

Scaled data based on original data using  
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact  
Fluorescent Lamps

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: SHAPER

Report Number: P30155

Luminaire Tested: **640-CFL/1/118-120**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-66-11  
Report Number: P30155  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 640-CFL/1/118-120  
Description: SHAPER TAPERED SQUARE WALL SCONCE  
Light Source: (1) FOUR PIN TWIN TUBE COMPACT FLUORESCENT LAMPS  
F18BX/SPX30/RS 18 WATTS  
Ballast/Driver: TRIAD  
C218UNVSE

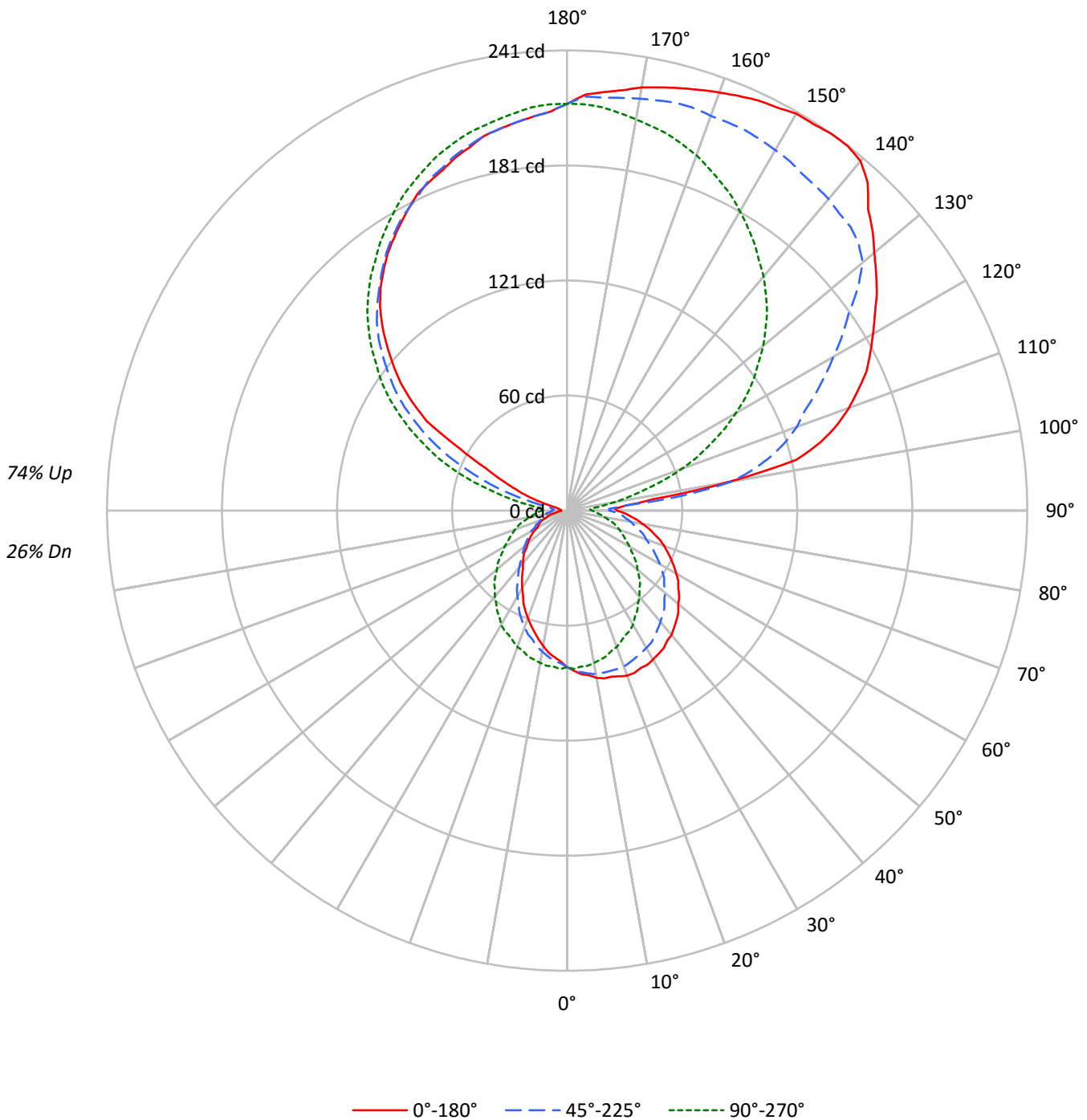
**Summary**

Lumens per Lamp: 1200 (1 lamp)  
Luminaire Lumens: 1002.2 lumens  
Efficiency: 83.5%  
Efficacy: 62.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36  
Luminous Opening: Rectangular (W 1.5' x L: 0.81' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 16  
Input Voltage (V): NR  
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	85	85	85	85	76	76	76	76	59	59	59	43	43	43	29	29	29	22
1	77	73	69	66	68	65	62	60	50	48	47	37	36	34	24	24	23	17
2	69	63	58	54	62	56	52	48	44	41	38	32	30	28	21	20	19	14
3	63	55	49	44	56	49	44	40	38	35	32	28	26	24	18	17	16	12
4	58	49	42	37	51	44	38	34	34	30	27	25	22	20	16	15	13	10
5	53	43	37	32	47	39	33	29	30	26	23	22	19	17	15	13	12	8
