

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: SURE-LITES

Report Number: P29220

Luminaire Tested: **SELW29SD**

Test Date: 02/08/17

Test Information

Test Method: LM-79-08
Report Number: P29220
Test Lab: INNOVATION CENTER-P2
Test Date: 02/08/17
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SURE-LITES
Catalog Number: SELW29SD
Description: EMERGENCY LIGHT 2 ADJUSTABLE LEDS WITH LIGHTS AIMED PERPENDICULAR TO THE FIXTURE
Light Source: (2) NICHIA 5000K LEDS
NFSW757DT-V1(2100)
Ballast/Driver: (1) ELECTRONIC DC POWER SUPPLY (4.8V)
AGILENT DC POWER SUPPLY IN0011

Summary

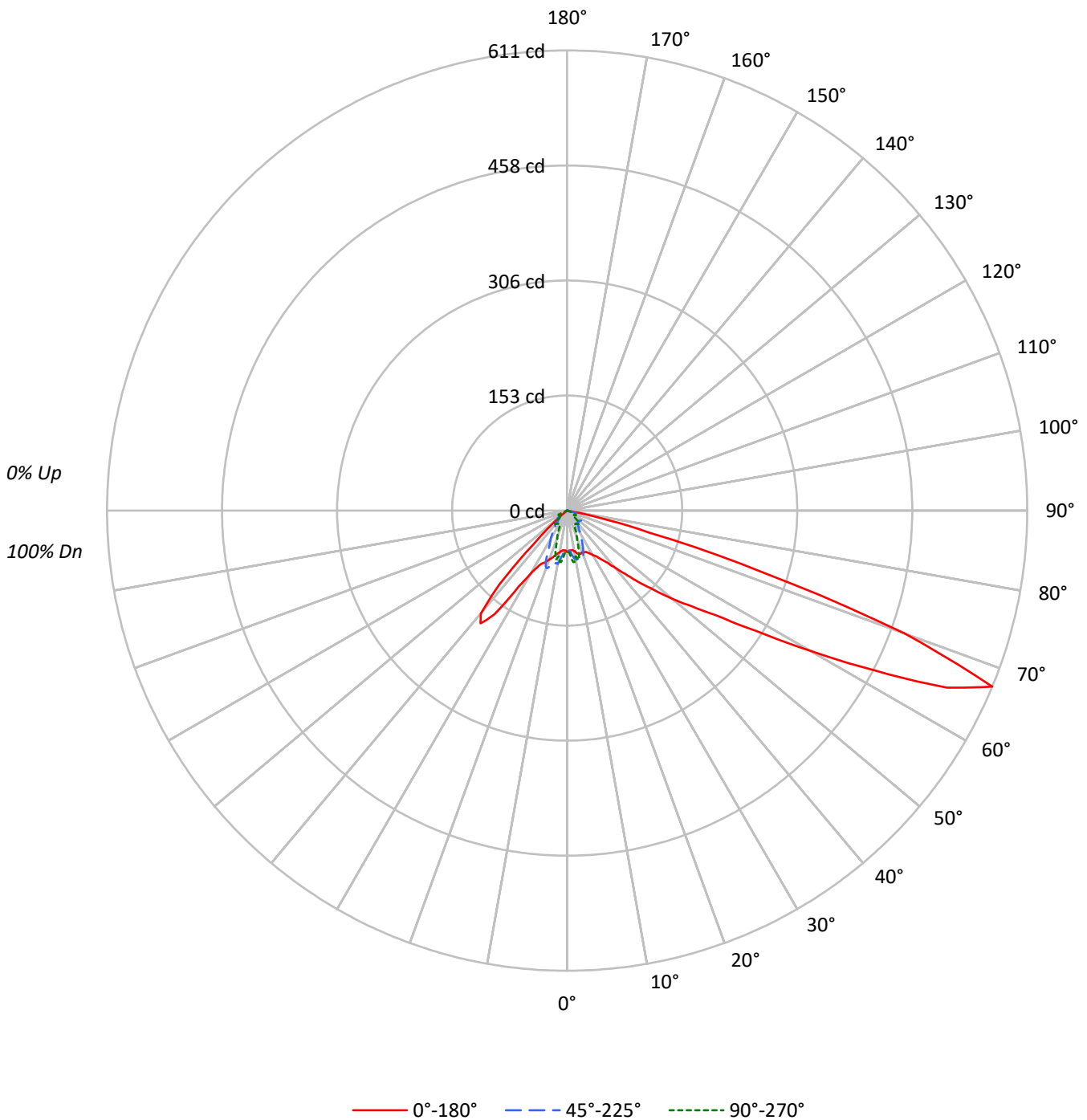
Lumens per Lamp: N/A
Luminaire Lumens: 203.1 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 2.24 / 0.79 / 0.99
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 0.17' x H: 0.04')
CIE Type: Direct

