

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: P333172-940

Luminaire Tested: **S125DIP-S610D590U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333172-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S125DIP-S610D590U940-4F0-1E-UDD-D  
Description: DEFINE 5 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 610 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4249.4 lumens  
Efficiency: N/A  
Efficacy: 129.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

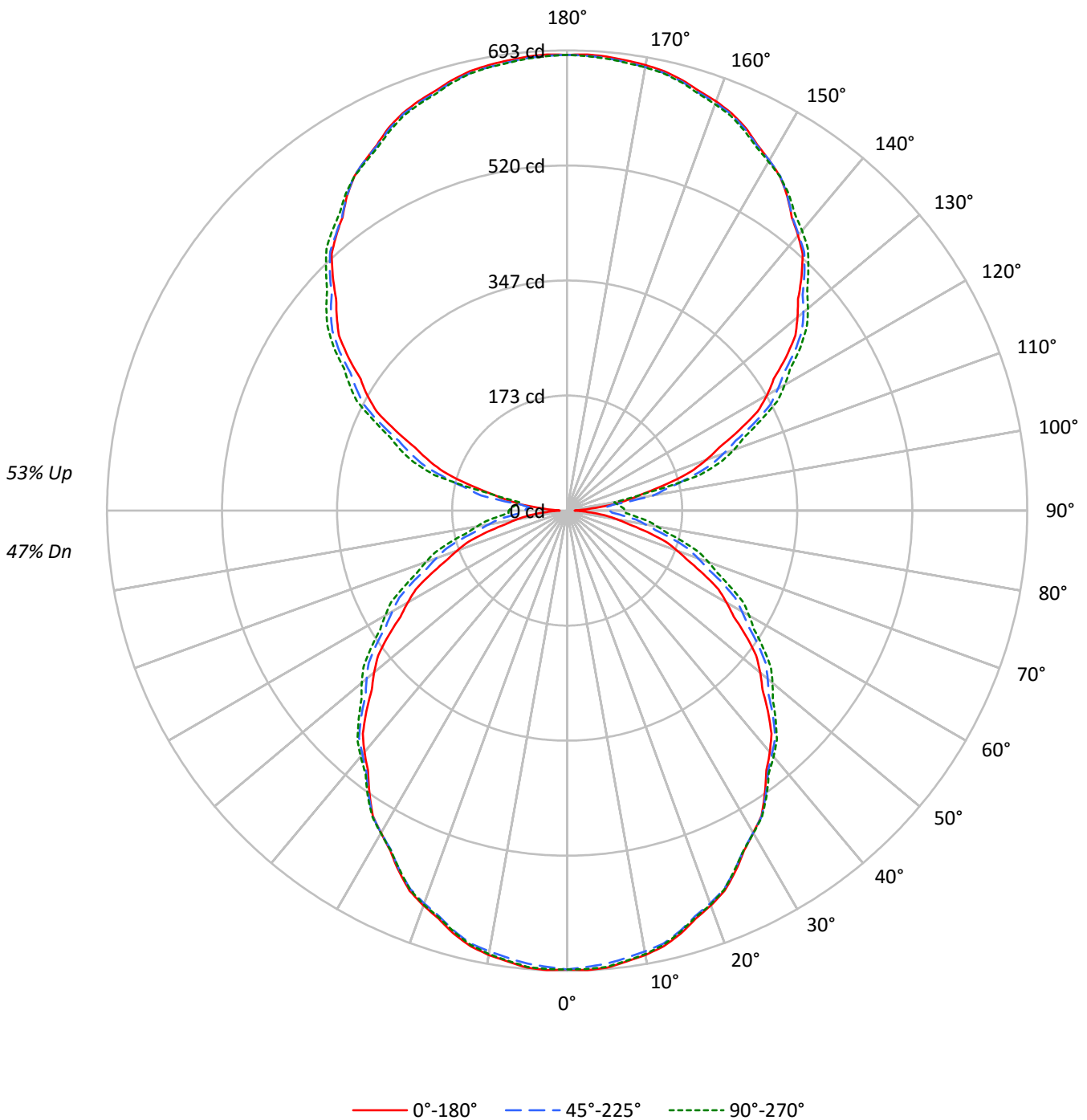
Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82		67	67	67		54	54	54	47
1	96	92	88	84	88	84	81	78	71	68	66		58	56	54		46	45	44	38
2	88	80	73	68	80	73	68	63	62	57	54		51	48	45		40	38	36	32
3	80	70	62	56	73	64	58	52	54	49	45		44	41	38		36	33	31	26
4	73	62	54	47	67	57	50	44	48	42	38		39	35	32		32	29	26	23
5	67	55	47	40	61	51	43	38	43	37	33		35	31	28		28	25	23	19
6	61	49	41	35	56	45	38	33	38	33	28		32	27	24		26	22	20	17
7	57	44	36	31	52	41	34	29	35	29	25		29	25	21		23	20	18	15
8	53	40	32	27	48	37	30	25	32	26	22		26	22	19		22	18	16	13
9	49	37	29	24	45	34	27	23	29	24	20		24	20	17		20	17	14	12
10	46	34	26	21	42	31	25	20	27	21	18		22	18	15		18	15	13	11

