

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: P331927-927

Luminaire Tested: **S123DIP-S560D585U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331927-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D585U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3517.4 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

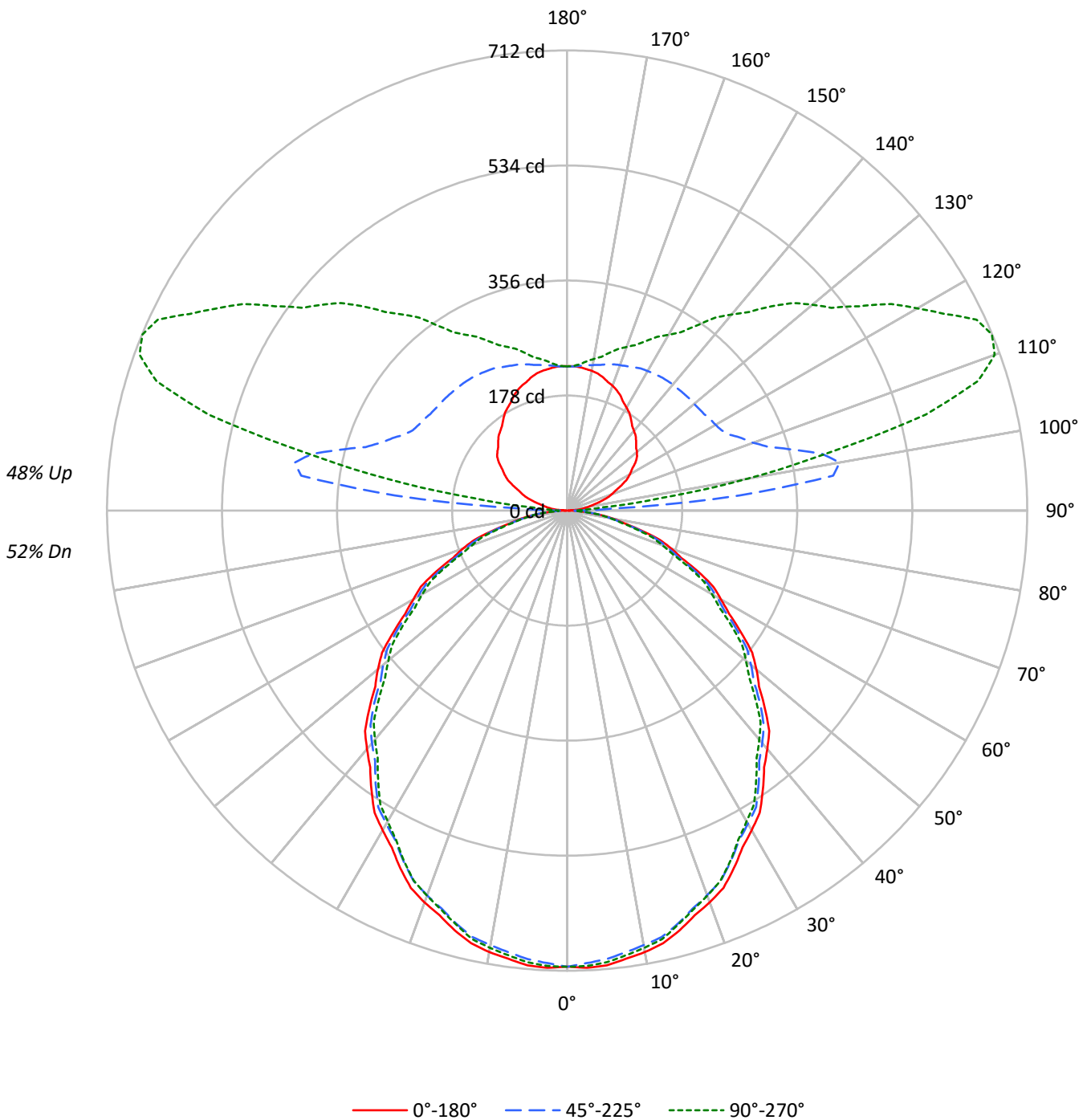
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	98	94	90	86	91	87	84	81	74	72	69	62	60	59	51	50	49	44
2	89	82	76	70	82	76	71	66	65	61	57	55	52	49	45	43	41	37
3	82	72	65	59	75	67	60	55	57	52	48	48	45	42	40	37	35	31
4	75	64	56	50	69	59	52	47	51	45	41	43	39	36	36	33	30	27
5	68	57	49	43	63	53	46	40	45	40	35	39	34	31	32	29	26	23
6	63	51	43	37	58	47	40	35	41	35	31	35	30	27	29	26	23	20
7	58	46	38	32	54	43	36	31	37	31	27	32	27	24	27	23	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	21	24	21	18	16
9	50	38	31	25	47	36	29	24	31	26	22	27	22	19	23	19	17	14
10	47	35	28	23	44	33	26	22	29	23	20	25	20	17	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7597	7597	7597
5°	7632	7527	7580
10°	7581	7462	7508
15°	7492	7377	7392
20°	7389	7257	7263
25°	7251	7114	7099
30°	7097	6954	6901
35°	6937	6786	6699
40°	6770	6600	6497
45°	6587	6428	6272
50°	6402	6219	6047
55°	6161	6001	5819
60°	5918	5748	5565
65°	5703	5471	5300
70°	5385	5155	4925
75°	4924	4745	4541
80°	4438	4252	4215
85°	3890	3742	3606



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.9
10°-20°	187.7	5.3
20°-30°	277.3	7.9
30°-40°	323.9	9.2
40°-50°	325.6	9.3
50°-60°	286.0	8.1
60°-70°	213.1	6.1
70°-80°	121.4	3.5
80°-90°	36.6	1.0
90°-100°	124.2	3.5
100°-110°	351.7	10.0
110°-120°	346.0	9.8
120°-130°	276.0	7.8
130°-140°	217.6	6.2
140°-150°	162.4	4.6
150°-160°	113.2	3.2
160°-170°	66.5	1.9
170°-180°	21.6	0.6
0°-30°	531.5	15.1
0°-40°	855.4	24.3
0°-60°	1467.0	41.7
0°-90°	1838.1	52.3
90°-120°	822.0	23.4
90°-150°	1478.0	42.0
90°-180°	1679.0	47.7
0°-180°	3517.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	706	706	706	706	706	
5°	706	703	697	702	702	67
15°	672	670	662	666	663	189
25°	610	607	599	599	598	281
35°	528	524	516	513	510	330
45°	433	430	422	415	412	334
55°	328	327	320	313	310	294
65°	224	221	215	210	208	221
75°	118	116	114	111	109	127
85°	32	30	30	29	29	35
90°	1	5	11	13	13	3
95°	15	50	268	78	52	17
105°	52	78	363	635	575	56
115°	93	115	278	609	699	92
