	899.4	33.0
0°-90°	1242.5	45.6
90°-120°	375.6	13.8
90°-150°	1123.0	41.2
90°-180°	1481.0	54.4
0°-180°	2723.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	403	403	403	403	403	
5°	404	403	400	403	403	38
15°	384	386	385	389	389	108
25°	347	351	353	358	358	160
35°	299	306	311	318	320	187
45°	244	255	266	274	278	188
55°	186	201	216	228	232	167
65°	129	146	165	178	183	127
75°	70	91	112	126	132	75
85°	22	44	67	81	86	23
90°	6	31	58	73	79	5
95°	25	30	54	69	74	29
105°	103	116	106	62	64	109
115°	188	196	214	228	233	186
125°	264	267	280	290	294	236
135°	328	329	335	344	345	252
145°	378	379	380	384	386	236
155°	415	415	415	416	415	191
165°	438	437	437	439	437	124
175°	448	447	447	449	447	43
180°	448	448	448	448	448	



TEST NUMBER: P331868-830

CATALOG NUMBER: S123DIP-S340D365U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	404.9	404.7	404.4	404.3	404.0	403.6	402.9	402.3	401.7	401.1	401.7
5°	403.6	403.4	403.2	403.0	402.8	402.5	401.8	401.2	400.7	400.1	400.9
7.5°	399.6	399.7	399.7	399.7	399.8	399.5	399.0	398.4	397.8	397.3	398.2
10°	396.2	396.3	396.5	396.7	396.9	396.8	396.2	395.8	395.3	394.8	395.8
12.5°	391.9	392.2	392.5	392.8	393.0	392.9	392.7	392.3	392.0	391.6	392.6
15°	384.3	384.6	384.8	385.1	385.4	385.6	385.4	385.3	385.2	385.1	386.2
17.5°	374.7	375.2	375.8	376.4	376.9	377.2	377.2	377.1	377.1	377.1	378.0
20°	367.6	368.2	368.7	369.4	369.9	370.3	370.5	370.7	370.9	371.1	372.0
22.5°	360.2	360.8	361.4	361.9	362.6	363.0	363.3	363.5	363.8	364.1	365.2
25°	346.9	347.9	348.9	349.9	350.8	351.5	351.8	352.0	352.3	352.7	353.9
27.5°	333.6	334.7	335.8	337.0	338.1	338.9	339.5	340.2	340.8	341.4	342.5
30°	324.1	325.4	326.7	327.9	329.2	330.2	331.0	331.8	332.5	333.4	334.5
32.5°	313.6	315.0	316.4	317.8	319.2	320.5	321.5	322.5	323.6	324.5	325.8
35°	298.6	300.2	301.8	303.3	304.9	306.3	307.6	308.9	310.1	311.4	312.8
37.5°	282.9	284.6	286.3	288.1	289.8	291.5	293.0	294.6	296.2	297.7	299.4
40°	272.3	274.1	275.8	277.6	279.3	281.2	283.1	285.1	287.0	289.0	290.7
42.5°	260.7	262.9	264.9	267.1	269.3	271.4	273.4	275.4	277.5	279.5	281.3
45°	244.2	246.6	248.8	251.2	253.5	255.9	258.4	260.8	263.3	265.7	267.6
47.5°	226.9	229.5	232.1	234.9	237.5	240.3	243.0	245.8	248.5	251.4	253.4
50°	215.7	218.4	221.1	223.9	226.6	229.4	232.4	235.5	238.6	241.6	243.8
52.5°	203.7	206.6	209.4	212.4	215.3	218.4	221.7	225.1	228.4	231.7	234.0
55°	186.2	189.5	192.7	195.9	199.1	202.5	205.9	209.5	213.0	216.5	219.1
57.5°	169.2	172.5	175.9	179.3	182.6	186.2	190.0	193.9	197.7	201.6	204.2
