

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: FAIL-SAFE

Report Number: 08095

Luminaire Tested: **CTFP-TL22-8/42-E**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 08095  
Test Lab: LUMINAIRE TESTING LABORATORY, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CTFP-TL22-8/42-E  
Description: FORMED AND FABRICATED STEEL HOUSING, SPUN WHITE ENAMEL  
ALUMINUM OUTER HOUSING, CLEAR ACRYLIC PRISMATIC REFLECTOR/  
REFRACTOR WITH CLEAR ACRYLIC PRISMATIC LENS.  
Light Source: EIGHT VBU 42 WATT TRIPLE TUBE COMPACT FLUORESCENT LAMPS RATED  
AT 3200 LUMENS EACH.  
SYLVANIA CF42DT/E/IN/827  
Ballast/Driver: FOUR ADVANCE ICF-2S42-M2-LD

**Summary**

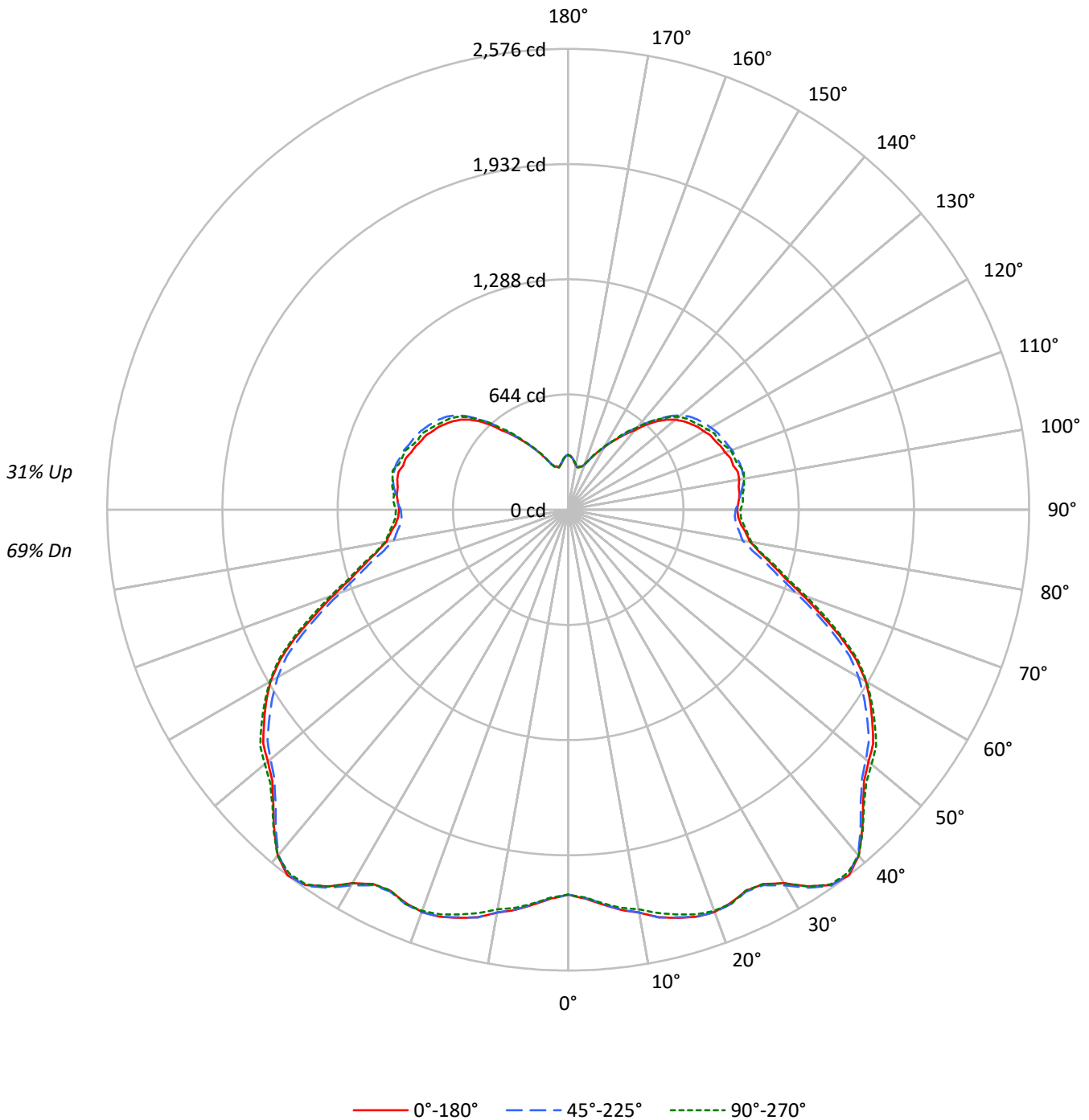
Lumens per Lamp: 3200 (8 lamps)  
Luminaire Lumens: 16264.6 lumens  
Efficiency: 63.5%  
Efficacy: 56.5 lumens/watt  
Spacing Criteria (0/90/45): 1.73 / 1.73 / 1.74  
Luminous Opening: Vertical Cylinder (Dia: 1.87' x H: 1.23')  
CIE Type: Semi-Direct

