

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: P331913-930

Luminaire Tested: **S123DIP-S560D365U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331913-930
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-S560D365U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 3110.2 lumens
Efficiency: N/A
Efficacy: 113.1 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

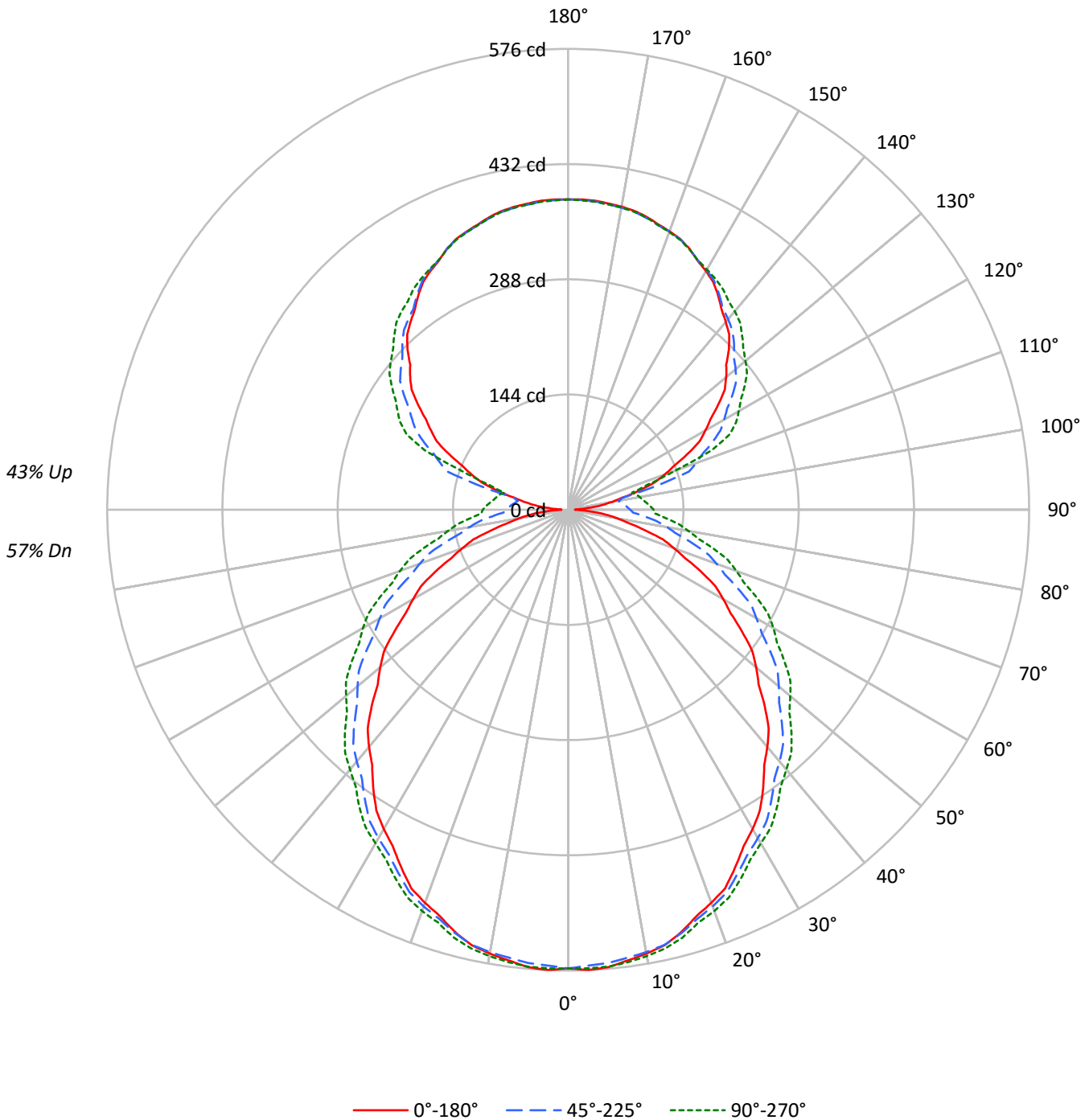
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331913-930

CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	98	93	89	85	91	87	83	79	75	72	69	63	61	59	53	52	50	45
2	89	81	74	68	82	75	69	64	65	60	56	55	52	49	46	44	41	37
3	81	71	63	56	75	66	59	53	57	51	47	48	44	41	41	37	35	31
4	74	62	54	47	68	58	51	45	50	44	40	43	38	35	36	33	30	26
5	68	55	47	40	62	52	44	38	45	39	34	38	34	30	32	29	26	22
6	62	50	41	35	58	46	39	33	40	34	30	35	30	26	29	25	22	20
7	58	45	36	31	53	42	34	29	36	30	26	31	27	23	27	23	20	17
8	53	41	33	27	49	38	31	26	33	27	23	29	24	20	24	21	18	15
9	50	37	29	24	46	35	28	23	30	25	21	26	22	18	23	19	16	14
10	46	34	27	22	43	32	25	21	28	22	18	24	20	16	21	17	14	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6171	6171	6171
5°	6191	6015	6019
10°	6135	5878	5848
15°	6056	5720	5660
20°	5943	5540	5454
25°	5804	5333	5238
30°	5660	5147	5019
35°	5500	4950	4844
40°	5347	4771	4656
45°	5177	4599	4506
50°	5010	4430	4341
55°	4826	4256	4193
60°	4646	4080	4040
65°	4462	3891	3859
70°	4185	3680	3673
75°	3832	3437	3484
80°	3426	3199	3268
85°	3052	3034	3143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.7
10°-20°	154.9	5.0
20°-30°	231.7	7.5
30°-40°	276.7	8.9
40°-50°	289.5	9.3
50°-60°	271.7	8.7
60°-70°	226.9	7.3
70°-80°	162.4	5.2
80°-90°	97.9	3.1
90°-100°	74.8	2.4
100°-110°	111.8	3.6
110°-120°	191.2	6.1
120°-130°	222.6	7.2
130°-140°	227.2	7.3
140°-150°	207.0	6.7
150°-160°	165.7	5.3
160°-170°	106.9	3.4
170°-180°	36.8	1.2
0°-30°	441.0	14.2
0°-40°	717.7	23.1
0°-60°	1279.0	41.1
0°-90°	1766.1	56.8
90°-120°	377.9	12.1
90°-150°	1034.7	33.3
90°-180°	1344.0	43.2
0°-180°	3110.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	574	573	569	574	573	54