60°	157.2	160.7	164.3	167.8	171.3	175.0	179.1	183.0	187.0	191.1	193.8
62.5°	146.0	149.6	153.2	156.7	160.3	164.3	168.5	172.8	177.0	181.3	183.9
65°	128.7	132.5	136.3	140.1	143.9	148.0	152.2	156.6	160.8	165.1	168.1
67.5°	111.1	115.2	119.2	123.2	127.2	131.5	135.8	140.3	144.6	149.0	152.1
70°	98.8	103.0	107.2	111.4	115.6	120.1	124.7	129.4	134.1	138.7	141.9
72.5°	87.6	91.8	96.0	100.2	104.3	108.9	113.7	118.6	123.4	128.3	131.5
75°	69.8	74.5	79.0	83.6	88.2	92.9	97.8	102.6	107.5	112.4	115.6
77.5°	54.4	59.0	63.6	68.2	72.9	77.7	82.6	87.5	92.4	97.4	100.8
80°	43.5	48.3	53.1	57.9	62.6	67.6	72.6	77.7	82.8	87.8	91.1
82.5°	34.0	38.8	43.7	48.5	53.4	58.4	63.6	68.7	73.9	79.1	82.4
85°	21.5	26.4	31.3	36.2	41.0	46.1	51.3	56.4	61.5	66.7	70.0
87.5°	11.8	16.8	21.8	26.8	31.8	36.9	42.0	47.2	52.4	57.6	60.9
90°	6.0	11.6	17.1	22.6	28.1	33.8	39.8	45.7	51.7	57.6	61.3
92.5°	11.6	15.6	19.8	23.8	28.0	32.8	38.5	44.1	49.7	55.3	59.1
95°	25.2	25.9	26.7	27.4	28.3	31.4	37.0	42.6	48.2	53.8	57.3
97.5°	45.1	47.2	49.3	51.4	53.4	54.1	53.3	52.6	51.8	51.1	54.6
100°	60.2	64.8	69.5	74.1	78.6	77.4	70.4	63.3	56.3	49.2	52.6
102.5°	77.5	81.3	85.2	89.1	92.9	90.9	82.7	74.5	66.3	58.1	58.9
105°	102.7	105.9	109.1	112.3	115.4	115.7	113.3	110.8	108.3	105.8	95.5
107.5°	129.0	131.7	134.3	137.0	139.6	143.5	148.5	153.4	158.5	163.5	156.6
110°	146.6	148.8	151.2	153.5	155.9	159.5	164.2	168.9	173.6	178.3	178.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	163.5	165.5	167.5	169.5	171.4	174.7	179.3	183.9	188.4	193.0	195.5
115°	188.4	190.0	191.6	193.2	194.8	197.7	201.9	206.1	210.3	214.4	217.5
117.5°	212.7	214.1	215.3	216.5	217.8	220.3	223.9	227.5	231.2	234.8	237.7
120°	227.5	228.8	229.9	231.0	232.1	234.5	237.9	241.4	244.8	248.3	251.1
122.5°	243.0	243.8	244.6	245.4	246.2	248.3	251.7	255.0	258.4	261.6	264.3
125°	263.8	264.4	264.9	265.5	266.2	268.0	271.2	274.3	277.4	280.5	282.7
127.5°	284.3	284.7	285.3	285.8	286.3	287.9	290.6	293.2	296.0	298.7	300.9
130°	297.1	297.6	298.0	298.6	299.1	300.4	302.7	304.9	307.2	309.4	311.6
132.5°	309.0	309.5	310.1	310.7	311.3	312.5	314.2	316.0	317.8	319.6	321.7
135°	327.6	328.0	328.3	328.7	329.0	329.9	331.2	332.6	333.9	335.4	337.3
137.5°	343.6	344.0	344.5	345.0	345.4	346.1	346.9	347.6	348.4	349.1	351.0
140°	353.8	354.3	354.7	355.2	355.6	356.1	356.6	357.1	357.6	358.2	359.9
142.5°	363.7	364.0	364.4	364.8	365.1	365.4	365.7	366.0	366.3	366.6	368.2
145°	377.5	377.9	378.3	378.7	379.2	379.5	379.6	379.8	379.8	380.0	381.0