125°	129	152	259	470	551	114
135°	151	180	256	387	447	117
145°	172	197	252	317	349	108
155°	196	211	244	278	290	90
165°	214	220	234	248	252	60
175°	223	223	225	228	227	21
180°	223	223	223	223	223	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	705.8	705.8	705.8	705.8	705.8	705.8	705.8	705.8	705.8	705.8	705.8
2.5°	708.1	707.7	707.3	706.9	706.5	705.6	704.4	703.2	702.1	700.9	702.0
5°	706.3	705.7	705.0	704.3	703.6	702.6	701.1	699.6	698.2	696.6	698.0
7.5°	699.4	698.8	698.1	697.4	696.7	695.6	694.1	692.5	691.0	689.5	690.7
10°	693.6	692.9	692.3	691.6	690.9	689.7	687.9	686.2	684.4	682.7	683.9
12.5°	685.9	685.2	684.7	684.1	683.6	682.5	680.8	679.1	677.6	675.9	676.8
15°	672.3	671.8	671.3	670.7	670.2	669.1	667.3	665.6	663.8	662.0	663.1
17.5°	656.7	656.0	655.3	654.6	653.9	652.7	650.9	649.2	647.5	645.6	646.4
20°	645.1	644.3	643.4	642.6	641.8	640.6	638.8	637.1	635.3	633.5	634.1
22.5°	631.9	631.1	630.3	629.5	628.7	627.4	625.7	623.9	622.2	620.4	620.8
25°	610.5	609.7	608.9	608.1	607.2	605.9	604.2	602.5	600.7	599.0	599.0
27.5°	587.6	586.8	586.0	585.2	584.4	583.0	581.1	579.3	577.4	575.5	575.6
30°	571.0	570.4	569.7	569.0	568.3	567.0	565.1	563.2	561.4	559.5	559.5
32.5°	554.5	553.7	552.7	551.8	551.0	549.8	548.3	546.8	545.4	544.0	543.2
35°	527.9	527.1	526.3	525.5	524.7	523.4	521.7	519.9	518.2	516.4	515.6
37.5°	500.7	499.7	498.7	497.6	496.6	495.3	493.5	491.7	489.9	488.1	487.2
40°	481.8	481.0	480.2	479.4	478.6	477.2	475.3	473.5	471.6	469.7	468.6
42.5°	462.9	462.0	461.1	460.1	459.2	457.8	455.9	454.1	452.2	450.3	449.2
45°	432.7	432.1	431.6	431.0	430.5	429.4	427.6	425.9	424.1	422.3	420.7
47.5°	402.7	401.9	401.2	400.4	399.6	398.3	396.7	395.1	393.4	391.7	390.1
50°	382.3	381.6	381.0	380.2	379.6	378.4	376.6	374.9	373.1	371.4	369.9
52.5°	360.9	360.4	360.0	359.6	359.1	357.9	356.1	354.3	352.4	350.5	349.3
55°	328.3	328.1	328.0	327.9	327.7	326.8	325.0	323.3	321.5	319.8	318.3
57.5°	297.2	296.8	296.3	295.9	295.4	294.5	293.0	291.7	290.3	288.8	287.6
60°	274.9	274.7	274.6	274.5	274.3	273.5	271.9	270.2	268.6	267.0	265.8
62.5°	255.0	254.6	254.3	254.0	253.6	252.6	251.0	249.4	247.7	246.1	244.9
65°	223.9	223.2	222.6	221.9	221.3	220.2	218.9	217.5	216.2	214.8	213.7
67.5°	191.0	190.4	189.8	189.3	188.6	187.8	186.8	185.8	184.7	183.8	182.8
70°	171.1	170.3	169.5	168.7	167.9	167.1	166.3	165.5	164.6	163.8	162.9
