

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: ITL55887

Luminaire Tested: **HLCFL/6/24W (FIXTURES 1200, 1215, 1220, 1240, 1250, 1270)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-66-11  
Report Number: ITL55887  
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: HLCFL/6/24W (FIXTURES 1200, 1215, 1220, 1240, 1250, 1270)  
Description: FABRICATED SEMI-DIFFUSE METAL MOUNTING PLATE, THREE FORMED METAL REFLECTORS WITH PREMIUM SPECULAR FINISH, OPEN SOCKET ENDS AND TOP.  
Light Source: SIX 24-WATT SINGLE ENDED TWIN TUBE FLUORESCENTS, SYLVANIA FT24DL/841. LAMPS HORIZONTAL WITH TUBES VERTICAL.  
Ballast/Driver: THREE ADVANCE ICN-2S24

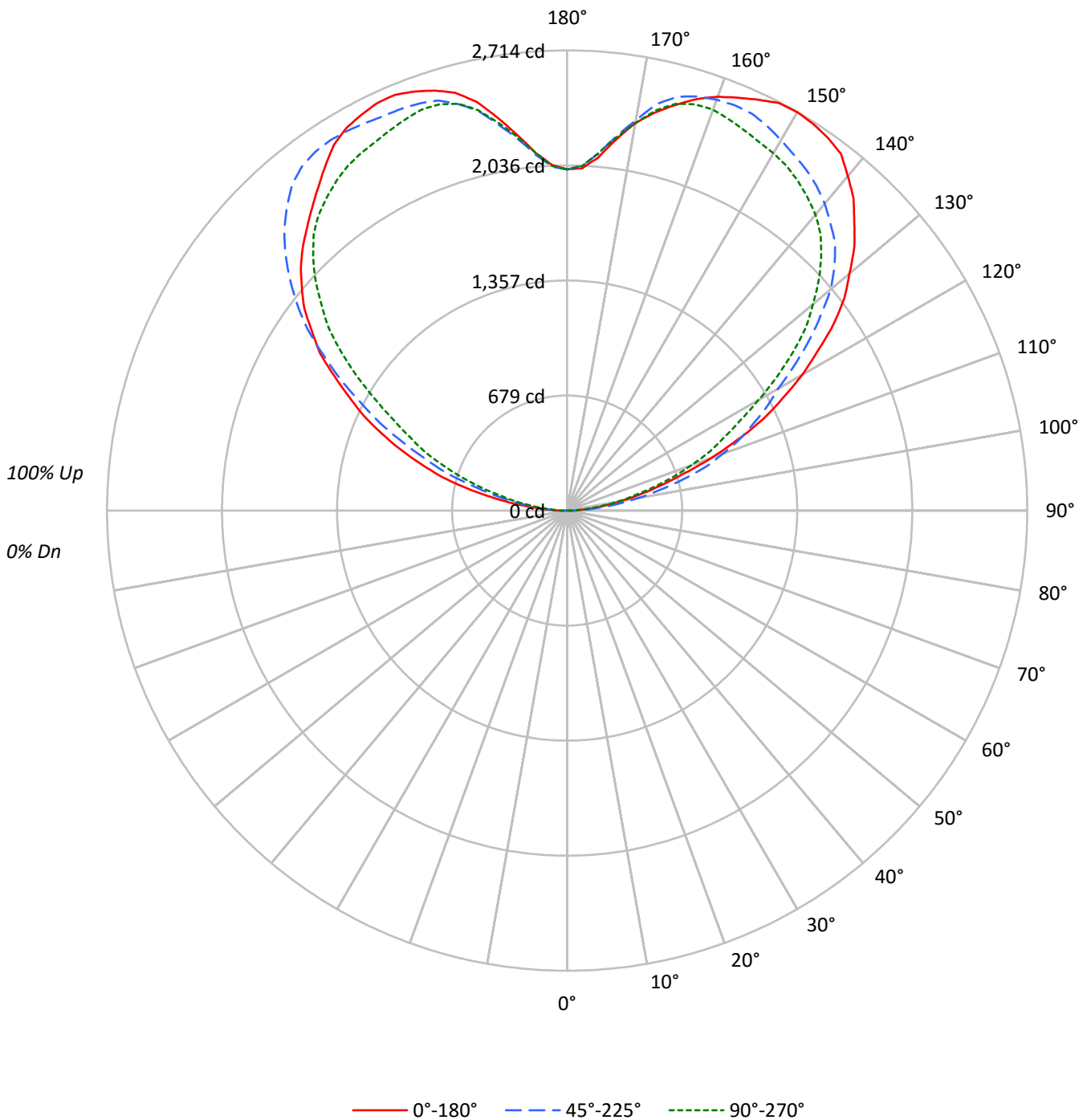
**Summary**

Lumens per Lamp: 1800 (6 lamps)  
Luminaire Lumens: 9067.3 lumens  
Efficiency: 84.0%  
Efficacy: 59.0 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Vertical Cylinder (Dia: 1.73' x H: 0.16')  
CIE Type: Indirect  
  