15°	546	548	548	554	553	154
25°	493	499	502	509	510	227
35°	425	435	443	452	455	266
45°	347	362	378	389	395	268
55°	265	286	308	324	330	237
65°	183	208	235	253	260	181
75°	99	129	160	180	188	106
85°	31	62	95	115	122	32
90°	8	42	78	99	107	6
95°	24	38	71	91	98	27
105°	91	108	110	79	83	96
115°	164	174	198	216	222	162
125°	229	232	250	264	269	205
135°	284	285	293	305	307	218
145°	327	328	329	334	337	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°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	575.8	575.5	575.2	574.8	574.5	573.9	573.0	572.1	571.2	570.3	571.2
5°	574.0	573.6	573.4	573.2	572.8	572.3	571.4	570.6	569.8	568.9	570.1
7.5°	568.3	568.3	568.4	568.5	568.6	568.2	567.4	566.6	565.7	564.9	566.3
10°	563.4	563.6	563.9	564.2	564.4	564.3	563.5	562.9	562.1	561.5	562.9
12.5°	557.3	557.7	558.2	558.5	558.9	558.9	558.4	557.9	557.4	556.9	558.2
15°	546.5	546.9	547.3	547.7	548.1	548.3	548.1	548.0	547.9	547.7	549.1
17.5°	532.7	533.5	534.4	535.2	536.1	536.5	536.4	536.3	536.3	536.2	537.4
20°	522.8	523.6	524.4	525.2	526.0	526.6	526.9	527.2	527.4	527.7	529.0
22.5°	512.3	513.1	513.9	514.8	515.6	516.2	516.6	517.0	517.4	517.7	519.3
25°	493.4	494.8	496.2	497.6	499.0	499.9	500.3	500.7	501.1	501.5	503.3
27.5°	474.4	476.0	477.6	479.2	480.7	481.9	482.8	483.7	484.6	485.5	487.1
30°	460.9	462.7	464.5	466.4	468.1	469.6	470.7	471.8	472.9	474.0	475.7
32.5°	445.9	447.9	450.0	452.0	454.0	455.8	457.2	458.6	460.1	461.5	463.3
35°	424.7	426.9	429.1	431.4	433.6	435.6	437.4	439.2	441.0	442.8	444.9
37.5°	402.2	404.7	407.2	409.7	412.2	414.6	416.8	419.0	421.2	423.5	425.8
40°	387.2	389.7	392.2	394.7	397.2	399.8	402.6	405.4	408.1	410.9	413.3
42.5°	370.7	373.8	376.8	379.8	382.9	385.9	388.8	391.7	394.6	397.5	400.1
45°	347.2	350.6	353.9	357.3	360.5	363.9	367.5	370.9	374.4	377.8	380.5
47.5°	322.6	326.4	330.2	333.9	337.7	341.6	345.6	349.5	353.5	357.5	360.4
50°	306.6	310.5	314.4	318.3	322.2	326.3	330.6	334.9	339.2	343.5	346.7
52.5°	289.7	293.8	297.9	302.0	306.1	310.5	315.3	320.0	324.7	329.5	332.8