72.5°	150.3	149.6	149.1	148.5	147.9	147.1	146.2	145.3	144.3	143.5	142.6
75°	118.4	117.8	117.2	116.7	116.2	115.7	115.3	114.9	114.5	114.1	113.4
77.5°	90.1	89.8	89.4	89.2	88.9	88.5	88.0	87.5	87.0	86.5	86.1
80°	71.6	71.2	70.8	70.4	69.9	69.6	69.4	69.1	68.8	68.6	68.4
82.5°	53.6	53.6	53.5	53.4	53.3	53.2	53.2	53.2	53.1	53.1	52.8
85°	31.5	31.3	31.1	30.7	30.5	30.3	30.3	30.3	30.3	30.3	30.1
87.5°	12.8	12.7	12.5	12.4	12.4	12.3	12.4	12.6	12.8	12.9	12.8
90°	0.9	1.8	2.7	4.0	5.0	5.9	7.2	8.6	9.9	11.3	10.9
92.5°	5.6	8.3	12.1	15.6	19.4	26.1	37.9	57.4	76.4	69.5	52.4
95°	15.4	16.7	21.7	29.4	41.1	58.7	97.1	164.5	238.6	267.9	217.3
97.5°	26.2	26.7	30.6	37.2	48.8	67.9	104.6	180.5	304.0	415.3	444.3
100°	33.4	33.9	37.1	43.4	54.2	71.9	103.5	170.3	289.1	427.9	516.9
102.5°	41.0	41.8	44.7	50.6	60.4	76.5	104.9	161.7	267.5	404.4	520.5
105°	52.4	53.8	56.5	61.9	70.5	84.5	108.9	155.4	240.8	363.3	493.0
107.5°	64.5	65.9	68.5	73.8	81.9	94.9	116.3	155.0	223.9	326.9	444.7
110°	73.2	74.5	76.8	81.8	89.4	102.1	122.5	156.8	217.3	306.3	414.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	81.1	82.5	84.8	89.8	97.4	109.7	128.6	160.4	213.7	292.6	387.9
115°	92.6	94.4	97.1	101.6	109.3	121.5	138.7	166.3	212.4	277.9	356.1
117.5°	104.1	106.2	108.4	112.6	121.2	132.5	149.5	174.0	213.2	269.2	336.8
120°	112.1	113.4	115.7	120.2	128.8	140.1	156.3	179.8	214.6	265.2	326.7
122.5°	118.9	120.3	122.6	127.4	135.6	147.7	163.6	185.3	217.1	262.7	318.4
125°	128.8	129.7	132.4	137.4	145.9	158.1	174.0	193.8	220.9	259.4	307.7
127.5°	136.3	137.6	141.0	146.0	155.5	167.7	183.0	200.9	225.3	257.7	298.3
130°	141.0	142.4	146.4	151.8	161.3	173.5	188.4	205.6	228.1	256.7	293.3
132.5°	144.6	146.3	150.8	157.2	166.8	178.6	193.1	209.9	230.4	256.3	288.5
135°	150.9	152.7	157.7	164.5	174.0	186.2	200.2	215.6	233.6	255.7	282.4
137.5°	156.9	158.8	163.7	170.9	180.3	191.5	205.0	219.7	235.8	254.8	277.1
140°	160.9	163.1	167.6	174.8	183.9	195.2	208.3	221.9	237.2	254.4	273.8
142.5°	165.2	167.1	172.0	178.5	187.5	198.1	210.8	224.0	238.3	253.7	270.9
145°	172.1	173.5	177.6	184.3	192.0	202.4	214.2	226.4	239.0	252.5	267.0
147.5°	179.2	180.0	184.0	189.9	197.3	206.1	216.9	227.8	239.0	250.9	263.2
150°	183.9	184.3	188.0	193.8	200.2	208.3	218.7	228.1	239.0	249.4	260.7
152.5°	188.6	188.7	192.3	197.5	203.0	210.8	219.8	228.9	238.0	247.6	257.9
155°	195.7	195.7	198.4	202.9	207.9	214.2	221.9	229.1	236.8	244.5	253.5