6	48	39	32	27	43	35	29	25	27	23	20	20	17	15	13	11	10	7
7	45	35	28	24	40	31	25	21	24	20	17	18	15	13	12	10	9	6
8	41	31	25	21	37	28	23	19	22	18	15	16	14	11	11	9	8	6
9	38	28	22	18	34	26	20	17	20	16	13	15	12	10	10	8	7	5
10	36	26	20	16	32	23	18	15	18	15	12	14	11	9	9	8	6	5

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

	0°	90°	180°
0°	724	724	724
5°	762	727	683
10°	798	726	646
15°	823	722	603
20°	865	714	564
25°	887	702	526
30°	918	704	479
35°	949	690	442
40°	980	680	415
45°	1012	674	400
50°	1044	660	371
55°	1093	662	354
60°	1166	671	318
65°	1254	690	334
70°	1394	749	336
75°	1604	853	341
80°	2034	1017	305
85°	3344	1621	405



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	7.8	0.8	0.6
10°-20°	22.2	2.2	1.8
20°-30°	33.3	3.3	2.8
30°-40°	39.7	4.0	3.3
40°-50°	41.5	4.1	3.5
50°-60°	39.4	3.9	3.3
60°-70°	34.1	3.4	2.8
70°-80°	27.5	2.7	2.3
80°-90°	19.9	2.0	1.7
90°-100°	23.8	2.4	2.0
100°-110°	66.8	6.7	5.6
110°-120°	101.0	10.1	8.4
120°-130°	124.8	12.4	10.4
130°-140°	130.6	13.0	10.9
140°-150°	118.0	11.8	9.8
150°-160°	92.8	9.3	7.7
160°-170°	59.0	5.9	4.9
170°-180°	20.2	2.0	1.7
0°-30°	63.2	6.3	5.3
0°-40°	102.9	10.3	8.6
0°-60°	183.8	18.3	15.3
0°-90°	265.2	26.5	22.1
90°-120°	191.6	19.1	16.0
90°-150°	564.9	56.4	47.1
90°-180°	737.0	73.5	61.4
0°-180°	1002.2	100.0	83.5