Input Watts (W): 288  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	71	71	71	71	67	67	67	67	60	60	60	53	53	53	47	47	47	44
1	63	59	56	53	59	56	53	50	49	47	45	44	42	40	38	37	36	33
2	56	51	46	42	53	48	43	40	42	39	36	37	34	32	32	30	28	26
3	51	44	38	34	48	41	36	32	37	32	29	32	29	26	28	25	23	21
4	46	38	32	28	43	36	31	27	32	28	24	28	25	22	25	22	19	17
5	42	34	28	24	40	32	27	23	28	24	20	25	21	18	22	19	17	15
6	39	30	24	20	36	29	23	19	25	21	18	22	19	16	20	17	14	12
7	36	27	21	17	34	26	20	17	23	18	15	20	17	14	18	15	12	11
8	33	25	19	15	31	23	18	15	21	16	13	18	15	12	16	13	11	9
9	31	22	17	14	29	21	16	13	19	15	12	17	13	11	15	12	10	8
10	29	20	15	12	27	19	15	12	17	13	11	16	12	10	14	11	9	7

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

	0°	45°	90°
0°	8434	8434	8434
5°	8119	8101	8094
10°	7930	7923	7865
15°	7827	7817	7761
20°	7649	7655	7627
25°	7308	7324	7305
30°	7352	7398	7358
35°	7724	7736	7712
40°	7587	7572	7587
45°	7028	6974	7049
50°	6686	6625	6753
55°	6456	6344	6509
60°	6145	5997	6161
65°	5559	5420	5615
70°	4832	4690	4905
75°	4320	4188	4375
80°	4047	3882	4075
85°	4126	4002	4190