157.5°	201.2	201.6	203.7	207.8	212.0	216.9	223.0	229.6	235.2	241.6	248.6
160°	205.6	205.6	207.4	211.0	214.2	218.7	224.1	229.6	234.5	239.5	245.3
162.5°	208.8	208.8	210.3	213.2	215.9	219.8	224.5	229.2	233.1	237.3	242.1
165°	213.7	213.3	214.2	216.4	218.2	221.4	225.0	228.1	230.9	234.1	237.7
167.5°	217.5	216.9	217.3	219.0	220.3	222.3	224.9	227.4	228.7	230.8	233.5
170°	219.6	218.7	219.1	220.5	221.4	222.3	224.6	226.4	227.3	228.6	230.9
172.5°	221.0	220.5	220.6	221.6	222.1	222.7	224.6	226.0	226.2	226.8	228.4
175°	222.8	222.3	221.9	222.8	222.8	223.2	224.1	225.0	224.6	224.6	225.5
177.5°	223.6	223.2	222.8	223.2	223.2	223.2	223.6	224.3	223.6	223.2	223.6
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	705.8	705.8	705.8	705.8	705.8	705.8	705.8	705.8
2.5°	703.1	704.1	705.2	705.7	705.6	705.4	705.4	705.3
5°	699.3	700.7	702.0	702.6	702.3	702.0	701.8	701.5
7.5°	691.9	693.1	694.3	694.8	694.7	694.5	694.3	694.2
10°	685.1	686.3	687.5	688.0	687.8	687.5	687.2	686.9
12.5°	677.6	678.6	679.5	679.8	679.6	679.5	679.3	679.1
15°	664.2	665.3	666.4	666.5	665.7	664.9	664.1	663.3
17.5°	647.2	647.9	648.7	648.9	648.6	648.3	648.0	647.7
20°	634.6	635.2	635.6	635.7	635.3	634.9	634.5	634.1
22.5°	621.3	621.7	622.2	622.1	621.6	621.1	620.6	620.0
25°	599.2	599.4	599.4	599.4	599.0	598.6	598.1	597.7
27.5°	575.8	575.8	575.9	575.8	575.2	574.7	574.2	573.7
30°	559.5	559.5	559.5	559.0	558.1	557.1	556.2	555.2
32.5°	542.5	541.7	540.9	540.3	539.8	539.3	538.8	538.3
35°	514.8	514.0	513.2	512.5	511.7	511.1	510.4	509.8
37.5°	486.2	485.2	484.3	483.5	483.2	482.7	482.3	481.8
40°	467.5	466.4	465.4	464.5	464.0	463.5	463.0	462.4
42.5°	448.1	447.0	445.9	445.1	444.6	444.1	443.5	443.0
45°	419.1	417.5	415.9	414.7	414.1	413.4	412.7	412.0
47.5°	388.6	387.0	385.4	384.3	383.7	383.1	382.5	381.9
50°	368.4	366.9	365.4	364.3	363.5	362.7	361.9	361.1
52.5°	348.0	346.7	345.5	344.4	343.6	342.8	342.0	341.2
55°	316.8	315.4	313.9	312.8	312.1	311.4	310.8	310.1
57.5°	286.2	284.9	283.6	282.5	281.7	281.0	280.2	279.4
60°	264.6	263.4	262.1	261.2	260.5	259.8	259.2	258.5
62.5°	243.7	242.5	241.3	240.4	240.0	239.6	239.1	238.6
65°	212.6	211.6	210.5	209.8	209.4	209.0	208.6	208.1
67.5°	181.9	180.9	180.0	179.2	178.6	178.1	177.5	177.0
70°	161.9	161.1	160.1	159.2	158.6	157.9	157.2	156.5
72.5°	141.8	140.9	140.1	139.5	139.2	138.8	138.5	138.1
75°	112.7	112.1	111.4	110.8	110.4	110.0	109.6	109.2