Input Watts (W): 2.88
Input Voltage (V): 4.80
Input Current (A_{in}): 0.600
Voltage Rise (V): NR
Power Factor: 1
Total Harmonic Distortion (THDi): NR
Frequency (hertz): DC
Stabilization Time: 0.5 HR
Operation Time: 2 HR
Ambient Temperature (°C): 25.1
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	28	26
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	21312	21312	21312
5°	20175	24362	20175
10°	20728	23366	21104
15°	22183	22559	23311
20°	22301	14363	26080
25°	23358	9190	29485
30°	26589	8211	37537
35°	31804	8454	67633
40°	41395	9617	74427
45°	58746	9645	28496
50°	84532	4645	3716
55°	120974	4978	498
60°	200643	6490	0
65°	331871	7163	0
70°	319701	0	0
75°	87522	0	0
80°	3692	0	0
85°	1153	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	5.7	2.8
10°-20°	18.4	9.0
20°-30°	26.5	13.1
30°-40°	40.4	19.9
40°-50°	35.7	17.6
50°-60°	26.2	12.9
60°-70°	36.6	18.0
70°-80°	13.3	6.5
80°-90°	0.3	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	50.6	24.9
0°-40°	91.0	44.8
0°-60°	152.9	75.3
0°-90°	203.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	203.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	55	55	55	55	55	
5°	53	56	64	57	53	5
15°	59	64	60	72	62	17
25°	61	47	24	60	77	29
35°	79	26	21	26	168	51
45°	134	21	22	14	65	106
55°	243	23	10	6	1	232
65°	556	11	12	0	0	510
75°	113	11	0	0	0	174
85°	1	1	0	0	0	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	55	55	55	55	55	55	55	55	55	55	55
1°	55	55	55	54	55	54	54	54	54	54	54
2°	54	54	54	54	54	54	54	54	54	54	54
3°	53	53	53	53	53	53	54	54	54	54	54
4°	53	53	53	52	53	54	56	56	56	57	57
5°	53	53	52	53	55	56	59	59	59	60	60
6°	53	53	53	54	57	59	61	61	62	62	62
7°	53	53	53	55	59	61	63	64	64	64	65
8°	53	53	54	57	61	63	65	66	66	66	66
9°	54	54	55	59	62	65	66	66	66	67	67
10°	55	55	57	61	65	66	66	66	66	66	66
11°	55	56	59	62	66	66	64	64	64	63	62
12°	57	58	61	64	68	66	62	62	62	62	62
13°	58	59	62	67	69	65	62	63	63	63	63
14°	59	60	64	69	68	64	65	65	65	65	65
15°	59	61	65	69	68	64	65	66	65	65	64
16°	60	61	66	71	68	65	64	63	63	63	62
17°	60	61	66	72	68	66	62	61	61	61	59
18°	60	61	66	71	68	66	59	58	58	57	56
19°	59	61	67	69	68	64	56	55	54	54	52
20°	59	61	68	68	67	63	52	52	51	50	48
21°	59	61	69	67	68	60	49	48	47	47	46
22°	60	61	69	66	68	57	46	46	45	44	43
23°	60	62	69	65	66	54	44	43	42	41	40
24°	60	63	69	65	63	51	40	39	39	38	37
25°	61	64	69	66	60	47	37	36	36	35	33
26°	62	66	69	66	57	45	34	33	33	32	32
27°	63	67	69	66	55	42	32	32	31	31	30
28°	65	69	69	65	51	39	30	30	30	29	29
29°	66	70	68	65	48	36	29	29	28	28	28
30°	68	72	68	65	46	34	28	27	27	27	26
32.5°	72	78	67	63	40	29	25	25	24	24	24
35°	79	85	71	58	38	26	23	22	22	22	22
37.5°	87	93	75	54	33	23	22	22	22	22	22
40°	99	103	82	49	29	22	21	21	21	21	21
42.5°	114	114	88	46	25	21	21	21	21	21	21
45°	134	127	94	45	23	21	22	22	22	22	22
47.5°	155	141	98	43	22	21	22	22	22	23	23
50°	182	157	99	38	22	21	22	22	23	23	23
52.5°	209	177	100	33	23	22	23	23	23	23	23
55°	243	204	98	30	23	23	22	21	21	20	19
57.5°	297	249	95	29	25	23	16	15	13	13	12
60°	371	320	100	30	25	20	10	10	10	10	10
62.5°	459	402	103	31	25	13	10	10	10	11	11
65°	556	465	104	32	19	11	10	10	10	10	11



