

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: P331868-840

Luminaire Tested: **S123DIP-S340D365U840-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331868-840
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-S340D365U840-4F0-1E-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: 2917.7 lumens
Efficiency: N/A
Efficacy: 143.7 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

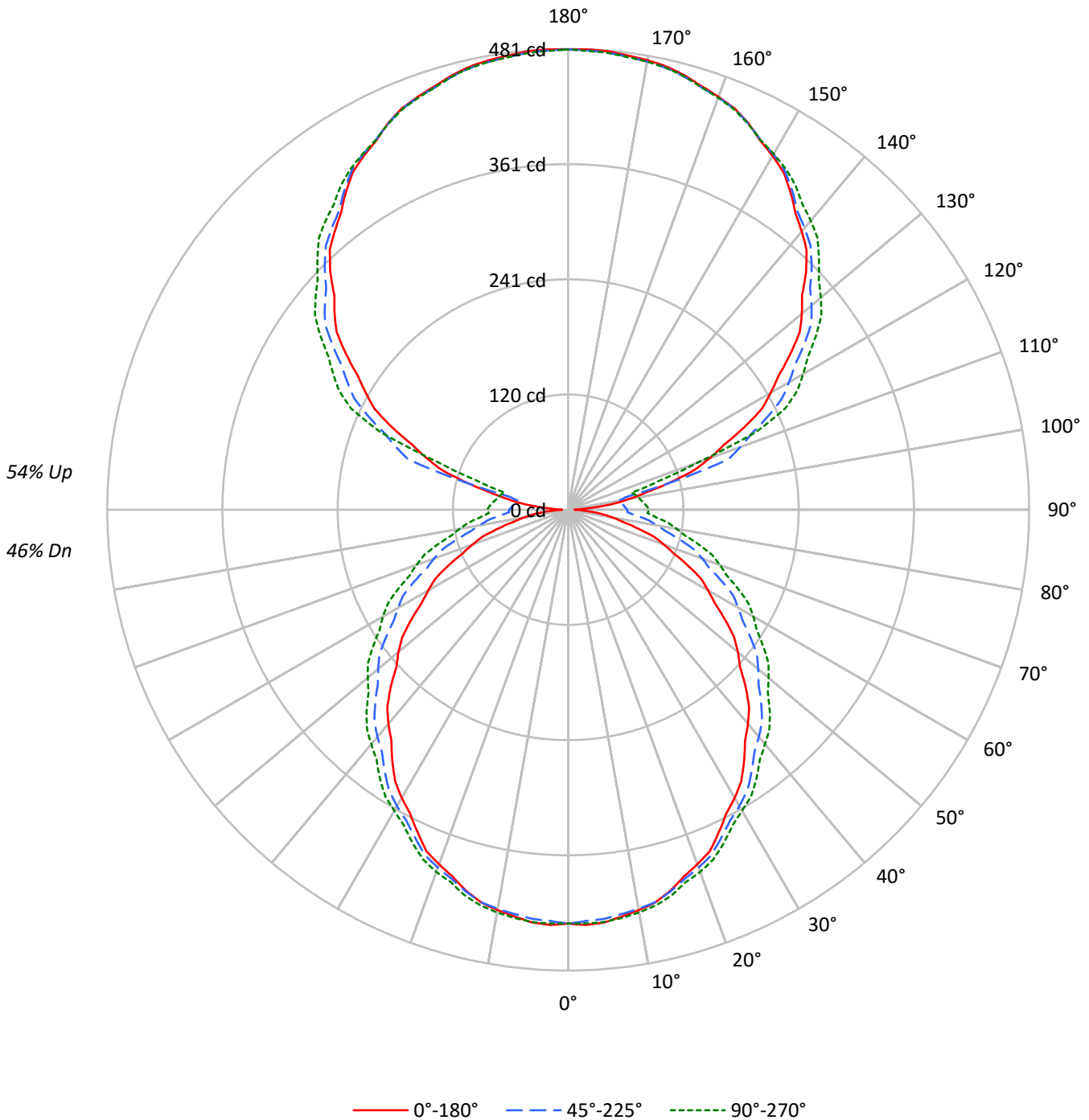
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331868-840

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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	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°	4649	4649	4649
5°	4664	4533	4534
10°	4622	4428	4406
15°	4562	4309	4265
20°	4477	4174	4110
25°	4372	4019	3947
30°	4265	3879	3780
35°	4143	3731	3649
40°	4030	3595	3508
45°	3902	3466	3395
50°	3776	3338	3272
55°	3636	3207	3158
60°	3499	3074	3045
65°	3360	2931	2907
70°	3149	2772	2766
75°	2886	2590	2626
80°	2583	2410	2462
85°	2294	2286	2367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	1.4
10°-20°	116.7	4.0
20°-30°	174.6	6.0
30°-40°	208.5	7.1
40°-50°	218.1	7.5
50°-60°	204.7	7.0
60°-70°	171.0	5.9
70°-80°	122.3	4.2
80°-90°	74.3	2.5
90°-100°	63.2	2.2
100°-110°	116.9	4.0
110°-120°	222.4	7.6
120°-130°	267.4	9.2
130°-140°	277.8	9.5
140°-150°	255.6	8.8
150°-160°	205.2	7.0
160°-170°	132.4	4.5
170°-180°	45.6	1.6
0°-30°	332.3	11.4
0°-40°	540.8	18.5
0°-60°	963.6	33.0
0°-90°	1331.2	45.6
90°-120°	402.5	13.8
90°-150°	1203.2	41.2
90°-180°	1586.0	54.4
0°-180°	2917.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	432	431	429	432	432	41
15°	412	413	413	417	417	116
25°	372	376	378	384	384	171
35°	320	327	334	340	342	200
45°	262	273	285	293	297	202
55°	200	215	232	244	248	179
65°	138	156	177	191	196	136
75°	75	97	120	135	142	80
85°	23	47	72	87	92	24
90°	6	33	62	79	85	5
95°	27	32	58	74	80	31
105°	110	124	113	66	68	117
115°	202	210	230	244	250	199
125°	283	286	300	311	315	252
135°	351	353	359	368	370	270
145°	404	406	407	411	414	253
155°	445	444	445	446	444	205
165°	469	468	468	470	468	133
175°	480	479	479	481	479	46
180°	480	480	480	480	480	



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CATALOG NUMBER: S123DIP-S340D365U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9