147.5°	390.0	390.4	390.7	391.1	391.3	391.6	391.8	391.9	392.1	392.2	392.6
150°	398.0	398.2	398.4	398.7	398.9	399.1	399.3	399.4	399.5	399.6	399.8
152.5°	405.2	405.3	405.4	405.5	405.6	405.8	405.8	405.9	406.0	406.0	406.3
155°	415.4	415.2	415.0	414.9	414.7	414.7	414.8	414.8	414.9	415.0	415.4
157.5°	423.2	423.2	423.2	423.1	423.1	423.1	423.0	422.9	422.8	422.8	423.2
160°	428.0	427.9	427.8	427.7	427.7	427.6	427.5	427.4	427.4	427.3	427.7
162.5°	432.5	432.3	432.2	432.0	431.8	431.6	431.5	431.5	431.4	431.3	431.8
165°	438.0	437.7	437.5	437.3	437.1	437.0	436.9	436.8	436.7	436.7	437.2
167.5°	442.2	442.0	441.7	441.4	441.0	440.9	440.9	440.9	440.9	440.9	441.5
170°	444.6	444.3	444.0	443.7	443.5	443.3	443.3	443.3	443.3	443.3	443.9
172.5°	446.2	445.9	445.5	445.2	444.8	444.7	444.7	444.8	444.9	444.9	445.5
175°	448.3	447.9	447.5	447.2	446.9	446.7	446.8	446.9	446.9	447.0	447.5
177.5°	448.8	448.6	448.3	448.0	447.6	447.5	447.6	447.6	447.7	447.8	448.3
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	402.3	402.9	403.6	403.8	403.8	403.7	403.6	403.5
5°	401.6	402.5	403.2	403.6	403.5	403.3	403.2	403.1
7.5°	399.3	400.2	401.1	401.6	401.5	401.3	401.2	401.1
10°	396.8	397.8	398.7	399.1	398.9	398.7	398.5	398.3
12.5°	393.4	394.4	395.2	395.6	395.4	395.2	395.0	394.8
15°	387.1	388.0	389.1	389.5	389.4	389.3	389.2	389.1
17.5°	378.8	379.8	380.6	381.0	380.8	380.7	380.6	380.4
20°	372.9	373.7	374.7	375.1	375.2	375.3	375.4	375.5
22.5°	366.3	367.4	368.5	369.1	369.0	368.9	368.9	368.8
25°	355.2	356.5	357.7	358.4	358.4	358.4	358.4	358.4
27.5°	343.6	344.7	345.8	346.4	346.5	346.6	346.6	346.7
30°	335.6	336.9	338.0	338.6	338.6	338.6	338.6	338.6
32.5°	327.1	328.3	329.5	330.3	330.5	330.7	331.0	331.2
35°	314.3	315.8	317.3	318.2	318.6	319.0	319.3	319.7
37.5°	301.0	302.7	304.4	305.4	305.7	306.0	306.3	306.6
40°	292.3	294.0	295.6	296.6	297.0	297.5	297.8	298.2
42.5°	283.1	284.9	286.7	287.9	288.5	289.0	289.5	290.1
45°	269.4	271.3	273.1	274.5	275.2	276.0	276.8	277.6
47.5°	255.5	257.7	259.8	261.1	261.6	262.3	262.9	263.5
50°	246.0	248.3	250.5	252.0	252.7	253.4	254.0	254.8
52.5°	236.4	238.7	241.0	242.6	243.5	244.3	245.1	245.9
55°	221.8	224.4	227.1	228.8	229.5	230.4	231.1	231.9
57.5°	206.9	209.5	212.2	214.0	214.9	215.8	216.8	217.6
60°	196.5	199.3	202.0	203.9	204.9	206.0	207.1	208.2
62.5°	186.6	189.4	192.1	194.0	195.0	196.0	197.0	198.0
65°	171.0	173.9	176.8	178.8	179.7	180.8	181.7	182.7
67.5°	155.3	158.5	161.7	163.8	164.6	165.4	166.3	167.0
70°	145.1	148.2	151.3	153.4	154.3	155.2	156.3	157.2