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
67.5°	611	484	95	29	14	11	10	11	11	11	11
70°	476	393	74	23	15	12	11	11	11	12	12
72.5°	271	244	52	19	14	12	11	11	11	11	10
75°	113	102	27	17	14	11	6	5	4	4	3
77.5°	40	35	12	10	7	4	1	1	1	1	1
80°	4	6	5	3	1	0	0	0	0	0	0
82.5°	2	2	1	1	1	1	0	0	0	0	0
85°	1	1	1	1	1	1	0	0	0	0	0
87.5°	1	1	1	1	1	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P29220
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CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	55	55	55	55	55	55	55	55	55	55	55
1°	54	54	54	55	55	55	54	54	54	54	54
2°	54	54	54	54	54	54	54	54	54	54	54
3°	54	54	54	55	55	55	55	55	55	55	55
4°	57	57	57	58	58	58	58	58	58	58	58
5°	60	60	61	61	61	61	61	61	61	61	61
6°	62	63	63	63	63	63	63	63	63	63	64
7°	65	65	65	66	66	66	66	66	66	66	66
8°	66	66	66	66	66	66	66	67	66	67	67
9°	67	67	67	67	67	67	67	66	66	66	66
10°	66	65	65	64	64	63	64	63	63	63	62
11°	62	62	62	62	61	61	61	61	61	61	61
12°	62	62	62	62	62	62	62	62	63	63	63
13°	63	64	64	64	64	64	65	65	65	65	65
14°	65	65	65	65	65	65	65	65	64	65	65
15°	64	64	64	63	63	63	62	62	62	62	62
16°	62	61	61	60	60	59	58	58	58	58	58
17°	58	58	57	57	56	56	55	54	54	54	54
18°	55	54	54	53	52	52	51	50	50	50	49
19°	51	51	50	49	48	47	46	46	46	45	45
20°	48	47	46	45	44	44	43	42	42	41	41
21°	45	44	43	42	41	41	40	40	39	39	38
22°	42	42	41	39	39	38	37	37	36	36	35
23°	39	38	37	36	36	35	34	34	33	33	33
24°	36	35	34	33	33	32	32	31	31	31	30
25°	33	32	32	31	31	31	30	30	29	29	29
26°	31	31	30	30	30	29	29	28	28	28	27
27°	30	29	29	28	28	28	27	27	27	26	26
28°	28	28	28	27	27	27	26	26	26	26	25
29°	27	27	27	26	26	26	25	25	25	24	24
30°	26	26	26	25	25	25	24	24	24	23	23
32.5°	23	23	23	23	23	22	22	22	22	22	22
35°	22	22	22	21	21	21	22	22	22	21	21
37.5°	22	21	21	21	21	21	21	21	21	21	21
40°	21	21	21	21	21	21	21	21	21	21	21
42.5°	21	21	21	21	21	21	21	21	22	22	22
45°	22	22	22	22	22	22	22	23	23	23	23
47.5°	23	23	23	23	23	23	23	23	23	23	23
50°	23	23	23	23	23	23	24	23	23	23	23
52.5°	23	23	22	22	21	20	19	18	17	16	15
55°	18	17	15	14	13	13	12	12	11	11	11
57.5°	11	11	11	10	10	10	10	10	10	10	10
60°	10	10	10	10	10	10	10	10	10	10	10
62.5°	11	11	11	11	11	11	11	11	11	11	11
65°	11	11	11	12	12	12	12	12	12	12	12