2.5°	433.8	433.6	433.3	433.1	432.8	432.4	431.7	431.0	430.4	429.7	430.4
5°	432.4	432.2	432.0	431.8	431.6	431.2	430.5	429.9	429.3	428.7	429.5
7.5°	428.2	428.3	428.3	428.3	428.4	428.1	427.5	426.9	426.3	425.7	426.7
10°	424.4	424.6	424.9	425.1	425.3	425.2	424.5	424.0	423.5	423.0	424.0
12.5°	419.9	420.2	420.5	420.8	421.1	421.0	420.7	420.3	420.0	419.6	420.6
15°	411.7	412.0	412.3	412.6	412.9	413.1	412.9	412.8	412.7	412.6	413.7
17.5°	401.4	402.0	402.6	403.2	403.8	404.1	404.1	404.0	404.0	404.0	405.0
20°	393.8	394.5	395.1	395.8	396.4	396.8	397.0	397.2	397.4	397.6	398.6
22.5°	386.0	386.6	387.2	387.8	388.5	388.9	389.2	389.5	389.8	390.1	391.3
25°	371.7	372.7	373.9	374.9	375.9	376.6	376.9	377.2	377.5	377.9	379.2
27.5°	357.4	358.6	359.8	361.0	362.2	363.1	363.8	364.5	365.2	365.8	367.0
30°	347.3	348.6	350.0	351.3	352.7	353.8	354.7	355.5	356.3	357.2	358.4
32.5°	336.0	337.5	339.0	340.5	342.0	343.4	344.5	345.6	346.7	347.7	349.1
35°	319.9	321.6	323.4	325.0	326.7	328.2	329.5	330.9	332.2	333.7	335.2
37.5°	303.1	304.9	306.8	308.7	310.5	312.4	314.0	315.7	317.4	319.0	320.8
40°	291.8	293.7	295.5	297.4	299.2	301.2	303.4	305.5	307.5	309.6	311.4
42.5°	279.3	281.7	283.9	286.2	288.5	290.7	293.0	295.1	297.3	299.4	301.4
45°	261.7	264.2	266.6	269.1	271.7	274.2	276.8	279.4	282.1	284.7	286.7
47.5°	243.1	245.9	248.7	251.7	254.5	257.4	260.3	263.4	266.3	269.3	271.6
50°	231.1	234.0	236.9	239.8	242.8	245.8	249.0	252.4	255.6	258.8	261.3
52.5°	218.2	221.4	224.4	227.5	230.7	234.0	237.5	241.2	244.7	248.2	250.7
55°	199.5	203.0	206.4	209.8	213.3	216.9	220.7	224.5	228.2	232.0	234.8
57.5°	181.3	184.8	188.4	192.1	195.6	199.5	203.6	207.7	211.9	216.0	218.8
60°	168.4	172.2	176.0	179.8	183.5	187.5	191.9	196.1	200.4	204.7	207.6
62.5°	156.4	160.3	164.1	167.9	171.8	176.0	180.6	185.1	189.7	194.2	197.0
65°	137.8	142.0	146.0	150.1	154.2	158.5	163.1	167.7	172.3	176.9	180.1
67.5°	119.1	123.4	127.7	132.0	136.3	140.9	145.5	150.3	154.9	159.7	163.0
70°	105.8	110.4	114.8	119.4	123.8	128.7	133.6	138.7	143.7	148.7	152.1
72.5°	93.8	98.4	102.8	107.3	111.8	116.6	121.8	127.0	132.2	137.4	140.9
75°	74.8	79.8	84.6	89.6	94.5	99.6	104.8	110.0	115.2	120.5	123.9
77.5°	58.3	63.2	68.2	73.1	78.1	83.2	88.5	93.7	99.0	104.3	108.0
80°	46.6	51.7	56.9	62.0	67.1	72.4	77.8	83.2	88.7	94.1	97.7