55°	264.8	269.4	273.9	278.5	283.2	287.9	292.9	297.9	302.9	307.9	311.6
57.5°	240.6	245.3	250.1	254.9	259.7	264.8	270.3	275.7	281.2	286.7	290.4
60°	223.6	228.6	233.6	238.6	243.5	248.9	254.6	260.3	266.0	271.7	275.6
62.5°	207.6	212.7	217.8	222.9	228.0	233.6	239.6	245.6	251.7	257.7	261.5
65°	183.0	188.4	193.8	199.3	204.6	210.4	216.5	222.6	228.7	234.8	239.0
67.5°	158.0	163.8	169.5	175.2	181.0	186.9	193.2	199.4	205.6	211.8	216.4
70°	140.6	146.5	152.5	158.4	164.4	170.7	177.3	184.0	190.7	197.4	201.8
72.5°	124.5	130.5	136.5	142.4	148.4	154.8	161.7	168.6	175.5	182.4	186.9
75°	99.3	105.8	112.3	118.9	125.4	132.2	139.1	146.0	153.0	159.9	164.4
77.5°	77.3	83.9	90.5	97.0	103.6	110.4	117.4	124.4	131.4	138.4	143.2
80°	61.8	68.6	75.4	82.3	89.0	96.0	103.2	110.5	117.7	124.9	129.6
82.5°	48.3	55.3	62.1	69.1	76.0	83.1	90.4	97.8	105.1	112.4	117.2
85°	30.6	37.5	44.5	51.4	58.4	65.5	72.9	80.2	87.6	94.9	99.6
87.5°	16.6	23.7	30.7	37.7	44.8	51.9	59.2	66.4	73.7	81.0	85.7
90°	8.4	15.8	23.3	30.7	38.2	45.8	53.7	61.6	69.5	77.5	82.4
92.5°	13.0	18.9	24.9	30.8	36.8	43.5	51.2	58.8	66.4	73.9	79.0
95°	24.5	27.2	30.0	32.8	35.6	40.8	48.3	55.8	63.3	70.8	75.5
97.5°	41.4	45.2	48.8	52.6	56.3	59.0	61.0	62.9	64.7	66.6	71.3
100°	54.3	60.0	65.7	71.5	77.2	78.3	74.7	71.0	67.4	63.8	68.4
102.5°	69.1	73.9	78.8	83.8	88.7	88.9	84.2	79.6	74.9	70.3	72.6
105°	90.8	94.9	98.9	103.0	107.0	109.1	109.3	109.5	109.7	109.9	102.5
107.5°	113.2	116.7	120.1	123.4	126.9	131.8	138.4	145.0	151.6	158.1	153.5
110°	128.2	131.2	134.2	137.2	140.2	144.9	151.2	157.4	163.6	169.9	171.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.9	145.4	148.0	150.5	153.0	157.3	163.3	169.3	175.4	181.4	185.0
115°	164.2	166.2	168.3	170.3	172.4	176.2	181.7	187.4	192.9	198.4	202.4
117.5°	185.2	186.7	188.2	189.7	191.2	194.4	199.4	204.4	209.4	214.3	218.2
120°	197.8	199.1	200.4	201.6	202.9	205.9	210.7	215.5	220.2	225.0	228.7
122.5°	211.2	212.1	212.9	213.7	214.5	217.3	221.8	226.5	231.1	235.6	239.1
125°	228.9	229.4	229.9	230.4	231.0	233.3	237.7	241.9	246.2	250.5	253.5
127.5°	246.6	247.0	247.4	247.8	248.2	250.1	253.8	257.4	261.1	264.7	267.7