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CANDELA DISTRIBUTION (continued):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
67.5°	11	11	12	12	12	12	12	13	13	13	13
70°	12	12	12	12	12	12	12	12	12	12	11
72.5°	10	10	10	9	8	7	7	6	5	5	4
75°	3	3	2	2	1	1	1	1	1	1	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	71°	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°
0°	55	55	55	55	55	55	55	55	55	55	55
1°	54	54	54	54	54	54	54	54	54	54	54
2°	54	54	54	54	54	54	54	54	54	54	54
3°	55	55	55	55	55	55	56	55	56	55	55
4°	58	58	58	58	59	59	59	59	59	59	59
5°	62	62	62	62	62	62	63	63	63	63	63
6°	64	64	64	64	64	64	65	65	65	65	66
7°	66	66	66	66	67	67	67	67	67	68	67
8°	67	67	67	67	68	67	68	68	68	68	68
9°	66	66	66	66	65	65	65	65	64	65	65
10°	62	62	62	62	62	62	61	61	61	62	62
11°	61	61	61	61	61	61	61	61	62	62	62
12°	63	63	64	63	64	64	64	64	65	65	65
13°	65	65	65	65	65	65	65	66	66	65	66
14°	65	65	64	64	64	64	64	64	64	64	64
15°	61	61	60	60	61	60	59	60	59	60	60
16°	58	57	56	57	56	56	55	56	55	55	56
17°	53	53	52	52	52	51	51	51	51	51	51
18°	48	48	47	47	47	46	45	45	45	45	45
19°	44	43	43	43	42	42	41	41	41	41	41
20°	41	40	40	40	39	39	39	38	38	38	38
21°	38	37	37	37	36	36	36	36	36	36	36
22°	35	35	34	34	34	34	33	33	33	33	33
23°	32	32	32	31	31	31	30	30	30	30	30
24°	30	29	29	29	29	28	28	28	28	28	27
25°	28	28	28	28	27	27	27	26	26	26	26
26°	27	27	27	26	26	26	26	25	25	25	25
27°	26	26	25	25	25	25	24	24	24	24	23
28°	25	25	24	24	24	24	23	23	23	23	23
29°	24	24	23	23	23	23	23	22	22	22	22
30°	23	23	23	23	22	22	22	22	22	22	22
32.5°	22	22	22	22	21	21	21	21	21	21	21
35°	21	21	21	21	21	21	21	21	21	21	21
37.5°	21	21	21	21	21	21	21	21	21	21	21
40°	21	21	21	22	22	22	22	22	22	22	22
42.5°	22	22	22	22	22	22	22	22	22	22	23
45°	23	23	23	23	23	23	23	23	23	23	24
47.5°	23	24	24	24	23	23	23	22	22	21	21
50°	22	21	20	19	18	17	16	15	14	13	13
52.5°	14	13	13	12	11	11	11	10	11	10	10
55°	10	10	10	10	10	10	10	10	10	10	10
57.5°	10	10	10	10	10	10	10	11	11	11	10
60°	10	11	11	11	11	11	11	11	11	11	11
62.5°	11	11	11	11	11	12	12	12	12	12	12
65°	12	12	12	12	12	13	13	13	13	13	13



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CANDELA DISTRIBUTION (continued):

	71°	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°
67.5°	13	13	13	13	13	13	13	13	13	12	12
70°	11	11	10	10	9	8	6	5	4	4	3
72.5°	3	3	2	2	1	1	1	1	1	1	1
75°	0	0	0	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	82°	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°
0°	55	55	55	55	55	55	55	55	55	55	55
1°	54	55	54	55	55	55	55	55	55	55	55
2°	54	54	54	54	54	54	54	54	55	55	54
3°	56	55	56	55	56	56	56	56	56	56	55
4°	60	60	59	59	60	60	60	61	60	60	59
5°	63	63	63	63	63	64	64	64	64	64	63
6°	66	65	66	66	66	66	67	67	67	67	65
7°	67	68	68	68	68	68	68	69	69	69	69
8°	68	68	68	68	68	68	68	68	69	69	69
9°	65	65	65	64	65	65	64	65	65	65	67
10°	62	62	62	62	62	62	62	62	62	63	64
11°	62	62	62	62	63	62	63	63	62	63	63
12°	65	65	65	65	65	65	65	65	65	66	66
13°	66	67	67	67	67	67	67	67	67	68	68
14°	64	64	64	64	64	64	64	65	66	66	68
15°	60	60	60	60	60	60	60	60	60	61	65
16°	55	56	56	56	56	56	55	56	56	57	60
17°	51	51	51	51	51	51	51	51	51	51	56
18°	45	44	44	45	45	44	44	44	45	45	50
19°	40	40	40	40	40	40	40	40	40	41	44
20°	38	38	38	38	38	37	37	37	38	38	40
21°	35	35	35	35	35	35	35	35	36	36	37
22°	33	33	33	33	33	33	33	33	33	34	36
23°	30	30	30	30	30	29	29	29	30	30	34
24°	27	27	27	27	26	26	26	26	26	26	29
25°	26	26	25	25	25	25	25	25	24	24	25
26°	24	24	24	24	24	24	23	23	23	23	23
27°	23	23	23	23	23	23	22	22	22	22	21
28°	22	22	22	22	22	22	22	22	22	21	21
29°	22	22	22	22	21	21	21	21	21	21	20
30°	21	21	21	21	21	21	21	21	21	21	20
32.5°	21	21	21	21	21	21	21	21	21	21	20
35°	21	21	21	21	21	21	21	21	21	21	21
37.5°	21	21	21	21	21	21	22	22	22	22	22
40°	22	22	22	22	22	23	23	23	23	23	23
42.5°	23	23	23	23	23	23	23	23	24	24	21
45°	23	23	23	23	23	23	23	22	22	19	13
47.5°	20	19	18	17	16	15	15	14	14	11	10
50°	12	12	11	11	10	10	10	10	10	10	10
52.5°	10	10	10	10	10	10	10	10	10	10	10
55°	10	10	10	10	10	10	10	10	10	11	10
57.5°	11	11	11	11	11	11	11	11	12	11	11
60°	11	11	11	11	12	12	12	12	12	12	11
62.5°	12	12	13	13	13	13	13	13	13	13	6
65°	13	13	13	13	13	13	13	12	12	8	1