Input Watts (W): 153.8  
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									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	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	80	80	80	80	69	69	69	69	47	47	47	27	27	27	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	0																
1	73	69	66	64	62	59	57	55	41	39	38	23	23	22	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	0																
2	66	61	56	52	56	52	48	45	36	33	31	21	19	18	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0																
3	60	53	47	43	51	45	41	37	31	28	26	18	17	15	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0																
4	55	47	41	36	47	40	35	31	28	25	22	16	14	13	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	0																
5	50	41	35	31	43	36	30	27	24	21	19	14	12	11	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0																
6	46	37	31	26	39	32	26	23	22	19	16	13	11	10	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	0																
7	42	33	27	23	36	28	23	20	20	16	14	11	10	8	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0																
8	39	30	24	20	33	26	21	17	18	14	12	10	9	7	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	0																
9	36	27	21	17	31	23	18	15	16	13	11	9	8	6	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	0																
10	34	24	19	15	29	21	16	13	15	11	9	9	7	6	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0																

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

	0°	90°	180°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.0	0.0	0.0
10°-20°	0.0	0.0	0.0
20°-30°	0.0	0.0	0.0
30°-40°	0.0	0.0	0.0
40°-50°	0.0	0.0	0.0
50°-60°	0.0	0.0	0.0
60°-70°	0.0	0.0	0.0
70°-80°	0.0	0.0	0.0
80°-90°	23.9	0.3	0.2
90°-100°	195.4	2.2	1.8
100°-110°	674.7	7.4	6.2
110°-120°	1190.1	13.1	11.0
120°-130°	1595.5	17.6	14.8
130°-140°	1737.2	19.2	16.1
140°-150°	1565.6	17.3	14.5
150°-160°	1189.1	13.1	11.0
160°-170°	705.8	7.8	6.5
170°-180°	208.0	2.3	1.9
0°-30°	0.0	0.0	0.0
0°-40°	0.0	0.0	0.0
0°-60°	0.0	0.0	0.0
0°-90°	23.9	0.3	0.2
90°-120°	2060.1	22.7	19.1
90°-150°	6958.4	76.7	64.4
90°-180°	9061.0	99.9	83.9
0°-180°	9067.3	100.0	84.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	41	51	34	41	44	21
95°	142	184	122	145	183	154
105°	568	703	524	593	762	614
115°	1275	1212	1021	1215	1324	1246
125°	1920	1738	1623	1871	1835	1704
135°	2395	2235	2119	2358	2204	1848
145°	2682	2456	2373	2586	2485	1676
155°	2673	2582	2474	2566	2652	1237
165°	2477	2527	2484	2482	2551	705
175°	2089	2112	2116	2105	2116	207
180°	2012	2012	2012	2012	2012	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0
90°	41	45	51	44	34	41	41	52	44
92.5°	71	81	100	100	61	76	72	97	96
95°	142	154	184	188	122	150	145	180	183
97.5°	227	243	302	329	205	242	239	284	314
100°	322	341	426	457	304	343	341	396	451
102.5°	437	451	558	612	397	457	467	526	606
105°	568	586	703	758	524	601	593	651	762
107.5°	715	722	856	907	651	761	754	781	893
110°	901	847	975	1047	777	926	890	905	1040
112.5°	1084	995	1103	1188	911	1102	1042	1027	1180
115°	1275	1124	1212	1323	1021	1274	1215	1147	1324
117.5°	1431	1288	1329	1445	1151	1454	1365	1283	1447
120°	1600	1440	1436	1548	1303	1608	1540	1417	1584
122.5°	1753	1608	1585	1682	1465	1772	1703	1574	1729
125°	1920	1756	1738	1811	1623	1922	1871	1730	1835
127.5°	2062	1901	1883	1937	1776	2071	2011	1886	1953
130°	2174	2013	2029	2043	1892	2189	2137	2007	2043
132.5°	2297	2108	2140	2134	2014	2301	2256	2129	2130
135°	2395	2213	2235	2220	2119	2404	2358	2221	2204
137.5°	2499	2308	2298	2288	2212	2500	2444	2288	2269
140°	2575	2381	2363	2354	2279	2586	2519	2340	2338
142.5°	2652	2425	2415	2415	2328	2645	2564	2384	2409
145°	2682	2454	2456	2473	2373	2671	2586	2419	2485
147.5°	2703	2481	2488	2529	2409	2683	2592	2451	2559
150°	2714	2488	2523	2585	2433	2688	2587	2469	2605
152.5°	2709	2489	2556	2627	2451	2675	2577	2495	2630
155°	2673	2493	2582	2642	2474	2653	2566	2515	2652
157.5°	2635	2507	2587	2638	2497	2630	2564	2537	2654
160°	2597	2518	2578	2627	2516	2594	2555	2540	2630
162.5°	2545	2505	2561	2592	2512	2548	2536	2526	2597
165°	2477	2456	2527	2537	2484	2485	2482	2490	2551
167.5°	2406	2399	2458	2447	2418	2404	2413	2424	2469
170°	2321	2295	2338	2339	2320	2308	2308	2317	2351
172.5°	2206	2196	2226	2212	2219	2202	2209	2212	2231
175°	2089	2095	2112	2107	2116	2090	2105	2107	2116
177.5°	2021	2024	2036	2025	2034	2024	2030	2028	2040
180°	2012	2012	2012	2012	2012	2012	2012	2012	2012

(END OF REPORT)