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	82	82	82	82	82	
5°	86	85	82	79	77	8
15°	90	87	79	70	66	26
25°	91	85	72	59	54	42
35°	88	80	64	45	41	55
45°	81	72	54	34	32	63
55°	71	62	43	25	23	64
65°	60	50	33	18	16	59
75°	47	39	25	13	10	50
85°	33	29	16	9	4	29
90°	26	22	13	8	3	15
95°	31	30	13	7	3	36
105°	137	111	42	24	6	140
115°	173	143	83	70	38	171
125°	198	180	119	110	99	177
135°	223	210	148	141	137	173
145°	241	215	171	165	164	151
155°	237	220	190	183	184	110
165°	229	221	204	198	197	65
175°	220	217	212	207	207	21
180°	213	213	213	213	213	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	82	82	82	82	82	82	82	82	82
2.5°	84	85	84	84	83	81	80	79	79
5°	86	86	85	84	82	80	79	78	77
7.5°	87	88	86	84	82	79	77	75	75
10°	89	88	87	84	81	78	75	73	72
12.5°	90	89	87	84	80	76	73	70	69
15°	90	90	87	83	79	74	70	68	66
17.5°	91	90	87	82	77	72	68	65	63
20°	92	91	87	82	76	70	65	62	60
22.5°	92	90	86	80	74	67	62	58	57
25°	91	90	85	79	72	65	59	55	54
27.5°	91	89	84	78	71	62	55	51	50
30°	90	88	83	77	69	59	52	48	47
32.5°	89	87	82	75	66	56	49	45	44
35°	88	86	80	73	64	53	45	42	41
37.5°	86	84	78	71	61	50	42	39	38
40°	85	82	76	68	59	47	39	36	36
42.5°	83	80	74	66	56	44	36	34	34
45°	81	78	72	64	54	41	34	31	32
47.5°	79	76	69	61	51	39	31	29	29
50°	76	74	67	58	48	36	29	27	27
52.5°	74	71	64	56	46	34	27	25	25
55°	71	69	62	53	43	32	25	22	23
57.5°	69	66	59	50	40	30	23	19	21
60°	66	63	56	47	38	28	22	16	18
62.5°	63	60	53	44	35	26	19	14	17
65°	60	57	50	42	33	24	18	13	16
67.5°	57	54	47	39	31	22	16	12	15
70°	54	51	44	37	29	21	15	11	13
72.5°	51	48	42	35	27	19	14	10	11
75°	47	44	39	32	25	17	13	9	10
77.5°	44	41	36	30	22	16	12	8	8
80°	40	38	34	27	20	15	11	8	6
82.5°	37	35	31	25	18	13	11	7	5
85°	33	32	29	22	16	12	9	6	4
87.5°	30	30	26	20	15	11	8	5	3
90°	26	26	22	17	13	10	8	5	3
92.5°	25	24	22	16	12	10	7	5	3
95°	31	31	30	27	13	10	7	4	3
97.5°	45	49	62	43	18	14	8	4	4
100°	85	89	88	55	25	22	9	5	4
102.5°	123	118	100	66	33	31	15	5	5
105°	137	129	111	78	42	42	24	9	6
107.5°	148	140	120	89	53	53	36	16	13
110°	157	149	128	98	64	63	47	25	22



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	165	158	134	110	74	72	58	36	29
115°	173	164	143	122	83	82	70	48	38
117.5°	179	171	152	130	93	91	81	59	48
120°	185	178	161	138	102	100	91	74	65
122.5°	191	185	171	145	111	108	101	91	87
125°	198	192	180	152	119	115	110	102	99
127.5°	204	198	192	158	126	123	118	112	110
130°	210	205	202	164	134	130	126	120	119
132.5°	217	212	207	169	141	137	134	129	128
135°	223	222	210	174	148	143	141	137	137
137.5°	233	230	211	179	154	149	147	145	145
140°	239	233	213	184	160	155	153	152	152
142.5°	241	233	214	187	165	160	159	158	158
145°	241	233	215	191	171	166	165	163	164
147.5°	240	233	217	195	176	171	170	168	169
150°	240	233	218	198	181	177	175	174	174
152.5°	238	232	219	201	186	182	179	179	179
155°	237	231	220	204	190	186	183	183	184
157.5°	235	230	220	207	194	190	188	187	187
160°	233	229	220	208	198	194	191	190	190
162.5°	231	228	221	210	201	197	195	193	194
165°	229	226	221	211	204	200	198	197	197
167.5°	227	225	220	212	206	203	201	200	201
170°	225	223	219	213	208	206	203	202	203
172.5°	222	221	218	214	210	208	205	204	205
175°	220	219	217	215	212	210	207	206	207
177.5°	218	217	217	215	213	211	209	208	209
180°	213	213	213	213	213	213	213	213	213

(END OF REPORT)