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	213.5	1.3	0.8	0°	2152	2152	2152	2152	2152	
10°-20°	665.0	4.1	2.6	5°	2215	2216	2210	2209	2208	214
20°-30°	1115.0	6.9	4.4	15°	2362	2333	2359	2328	2342	669
30°-40°	1586.5	9.8	6.2	25°	2350	2438	2355	2434	2349	1098
40°-50°	1798.9	11.1	7.0	35°	2561	2533	2565	2544	2557	1588
50°-60°	1816.0	11.2	7.1	45°	2330	2307	2312	2311	2337	1809
60°-70°	1625.6	10.0	6.4	55°	2075	1994	2039	2021	2092	1855
70°-80°	1286.2	7.9	5.0	65°	1676	1609	1634	1627	1693	1652
80°-90°	1091.3	6.7	4.3	75°	1177	1257	1141	1244	1192	1256
90°-100°	1089.0	6.7	4.3	85°	970	1033	941	1018	985	807
100°-110°	1076.4	6.6	4.2	90°	944	1014	935	1001	963	520
110°-120°	965.8	5.9	3.8	95°	961	1033	966	1013	978	785
120°-130°	798.9	4.9	3.1	105°	954	1061	994	1049	980	1013
130°-140°	564.4	3.5	2.2	115°	907	1014	950	1003	925	902
140°-150°	319.1	2.0	1.2	125°	836	922	880	919	854	749
150°-160°	155.6	1.0	0.6	135°	698	746	720	747	715	538
160°-170°	71.3	0.4	0.3	145°	489	508	495	511	501	310
170°-180°	26.2	0.2	0.1	155°	330	325	332	327	339	156
0°-30°	1993.4	12.3	7.8	165°	251	249	242	242	246	72
0°-40°	3579.9	22.0	14.0	175°	287	287	288	286	286	26
0°-60°	7194.7	44.2	28.1	180°	306	306	306	306	306	
0°-90°	11197.9	68.8	43.7							
90°-120°	3131.2	19.3	12.2							
90°-150°	4813.6	29.6	18.8							
90°-180°	5067.0	31.2	19.8							
0°-180°	16264.6	100.0	63.5							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2152	2152	2152	2152	2152
2.5°	2176	2177	2172	2178	2169
5°	2215	2216	2210	2209	2208
7.5°	2256	2257	2255	2254	2244
10°	2287	2284	2285	2277	2268
12.5°	2333	2313	2335	2307	2309
15°	2362	2333	2359	2328	2342
17.5°	2386	2356	2385	2352	2372
20°	2393	2381	2395	2376	2386
22.5°	2378	2409	2383	2406	2383
25°	2350	2438	2355	2434	2349
27.5°	2359	2475	2366	2469	2359
30°	2410	2496	2425	2503	2412
32.5°	2496	2512	2505	2526	2496
35°	2561	2533	2565	2544	2557
37.5°	2576	2525	2570	2541	2562
40°	2525	2495	2520	2507	2525
42.5°	2431	2412	2417	2419	2436
45°	2330	2307	2312	2311	2337
47.5°	2242	2219	2226	2229	2258
50°	2191	2152	2171	2173	2213
52.5°	2148	2089	2118	2111	2169
55°	2075	1994	2039	2021	2092
57.5°	2001	1889	1960	1919	2012
60°	1921	1787	1875	1814	1926
62.5°	1813	1693	1773	1716	1827
65°	1676	1609	1634	1627	1693
67.5°	1527	1549	1490	1561	1550
70°	1392	1474	1351	1477	1413
72.5°	1269	1361	1232	1354	1285
75°	1177	1257	1141	1244	1192
77.5°	1095	1169	1054	1153	1102
80°	1031	1096	989	1077	1038
82.5°	1002	1064	966	1047	1011
85°	970	1033	941	1018	985
87.5°	951	1015	932	997	965
90°	944	1014	935	1001	963
92.5°	953	1025	955	1011	977
95°	961	1033	966	1013	978
97.5°	961	1049	983	1032	992
100°	970	1056	995	1047	996
102.5°	972	1070	996	1055	1006
105°	954	1061	994	1049	980
107.5°	953	1059	982	1044	972
110°	934	1055	975	1038	968



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	924	1037	960	1026	942
115°	907	1014	950	1003	925
117.5°	898	1000	937	990	922
120°	876	977	919	968	898
122.5°	860	954	901	945	877
125°	836	922	880	919	854
127.5°	812	891	854	893	836
130°	782	855	820	850	807
132.5°	744	808	775	801	766
135°	698	746	720	747	715
137.5°	643	679	663	682	662
140°	580	619	603	623	600
142.5°	535	563	544	566	554
145°	489	508	495	511	501
147.5°	445	449	451	458	448
150°	404	405	407	411	412
152.5°	368	357	365	361	368
155°	330	325	332	327	339
157.5°	301	291	298	298	298
160°	269	270	269	278	270
162.5°	253	249	251	256	255
165°	251	249	242	242	246
167.5°	241	244	240	243	241
170°	251	251	253	256	255
172.5°	265	268	269	268	270
175°	287	287	288	286	286
177.5°	301	301	301	301	299
180°	306	306	306	306	306

(END OF REPORT)