72.5°	134.6	137.8	141.0	143.2	144.1	145.1	146.1	147.0
75°	118.9	122.1	125.4	127.5	128.7	129.9	131.0	132.2
77.5°	104.2	107.5	110.9	113.0	114.0	114.9	115.7	116.7
80°	94.4	97.8	101.1	103.2	104.2	105.2	106.2	107.2
82.5°	85.7	89.0	92.4	94.4	95.5	96.4	97.4	98.4
85°	73.4	76.7	80.0	82.2	83.1	84.2	85.1	86.1
87.5°	64.3	67.7	71.1	73.2	74.3	75.3	76.3	77.3
90°	64.8	68.4	72.1	74.5	75.6	76.7	77.9	79.0
92.5°	62.8	66.4	70.2	72.6	73.5	74.6	75.5	76.5
95°	60.9	64.5	68.0	70.2	71.3	72.2	73.1	74.2
97.5°	58.1	61.5	65.0	67.3	68.3	69.4	70.5	71.5
100°	56.1	59.5	62.9	65.1	66.2	67.2	68.2	69.4
102.5°	59.9	60.8	61.6	62.7	63.8	64.9	66.0	67.1
105°	85.1	74.7	64.4	59.8	60.8	61.8	62.8	63.8
107.5°	149.6	142.6	135.6	127.6	118.6	109.5	100.6	91.5
110°	178.5	178.6	178.7	173.8	164.0	154.2	144.4	134.6



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CATALOG NUMBER: S123DIP-S340D365U830-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	198.0	200.5	203.0	203.6	202.2	200.9	199.4	198.0
115°	220.6	223.7	226.8	228.8	230.0	231.0	232.1	233.2
117.5°	240.6	243.6	246.5	248.4	249.2	250.0	250.8	251.7
120°	253.9	256.7	259.6	261.4	262.0	262.8	263.4	264.1
122.5°	266.8	269.5	272.0	273.7	274.4	275.1	275.9	276.6
125°	284.9	287.1	289.3	290.8	291.6	292.5	293.3	294.2
127.5°	303.0	305.2	307.4	308.7	309.2	309.7	310.2	310.8
130°	313.7	315.8	318.0	319.3	319.7	320.2	320.7	321.0
132.5°	323.8	325.8	327.9	329.2	329.7	330.1	330.5	331.0
135°	339.3	341.3	343.3	344.4	344.7	344.9	345.2	345.4
137.5°	353.0	354.9	356.8	357.9	358.2	358.5	358.9	359.2
140°	361.7	363.4	365.1	366.3	366.6	366.9	367.2	367.6
142.5°	369.7	371.3	372.8	373.7	374.0	374.3	374.6	374.8
145°	381.9	382.9	383.7	384.4	384.8	385.2	385.6	386.0
147.5°	392.9	393.3	393.8	394.0	394.0	394.0	394.0	394.0
150°	400.0	400.1	400.3	400.3	400.3	400.3	400.3	400.2
152.5°	406.6	406.9	407.2	407.1	406.8	406.5	406.2	406.0
155°	415.8	416.1	416.5	416.4	416.0	415.6	415.1	414.6
157.5°	423.7	424.1	424.6	424.5	424.0	423.4	422.7	422.2
160°	428.2	428.7	429.1	429.0	428.6	428.0	427.5	427.0
162.5°	432.3	432.8	433.3	433.4	432.9	432.4	432.0	431.5
165°	437.8	438.5	439.0	439.0	438.6	438.0	437.5	437.0
167.5°	442.1	442.7	443.3	443.3	442.7	442.1	441.5	440.9
170°	444.5	445.1	445.6	445.6	445.1	444.5	443.9	443.3
172.5°	446.1	446.7	447.2	447.2	446.6	445.9	445.3	444.6
175°	448.0	448.6	449.0	449.0	448.5	447.8	447.2	446.7
177.5°	448.7	449.2	449.7	449.6	449.0	448.5	447.8	447.2
180°	448.3	448.3	448.3	448.3	448.3	448.3	448.3	448.3

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