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4463	4463	4463
5°	4472	4380	4394
10°	4440	4302	4295
15°	4388	4209	4171
20°	4316	4093	4045
25°	4232	3969	3891
30°	4129	3833	3751
35°	4033	3708	3622
40°	3935	3576	3493
45°	3825	3463	3378
50°	3720	3340	3276
55°	3593	3225	3156
60°	3455	3093	3035
65°	3310	2956	2898
70°	3145	2767	2758
75°	2887	2586	2585
80°	2548	2365	2396
85°	2232	2219	2336



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.3	1.5
10°-20°	185.5	4.4
20°-30°	275.9	6.5
30°-40°	326.8	7.7
40°-50°	337.9	8.0
50°-60°	311.2	7.3
60°-70°	251.6	5.9
70°-80°	168.5	4.0
80°-90°	88.8	2.1
90°-100°	74.0	1.7
100°-110°	189.9	4.5
110°-120°	303.0	7.1
120°-130°	371.5	8.7
130°-140°	390.8	9.2
140°-150°	362.4	8.5
150°-160°	292.2	6.9
160°-170°	189.0	4.4
170°-180°	65.2	1.5
0°-30°	526.7	12.4
0°-40°	853.5	20.1
0°-60°	1502.6	35.4
0°-90°	2011.5	47.3
90°-120°	566.8	13.3
90°-150°	1691.6	39.8
90°-180°	2238.0	52.7
0°-180°	4249.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	691	691	691	691	691	
5°	691	690	685	690	690	66
15°	660	660	656	660	657	186
25°	600	601	598	600	597	276
35°	519	523	522	524	524	325
45°	428	435	438	443	444	330
55°	329	339	350	357	360	294
65°	226	242	258	268	271	224
75°	125	143	164	177	181	132
85°	37	60	83	98	104	40
90°	11	37	64	81	88	8
95°	38	53	58	74	80	44
105°	156	169	189	202	207	165
115°	285	293	310	320	322	282
125°	402	406	418	427	429	359
135°	499	502	506	513	514	385
145°	578	578	578	582	582	361
155°	636	633	634	635	631	293
165°	671	668	668	671	667	189
175°	686	683	684	687	683	65
180°	686	686	686	686	686	