77.5°	85.6	85.2	84.7	84.4	84.4	84.4	84.4	84.4
80°	68.3	68.1	68.0	68.0	68.0	68.0	68.0	68.0
82.5°	52.5	52.3	52.0	51.9	51.8	51.7	51.6	51.5
85°	29.8	29.5	29.2	29.2	29.2	29.2	29.2	29.2
87.5°	12.8	12.7	12.7	12.8	12.8	12.8	12.9	12.8
90°	11.3	11.7	12.2	13.1	12.7	13.1	13.5	13.1
92.5°	38.0	30.2	26.7	24.3	23.5	22.1	22.6	21.8
95°	162.6	110.3	86.3	70.0	61.5	57.4	54.2	52.4
97.5°	405.5	324.8	266.5	212.5	179.1	158.8	146.6	142.7
100°	532.7	496.1	443.2	379.1	333.4	300.5	282.9	283.3
102.5°	575.0	573.9	543.0	502.3	466.8	440.7	426.0	415.6
105°	587.4	632.6	641.2	629.4	608.6	591.4	577.0	574.7
107.5°	551.8	625.2	664.7	680.8	681.2	675.4	670.5	666.4
110°	517.8	600.9	657.9	689.5	702.2	705.8	704.9	703.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	484.2	569.1	633.0	673.6	696.7	708.0	711.4	711.5
115°	439.7	518.2	584.7	633.9	667.8	687.7	696.7	699.0
117.5°	407.3	475.2	534.9	584.9	620.2	642.9	656.0	659.0
120°	390.4	451.4	505.6	551.3	586.9	612.3	623.1	625.8
122.5°	377.0	432.2	482.4	524.8	556.6	579.3	591.3	594.7
125°	359.2	408.4	451.9	488.0	516.9	536.8	548.1	551.3
127.5°	343.6	387.6	426.7	459.6	485.4	502.3	512.5	515.5
130°	333.9	374.5	411.1	441.9	465.9	482.1	491.6	495.2
132.5°	324.9	362.3	396.3	425.6	448.1	464.4	472.8	475.3
135°	312.7	344.8	374.1	399.9	422.0	435.5	443.7	446.9
137.5°	301.6	327.9	353.2	375.5	394.1	407.8	414.7	416.8
140°	295.1	318.1	339.8	359.2	376.4	389.0	396.2	395.8
142.5°	288.9	308.7	327.5	344.4	359.0	370.3	376.8	376.3
145°	281.5	296.4	310.9	324.0	335.3	344.8	348.4	349.3
147.5°	275.4	287.2	299.0	308.2	316.8	323.2	326.7	327.0
150°	271.1	281.5	291.0	299.6	306.3	311.3	314.0	314.0
152.5°	267.1	276.1	284.5	291.6	296.9	301.6	303.2	303.2
155°	261.2	268.4	275.2	280.6	284.6	288.3	289.1	289.6
157.5°	254.8	260.9	266.2	270.4	273.9	276.6	277.3	277.3
160°	251.2	256.2	260.7	263.9	267.0	269.7	269.7	269.3
162.5°	246.9	251.1	255.3	258.1	260.2	262.5	262.5	262.1
165°	241.3	244.0	247.2	249.4	251.2	253.0	252.5	252.5
167.5°	236.4	238.4	240.3	241.9	242.7	244.0	243.5	243.5
170°	233.1	234.5	236.3	237.2	237.7	238.6	238.1	238.1
172.5°	230.3	231.2	232.7	233.2	233.3	234.2	233.5	233.1
175°	226.4	226.8	227.8	227.8	227.8	228.1	227.8	227.3
177.5°	223.9	224.3	224.7	224.7	224.3	224.7	223.9	223.9
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2

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