82.5°	36.5	41.6	46.9	52.0	57.3	62.6	68.2	73.6	79.2	84.7	88.3
85°	23.0	28.3	33.5	38.8	43.9	49.4	54.9	60.4	65.9	71.5	75.0
87.5°	12.6	18.0	23.3	28.7	34.0	39.5	45.0	50.6	56.1	61.7	65.2
90°	6.5	12.4	18.3	24.2	30.1	36.3	42.6	49.0	55.3	61.7	65.6
92.5°	12.4	16.8	21.2	25.5	30.0	35.1	41.2	47.3	53.2	59.3	63.3
95°	27.0	27.8	28.6	29.4	30.3	33.6	39.7	45.6	51.6	57.7	61.4
97.5°	48.4	50.6	52.8	55.0	57.3	58.0	57.2	56.4	55.5	54.7	58.5
100°	64.5	69.5	74.4	79.4	84.2	82.9	75.4	67.9	60.3	52.7	56.4
102.5°	83.0	87.2	91.3	95.4	99.6	97.4	88.6	79.8	71.0	62.2	63.1
105°	110.1	113.5	116.8	120.3	123.6	124.0	121.4	118.8	116.0	113.4	102.3
107.5°	138.3	141.1	143.9	146.7	149.6	153.7	159.1	164.4	169.9	175.2	167.7
110°	157.0	159.5	162.0	164.5	167.0	170.9	175.9	181.0	186.0	191.1	191.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	175.2	177.3	179.5	181.6	183.7	187.2	192.1	197.0	201.9	206.8	209.4
115°	201.9	203.6	205.3	207.0	208.7	211.9	216.3	220.9	225.3	229.7	233.1
117.5°	227.9	229.3	230.7	232.0	233.4	236.0	239.9	243.8	247.7	251.6	254.7
120°	243.8	245.1	246.3	247.5	248.7	251.3	254.9	258.6	262.3	266.0	269.0
122.5°	260.3	261.3	262.1	263.0	263.8	266.0	269.6	273.2	276.8	280.3	283.2
125°	282.7	283.3	283.9	284.5	285.2	287.1	290.5	293.9	297.2	300.5	302.9
127.5°	304.6	305.1	305.7	306.2	306.7	308.4	311.3	314.2	317.1	320.0	322.3
130°	318.3	318.8	319.3	319.9	320.4	321.8	324.3	326.7	329.1	331.5	333.9
132.5°	331.0	331.6	332.2	332.9	333.6	334.8	336.7	338.6	340.5	342.4	344.7
135°	351.0	351.4	351.7	352.1	352.5	353.5	354.9	356.4	357.8	359.3	361.4
137.5°	368.1	368.6	369.1	369.6	370.1	370.8	371.6	372.4	373.2	374.1	376.1
140°	379.1	379.6	380.0	380.5	381.0	381.5	382.0	382.6	383.1	383.7	385.6
142.5°	389.7	390.0	390.4	390.8	391.2	391.5	391.8	392.1	392.4	392.7	394.5
145°	404.5	404.9	405.4	405.8	406.3	406.6	406.7	406.9	407.0	407.2	408.2
147.5°	417.9	418.3	418.6	419.0	419.3	419.6	419.8	419.9	420.1	420.2	420.6
150°	426.5	426.7	426.9	427.2	427.4	427.6	427.8	427.9	428.1	428.2	428.4
152.5°	434.1	434.2	434.3	434.4	434.5	434.7	434.7	434.8	434.9	435.0	435.4
155°	445.0	444.8	444.6	444.5	444.3	444.3	444.4	444.4	444.5	444.6	445.0
157.5°	453.4	453.4	453.4	453.3	453.3	453.3	453.2	453.1	453.0	453.0	453.4
160°	458.6	458.5	458.4	458.3	458.3	458.2	458.1	458.0	458.0	457.9	458.3