TEST NUMBER: P333172-940

CATALOG NUMBER: S125DIP-S610D590U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1
2.5°	692.7	692.4	692.2	692.0	691.7	691.2	690.4	689.5	688.7	687.8	688.7
5°	691.1	690.7	690.5	690.2	689.8	689.2	688.1	687.1	686.0	684.9	686.2
7.5°	684.9	684.8	684.7	684.6	684.5	683.9	682.8	681.7	680.6	679.6	680.6
10°	679.6	679.6	679.6	679.6	679.6	678.9	677.7	676.5	675.3	674.1	675.2
12.5°	672.0	672.1	672.2	672.3	672.4	672.0	671.0	670.1	669.1	668.2	669.0
15°	659.9	660.0	660.2	660.3	660.5	660.0	659.0	657.9	656.9	655.9	656.7
17.5°	644.2	644.4	644.8	645.1	645.4	645.0	644.0	642.9	641.9	640.8	641.5
20°	632.8	633.1	633.4	633.7	634.0	633.6	632.6	631.5	630.4	629.4	629.8
22.5°	619.8	620.4	620.9	621.4	622.0	621.6	620.5	619.3	618.1	617.0	617.5
25°	599.6	600.0	600.5	600.9	601.4	601.2	600.3	599.4	598.4	597.5	598.2
27.5°	577.1	577.7	578.5	579.1	579.8	579.6	578.5	577.6	576.5	575.5	575.9
30°	560.3	561.2	562.1	563.0	563.9	563.9	563.0	562.1	561.2	560.3	560.6
32.5°	545.1	545.9	546.7	547.5	548.2	548.3	547.7	547.0	546.4	545.6	546.0
35°	519.0	520.0	521.1	522.1	523.2	523.5	523.1	522.5	522.1	521.7	522.1
37.5°	492.8	493.8	494.7	495.7	496.7	497.0	497.0	496.8	496.6	496.5	497.0
40°	474.9	476.2	477.3	478.6	479.7	480.3	480.1	480.0	479.8	479.7	480.3
42.5°	455.4	457.0	458.5	460.1	461.7	462.6	463.0	463.3	463.6	464.0	464.7
45°	427.5	429.2	430.8	432.5	434.2	435.3	436.1	436.8	437.6	438.4	439.4
47.5°	399.0	400.5	402.0	403.5	405.1	406.4	407.8	409.0	410.4	411.6	413.2
50°	379.4	381.0	382.7	384.4	386.0	387.7	389.3	391.0	392.6	394.3	396.0
52.5°	358.8	360.8	362.8	364.9	366.8	368.9	371.0	372.9	375.0	376.9	378.7
55°	328.6	331.0	333.4	335.8	338.2	340.6	343.0	345.4	347.9	350.3	352.0
57.5°	297.7	300.6	303.4	306.4	309.2	312.1	314.9	317.6	320.4	323.2	325.0
60°	277.1	280.1	283.1	286.1	289.2	292.1	295.2	298.2	301.2	304.2	306.5
62.5°	257.1	260.0	263.1	266.1	269.1	272.2	275.4	278.7	282.0	285.3	287.8
65°	226.3	229.8	233.2	236.7	240.1	243.7	247.3	250.9	254.5	258.2	260.4
67.5°	197.3	200.6	203.9	207.3	210.6	214.2	217.8	221.5	225.2	228.9	231.6
70°	176.1	179.6	183.1	186.5	190.0	193.7	197.6	201.5	205.5	209.4	212.2
72.5°	155.5	159.2	162.7	166.3	169.9	173.8	178.1	182.4	186.6	190.9	194.0
75°	124.7	128.6	132.5	136.4	140.4	144.7	149.5	154.4	159.2	164.0	166.9
77.5°	95.0	99.5	104.1	108.5	113.1	117.6	122.3	126.9	131.5	136.2	139.5
80°	76.6	81.1	85.6	90.2	94.6	99.4	104.6	109.7	114.8	119.9	123.2
82.5°	59.7	64.5	69.3	74.0	78.8	83.8	89.0	94.3	99.5	104.8	107.9
85°	37.3	42.3	47.2	52.2	57.2	62.2	67.5	72.8	78.0	83.4	86.7
87.5°	21.2	26.2	31.2	36.2	41.2	46.4	51.6	56.9	62.2	67.5	71.1
90°	11.3	17.0	22.8	28.5	34.2	40.0	45.9	51.9	57.8	63.7	67.7
92.5°	17.6	21.4	25.2	29.1	32.9	37.8	43.7	49.7	55.6	61.5	65.5
95°	37.8	41.4	44.9	48.5	52.1	54.3	55.1	55.9	56.8	57.6	61.4
97.5°	68.6	72.7	76.8	81.0	85.1	85.3	81.8	78.2	74.6	71.1	71.1
100°	92.4	95.9	99.4	102.9	106.4	110.8	116.1	121.4	126.6	131.9	118.2
102.5°	116.7	120.0	123.4	126.7	130.1	134.3	139.2	144.2	149.2	154.2	154.0
105°	155.7	158.5	161.4	164.3	167.1	170.8	175.3	179.9	184.3	188.9	191.9
107.5°	196.2	198.2	200.3	202.3	204.4	207.7	212.2	216.8	221.3	225.9	228.9
110°	222.5	224.3	226.1	227.9	229.7	232.8	237.3	241.7	246.2	250.6	253.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	247.7	249.4	251.2	252.9	254.6	257.5	261.8	266.0	270.3	274.5	276.8
115°	284.9	286.5	288.1	289.7	291.4	294.2	298.2	302.3	306.3	310.3	312.5
117.5°	323.4	324.0	324.8	325.4	326.1	328.5	332.6	336.7	340.9	345.0	347.0
120°	347.9	348.1	348.5	348.8	349.2	351.2	355.1	358.8	362.7	366.4	368.8
122.5°	368.8	369.5	370.1	370.8	371.4	373.4	377.0	380.5	384.0	387.4	389.7
125°	402.1	402.7	403.3	404.0	404.7	406.4	409.5	412.5	415.5	418.5	420.4
127.5°	433.3	433.6	434.1	434.5	434.9	436.3	438.7	441.1	443.5	445.9	447.9
130°	452.8	453.2	453.6	454.1	454.4	455.8	458.0	460.2	462.4	464.7	466.5