TEST NUMBER: P29220
CATALOG NUMBER: SELW29SD

CANDELA DISTRIBUTION (continued):

	82°	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°
67.5°	11	10	9	9	8	6	5	4	4	1	0
70°	2	2	1	1	1	1	1	0	0	0	0
72.5°	1	1	0	1	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	115°	125°	135°	145°	155°	165°	175°	180°
0°	55	55	55	55	55	55	55	55
1°	55	54	54	54	54	54	54	54
2°	54	54	54	54	54	53	54	53
3°	54	54	53	53	54	53	53	53
4°	58	56	54	53	53	53	53	53
5°	62	60	57	54	53	54	53	53
6°	64	63	60	56	54	54	54	53
7°	68	66	62	59	55	54	54	54
8°	70	70	65	62	57	54	55	54
9°	68	70	69	64	59	55	55	55
10°	66	70	72	67	62	56	56	56
11°	64	68	71	71	64	57	57	57
12°	65	67	72	75	67	59	58	58
13°	67	67	71	76	71	61	59	59
14°	70	69	71	77	76	64	61	60
15°	70	72	72	78	81	67	62	62
16°	68	73	74	78	85	70	64	63
17°	62	74	77	79	88	75	66	65
18°	58	70	79	80	90	79	68	66
19°	53	66	81	82	93	85	69	68
20°	47	61	81	85	94	90	71	69
21°	42	56	79	91	96	96	73	71
22°	39	50	76	95	98	102	76	73
23°	38	46	72	98	100	108	79	75
24°	36	43	66	100	104	114	81	76
25°	33	41	60	101	109	120	84	77
26°	29	40	55	100	115	127	87	79
27°	25	38	51	99	122	133	91	82
28°	22	34	48	95	129	142	97	86
29°	21	30	46	88	136	153	102	90
30°	21	25	44	80	143	163	109	96
32.5°	21	22	37	65	155	206	131	119
35°	21	22	26	57	161	294	171	168
37.5°	23	24	26	52	162	385	203	189
40°	23	24	24	36	154	386	200	178
42.5°	18	17	18	25	122	255	154	133
45°	12	12	14	25	84	146	81	65
47.5°	11	12	16	23	38	58	35	29
50°	10	12	17	18	15	22	12	8
52.5°	11	13	14	8	8	7	2	2
55°	12	12	6	3	2	2	1	1
57.5°	12	6	2	1	1	1	1	0
60°	6	1	1	1	0	0	0	0
62.5°	1	1	1	0	0	0	1	1
65°	0	0	0	0	0	0	1	0



TEST NUMBER: P29220
CATALOG NUMBER: SELW29SD

CANDELA DISTRIBUTION (continued):

	115°	125°	135°	145°	155°	165°	175°	180°
67.5°	0	1	0	0	0	0	0	0
70°	1	0	0	0	0	0	0	0
72.5°	1	0	0	0	0	0	0	0
75°	0	0	0	0	0	0	0	0
77.5°	0	0	0	0	0	0	0	0
80°	0	0	0	0	0	0	0	0
82.5°	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0

(END OF REPORT)