162.5°	463.4	463.2	463.0	462.8	462.6	462.4	462.3	462.3	462.2	462.1	462.6
165°	469.3	469.0	468.8	468.6	468.3	468.2	468.1	468.0	467.9	467.9	468.5
167.5°	473.8	473.5	473.2	472.9	472.5	472.4	472.4	472.4	472.4	472.4	473.0
170°	476.4	476.1	475.7	475.4	475.1	474.9	474.9	474.9	474.9	474.9	475.6
172.5°	478.1	477.8	477.4	477.0	476.6	476.5	476.5	476.6	476.7	476.7	477.4
175°	480.3	479.9	479.5	479.2	478.8	478.6	478.7	478.8	478.8	478.9	479.5
177.5°	480.9	480.6	480.3	480.0	479.6	479.5	479.6	479.6	479.7	479.8	480.3
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9
2.5°	431.0	431.7	432.4	432.6	432.6	432.5	432.4	432.3
5°	430.3	431.2	432.0	432.4	432.3	432.1	432.0	431.9
7.5°	427.8	428.8	429.8	430.3	430.2	430.0	429.9	429.8
10°	425.2	426.2	427.2	427.6	427.4	427.2	427.0	426.8
12.5°	421.5	422.5	423.4	423.8	423.6	423.4	423.2	423.0
15°	414.8	415.8	416.9	417.3	417.2	417.1	417.0	416.9
17.5°	405.9	406.9	407.8	408.2	408.0	407.9	407.8	407.6
20°	399.5	400.4	401.4	401.9	402.0	402.1	402.2	402.3
22.5°	392.4	393.6	394.9	395.5	395.4	395.3	395.3	395.2
25°	380.5	381.9	383.2	384.0	384.0	384.0	384.0	384.0
27.5°	368.1	369.3	370.5	371.1	371.2	371.3	371.3	371.4
30°	359.6	360.9	362.1	362.7	362.7	362.7	362.7	362.7
32.5°	350.4	351.7	353.0	353.9	354.2	354.4	354.7	354.9
35°	336.8	338.3	339.9	340.9	341.3	341.7	342.1	342.5
37.5°	322.6	324.4	326.2	327.2	327.5	327.9	328.2	328.5
40°	313.2	315.0	316.7	317.8	318.2	318.7	319.1	319.5
42.5°	303.4	305.3	307.2	308.5	309.1	309.6	310.2	310.8
45°	288.6	290.6	292.7	294.1	294.9	295.7	296.6	297.4
47.5°	273.8	276.1	278.3	279.7	280.3	281.0	281.7	282.4
50°	263.6	266.0	268.4	270.0	270.7	271.5	272.2	273.0
52.5°	253.3	255.7	258.2	259.9	260.8	261.8	262.6	263.5
55°	237.6	240.4	243.3	245.1	245.9	246.8	247.6	248.4
57.5°	221.7	224.5	227.3	229.2	230.2	231.3	232.3	233.2
60°	210.6	213.5	216.4	218.4	219.5	220.8	221.9	223.1
62.5°	200.0	202.9	205.8	207.8	208.9	210.0	211.1	212.2
65°	183.2	186.3	189.5	191.6	192.6	193.7	194.7	195.7
67.5°	166.4	169.9	173.3	175.5	176.3	177.2	178.1	178.9
70°	155.4	158.8	162.1	164.3	165.3	166.3	167.4	168.4
72.5°	144.2	147.6	151.1	153.4	154.4	155.4	156.5	157.5
75°	127.3	130.8	134.3	136.6	137.8	139.2	140.4	141.7
77.5°	111.6	115.2	118.9	121.1	122.1	123.1	124.0	125.0
80°	101.2	104.8	108.4	110.6	111.7	112.7	113.8	114.8