132.5°	471.8	472.4	473.1	473.7	474.3	475.3	476.7	478.0	479.4	480.8	482.9
135°	499.4	500.0	500.5	501.1	501.5	502.2	503.0	503.9	504.7	505.5	507.3
137.5°	524.9	525.3	525.8	526.2	526.7	527.1	527.4	527.7	528.0	528.3	530.1
140°	541.0	541.2	541.4	541.6	541.9	542.0	542.1	542.1	542.2	542.2	544.0
142.5°	556.1	556.1	556.1	556.1	556.1	556.2	556.4	556.6	556.8	557.0	558.4
145°	578.1	578.2	578.3	578.4	578.5	578.5	578.5	578.5	578.5	578.5	579.3
147.5°	596.7	596.7	596.6	596.6	596.6	596.6	596.7	596.9	597.0	597.2	597.5
150°	608.9	608.8	608.5	608.3	608.1	608.1	608.3	608.5	608.8	608.9	609.2
152.5°	620.8	620.3	619.8	619.3	618.8	618.7	618.8	619.1	619.3	619.6	619.8
155°	636.0	635.3	634.6	633.9	633.2	633.0	633.2	633.5	633.6	633.9	634.3
157.5°	647.6	647.2	646.8	646.4	646.0	645.9	645.9	645.9	645.9	646.0	646.3
160°	655.8	655.1	654.4	653.7	653.1	652.8	652.9	653.0	653.1	653.3	653.7
162.5°	662.3	661.6	660.9	660.2	659.6	659.3	659.4	659.5	659.6	659.8	660.4
165°	671.0	670.4	669.7	669.1	668.3	668.1	668.2	668.2	668.4	668.5	669.1
167.5°	677.5	676.9	676.2	675.5	674.8	674.5	674.6	674.7	674.8	674.9	675.7
170°	681.3	680.5	679.7	678.9	678.1	677.7	677.8	678.0	678.1	678.1	679.0
172.5°	683.7	682.9	682.1	681.3	680.5	680.2	680.4	680.6	680.8	681.0	681.8
175°	686.3	685.6	684.9	684.3	683.6	683.3	683.4	683.6	683.7	683.8	684.7
177.5°	687.5	687.0	686.4	685.9	685.4	685.1	685.2	685.3	685.4	685.5	686.2
180°	686.3	686.3	686.3	686.3	686.3	686.3	686.3	686.3	686.3	686.3	686.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	691.1	691.1	691.1	691.1	691.1	691.1	691.1	691.1
2.5°	689.5	690.4	691.2	691.5	691.4	691.3	691.2	691.1
5°	687.3	688.6	689.7	690.3	690.2	690.0	689.8	689.7
7.5°	681.6	682.7	683.8	684.2	684.0	683.9	683.8	683.6
10°	676.3	677.3	678.3	678.8	678.7	678.5	678.3	678.1
12.5°	669.8	670.6	671.5	671.6	671.2	670.8	670.5	670.0
15°	657.6	658.5	659.4	659.6	659.0	658.4	657.8	657.2
17.5°	642.2	642.8	643.5	643.7	643.4	643.0	642.7	642.3
20°	630.4	630.8	631.2	631.4	631.4	631.4	631.4	631.4
22.5°	618.0	618.7	619.2	619.3	618.9	618.6	618.2	617.9
25°	598.8	599.4	599.9	599.9	599.1	598.4	597.6	596.9
27.5°	576.3	576.8	577.2	577.2	576.9	576.7	576.4	576.1
30°	560.9	561.2	561.5	561.6	561.4	561.2	561.2	561.0
32.5°	546.3	546.5	546.9	547.0	546.8	546.6	546.5	546.4
35°	522.5	523.1	523.5	523.7	523.7	523.7	523.7	523.7
37.5°	497.7	498.3	498.9	499.2	499.1	499.0	499.0	498.9
40°	480.9	481.5	482.1	482.5	482.9	483.1	483.5	483.8
42.5°	465.4	466.1	466.8	467.3	467.3	467.3	467.4	467.5
45°	440.4	441.5	442.6	443.2	443.4	443.4	443.6	443.8
47.5°	414.7	416.3	417.8	418.7	419.1	419.4	419.7	420.1
50°	397.6	399.3	400.9	402.0	402.4	402.9	403.3	403.8
52.5°	380.5	382.3	384.1	385.1	385.5	385.8	386.1	386.5
55°	353.6	355.3	356.9	358.0	358.6	359.3	359.8	360.4
57.5°	327.0	328.9	330.7	331.9	332.4	332.9	333.3	333.8
60°	308.7	310.9	313.3	314.6	315.0	315.5	315.9	316.4
62.5°	290.3	292.7	295.2	296.8	297.3	297.9	298.5	299.1
65°	262.6	264.9	267.2	268.6	269.2	269.8	270.4	271.0
67.5°	234.3	237.1	239.8	241.6	242.4	243.2	244.0	244.7
70°	215.1	217.9	220.8	222.7	223.6	224.4	225.4	226.3
72.5°	197.2	200.2	203.3	205.2	205.9	206.5	207.2	207.9
75°	170.0	173.0	176.0	177.9	178.6	179.4	180.1	180.9
77.5°	142.8	146.2	149.5	151.4	151.9	152.6	153.2	153.8
80°	126.5	129.8	133.1	135.1	135.7	136.3	137.0	137.5
82.5°	111.1	114.3	117.5	119.7	120.7	121.8	122.9	123.9
85°	90.0	93.3	96.6	98.8	100.0	101.2	102.5	103.6
87.5°	74.6	78.2	81.8	84.2	85.2	86.4	87.5	88.6
90°	71.8	75.8	79.8	82.5	83.9	85.3	86.7	88.1
92.5°	69.4	73.2	77.1	79.7	81.0	82.1	83.4	84.5
95°	65.4	69.2	73.1	75.6	76.6	77.7	78.7	79.8
97.5°	71.1	71.0	71.0	71.5	72.5	73.6	74.5	75.6
100°	104.5	90.9	77.1	70.5	71.0	71.4	71.9	72.3
102.5°	153.8	153.7	153.6	150.1	143.3	136.5	129.7	123.0
105°	194.9	197.9	200.9	202.9	203.8	204.7	205.7	206.7
107.5°	231.9	235.0	237.9	239.7	240.3	240.9	241.5	242.1
110°	255.7	258.2	260.7	262.5	263.7	264.8	266.0	267.2