130°	257.7	258.0	258.4	258.9	259.2	260.9	263.9	266.9	270.0	273.0	275.9
132.5°	267.8	268.3	268.8	269.3	269.8	271.2	273.6	276.1	278.5	280.9	283.7
135°	283.9	284.1	284.4	284.6	284.9	285.8	287.6	289.4	291.2	293.0	295.7
137.5°	297.6	298.0	298.3	298.7	299.1	299.8	300.8	301.7	302.8	303.8	306.3
140°	306.3	306.7	307.0	307.4	307.9	308.3	308.9	309.6	310.1	310.8	313.1
142.5°	314.9	315.1	315.4	315.7	315.9	316.2	316.5	316.7	317.0	317.3	319.4
145°	326.8	327.1	327.3	327.7	328.0	328.2	328.3	328.5	328.6	328.7	330.0
147.5°	337.4	337.7	337.9	338.3	338.5	338.8	338.9	339.0	339.2	339.2	339.7
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°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	572.1	573.0	573.9	574.3	574.1	574.1	574.0	573.8
5°	571.2	572.3	573.4	573.9	573.7	573.6	573.5	573.3
7.5°	567.7	569.1	570.5	571.1	571.0	570.8	570.6	570.5
10°	564.3	565.7	567.0	567.5	567.3	567.0	566.7	566.5
12.5°	559.5	560.8	562.1	562.6	562.3	562.0	561.7	561.5
15°	550.5	551.9	553.3	553.9	553.8	553.6	553.5	553.3
17.5°	538.7	540.0	541.2	541.8	541.5	541.4	541.2	541.0
20°	530.3	531.5	532.7	533.5	533.5	533.7	533.9	533.9
22.5°	520.9	522.5	524.1	524.8	524.7	524.6	524.6	524.5
25°	505.1	507.0	508.7	509.6	509.6	509.6	509.6	509.6
27.5°	488.6	490.2	491.7	492.6	492.7	492.8	492.9	493.0
30°	477.4	479.0	480.7	481.5	481.5	481.5	481.5	481.5
32.5°	465.0	466.8	468.6	469.7	470.0	470.3	470.7	471.0
35°	446.9	449.1	451.1	452.4	453.0	453.6	454.1	454.7
37.5°	428.1	430.5	432.8	434.3	434.7	435.1	435.6	436.0
40°	415.6	418.0	420.4	421.8	422.4	423.0	423.5	424.0
42.5°	402.6	405.2	407.8	409.4	410.3	411.0	411.8	412.5
45°	383.1	385.7	388.4	390.3	391.3	392.5	393.6	394.7
47.5°	363.5	366.4	369.3	371.3	372.1	373.0	373.9	374.7
50°	349.8	353.1	356.3	358.3	359.3	360.3	361.3	362.2
52.5°	336.1	339.4	342.8	345.0	346.2	347.3	348.5	349.8
55°	315.4	319.1	322.9	325.3	326.4	327.5	328.6	329.8
57.5°	294.2	298.0	301.7	304.3	305.6	306.9	308.2	309.5
60°	279.5	283.3	287.2	289.9	291.5	292.9	294.5	296.0
62.5°	265.5	269.4	273.2	275.9	277.3	278.7	280.1	281.5
65°	243.1	247.3	251.5	254.3	255.7	257.1	258.4	259.8