82.5°	91.8	95.3	99.0	101.2	102.3	103.3	104.3	105.4
85°	78.7	82.2	85.7	88.1	89.1	90.2	91.2	92.2
87.5°	68.9	72.5	76.1	78.5	79.6	80.7	81.7	82.8
90°	69.5	73.3	77.3	79.8	81.0	82.2	83.4	84.6
92.5°	67.3	71.2	75.2	77.8	78.8	79.9	80.9	82.0
95°	65.2	69.1	72.8	75.2	76.3	77.4	78.4	79.5
97.5°	62.2	65.9	69.7	72.1	73.2	74.3	75.5	76.6
100°	60.1	63.7	67.4	69.8	70.9	72.0	73.1	74.3
102.5°	64.1	65.1	66.0	67.2	68.4	69.6	70.7	71.9
105°	91.2	80.1	69.0	64.0	65.1	66.2	67.3	68.4
107.5°	160.3	152.8	145.3	136.7	127.0	117.3	107.8	98.1
110°	191.3	191.4	191.5	186.2	175.7	165.2	154.7	144.2



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CATALOG NUMBER: S123DIP-S340D365U840-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	212.2	214.8	217.5	218.1	216.6	215.2	213.7	212.2
115°	236.4	239.6	243.0	245.2	246.4	247.5	248.6	249.8
117.5°	257.8	260.9	264.1	266.1	267.0	267.8	268.7	269.6
120°	272.1	275.1	278.1	280.0	280.7	281.6	282.3	283.0
122.5°	285.9	288.7	291.4	293.3	294.0	294.8	295.6	296.4
125°	305.3	307.6	309.9	311.5	312.5	313.4	314.3	315.2
127.5°	324.7	327.0	329.3	330.7	331.2	331.8	332.3	333.0
130°	336.1	338.4	340.7	342.1	342.5	343.1	343.6	344.0
132.5°	346.9	349.1	351.3	352.7	353.3	353.7	354.2	354.7
135°	363.6	365.7	367.8	369.0	369.3	369.5	369.8	370.1
137.5°	378.2	380.2	382.2	383.4	383.7	384.2	384.6	384.9
140°	387.5	389.4	391.2	392.4	392.7	393.1	393.4	393.8
142.5°	396.1	397.8	399.4	400.4	400.7	401.0	401.3	401.6
145°	409.2	410.2	411.1	411.8	412.3	412.7	413.1	413.5
147.5°	421.0	421.4	421.9	422.1	422.1	422.1	422.1	422.1
150°	428.6	428.7	428.9	428.9	428.9	428.9	428.9	428.8
152.5°	435.7	436.0	436.3	436.2	435.9	435.6	435.3	434.9
155°	445.5	445.9	446.3	446.2	445.8	445.2	444.7	444.2
157.5°	453.9	454.4	454.9	454.8	454.2	453.6	452.9	452.3
160°	458.8	459.3	459.8	459.7	459.2	458.6	458.1	457.5
162.5°	463.2	463.7	464.2	464.3	463.8	463.3	462.8	462.3
165°	469.1	469.8	470.4	470.4	469.9	469.3	468.8	468.2
167.5°	473.6	474.3	474.9	474.9	474.3	473.6	473.0	472.4
170°	476.3	476.9	477.5	477.5	476.9	476.3	475.6	474.9
172.5°	478.0	478.6	479.2	479.2	478.5	477.8	477.1	476.4
175°	480.0	480.6	481.1	481.1	480.5	479.8	479.2	478.6
177.5°	480.8	481.3	481.8	481.7	481.1	480.5	479.8	479.2
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3

(END OF REPORT)