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CATALOG NUMBER: S125DIP-S610D590U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	279.1	281.4	283.7	285.3	286.2	287.1	288.0	288.9
115°	314.9	317.1	319.3	320.6	320.8	321.0	321.3	321.5
117.5°	348.9	350.9	352.9	354.3	355.0	355.7	356.4	357.1
120°	371.1	373.4	375.8	377.1	377.5	377.8	378.2	378.4
122.5°	391.9	394.1	396.4	397.5	397.8	398.1	398.3	398.6
125°	422.4	424.4	426.3	427.5	427.9	428.4	428.7	429.2
127.5°	449.9	451.8	453.9	454.9	454.9	455.0	455.0	455.0
130°	468.1	469.9	471.7	472.7	472.9	473.1	473.2	473.4
132.5°	484.9	486.9	488.9	490.0	490.1	490.2	490.2	490.3
135°	509.0	510.7	512.5	513.4	513.4	513.5	513.5	513.6
137.5°	532.0	533.8	535.7	536.5	536.5	536.5	536.5	536.5
140°	545.9	547.8	549.7	550.6	550.5	550.5	550.4	550.3
142.5°	559.9	561.3	562.8	563.5	563.4	563.3	563.3	563.2
145°	580.1	581.0	581.9	582.3	582.2	582.2	582.1	582.0
147.5°	597.9	598.3	598.7	598.6	598.1	597.5	597.0	596.5
150°	609.4	609.7	609.8	609.7	608.9	608.1	607.3	606.6
152.5°	620.0	620.3	620.5	620.2	619.4	618.6	617.9	617.1
155°	634.6	634.9	635.3	635.0	634.1	633.2	632.3	631.3
157.5°	646.7	647.0	647.4	647.1	646.2	645.2	644.4	643.5
160°	654.2	654.6	655.1	654.8	653.9	653.0	652.1	651.2
162.5°	661.0	661.6	662.3	662.1	661.1	660.1	659.2	658.1
165°	669.9	670.6	671.2	671.1	670.2	669.3	668.4	667.4
167.5°	676.5	677.3	678.1	678.1	677.1	676.0	675.0	674.0
170°	680.0	680.9	681.8	681.7	680.7	679.7	678.7	677.7
172.5°	682.6	683.5	684.3	684.2	683.1	682.2	681.1	680.1
175°	685.5	686.4	687.4	687.3	686.3	685.3	684.3	683.2
177.5°	686.8	687.4	688.0	688.0	687.2	686.5	685.8	685.1
180°	686.3	686.3	686.3	686.3	686.3	686.3	686.3	686.3

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