67.5°	220.9	225.5	230.1	232.9	234.1	235.2	236.4	237.6
70°	206.3	210.7	215.2	218.0	219.4	220.8	222.2	223.6
72.5°	191.4	196.0	200.6	203.6	205.0	206.4	207.7	209.1
75°	169.0	173.7	178.2	181.3	183.0	184.7	186.3	188.0
77.5°	148.1	152.9	157.7	160.8	162.1	163.3	164.6	165.9
80°	134.4	139.1	143.8	146.8	148.2	149.6	151.0	152.4
82.5°	121.9	126.5	131.3	134.4	135.7	137.1	138.5	139.9
85°	104.4	109.1	113.8	116.8	118.2	119.6	121.0	122.4
87.5°	90.5	95.2	100.0	103.1	104.5	105.9	107.4	108.8
90°	87.4	92.4	97.3	100.6	102.2	103.6	105.2	106.7
92.5°	84.0	89.0	94.0	97.2	98.6	99.9	101.3	102.6
95°	80.2	85.0	89.8	92.9	94.2	95.6	97.0	98.4
97.5°	75.9	80.6	85.2	88.2	89.7	91.2	92.6	94.1
100°	72.9	77.5	82.0	85.0	86.4	87.9	89.4	90.8
102.5°	74.9	77.3	79.6	81.5	83.0	84.5	86.0	87.6
105°	95.1	87.6	80.1	77.1	78.5	79.9	81.3	82.6
107.5°	149.0	144.3	139.7	133.8	126.5	119.2	111.9	104.5
110°	172.9	174.4	175.9	172.6	164.5	156.5	148.5	140.4



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CATALOG NUMBER: S123DIP-S560D365U930-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	188.5	192.0	195.6	197.0	196.2	195.6	194.9	194.1
115°	206.4	210.3	214.3	217.0	218.4	219.7	221.1	222.5
117.5°	222.0	225.8	229.7	232.1	233.3	234.4	235.5	236.7
120°	232.4	236.1	239.9	242.1	243.1	244.1	245.1	246.1
122.5°	242.6	246.0	249.4	251.7	252.7	253.7	254.7	255.8
125°	256.6	259.6	262.6	264.7	265.8	266.9	268.0	269.1
127.5°	270.6	273.5	276.5	278.4	279.2	280.1	280.9	281.7
130°	278.8	281.7	284.6	286.4	287.1	287.8	288.5	289.2
132.5°	286.5	289.3	292.0	293.8	294.6	295.3	296.1	296.9
135°	298.4	301.1	303.8	305.3	305.9	306.4	306.9	307.4
137.5°	308.8	311.3	313.8	315.3	315.8	316.4	317.0	317.6
140°	315.4	317.8	320.1	321.6	322.1	322.7	323.3	323.8
142.5°	321.4	323.5	325.5	326.9	327.3	327.9	328.4	328.9
145°	331.2	332.5	333.7	334.6	335.2	335.7	336.2	336.8
147.5°	340.2	340.6	341.1	341.4	341.7	341.9	342.1	342.3
150°	346.0	346.1	346.3	346.3	346.4	346.5	346.6	346.7
152.5°	351.7	352.0	352.2	352.2	352.0	351.7	351.5	351.2
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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