

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: 01716

Luminaire Tested: **CFE3-417**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 01716  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CFE3-417  
Description: FORMED STEEL HOUSING, WHITE ENAMEL REFLECTOR, CLEAR ACRYLIC  
PRISMATIC LENS WITH PRISMS ON INTERIOR SURFACE.  
Light Source: FOUR PHILIPS F17T8/TL741 RATED 1350 LUMENS EACH.  
Ballast/Driver: TWO ADVANCE REL-2P32-RH-TP

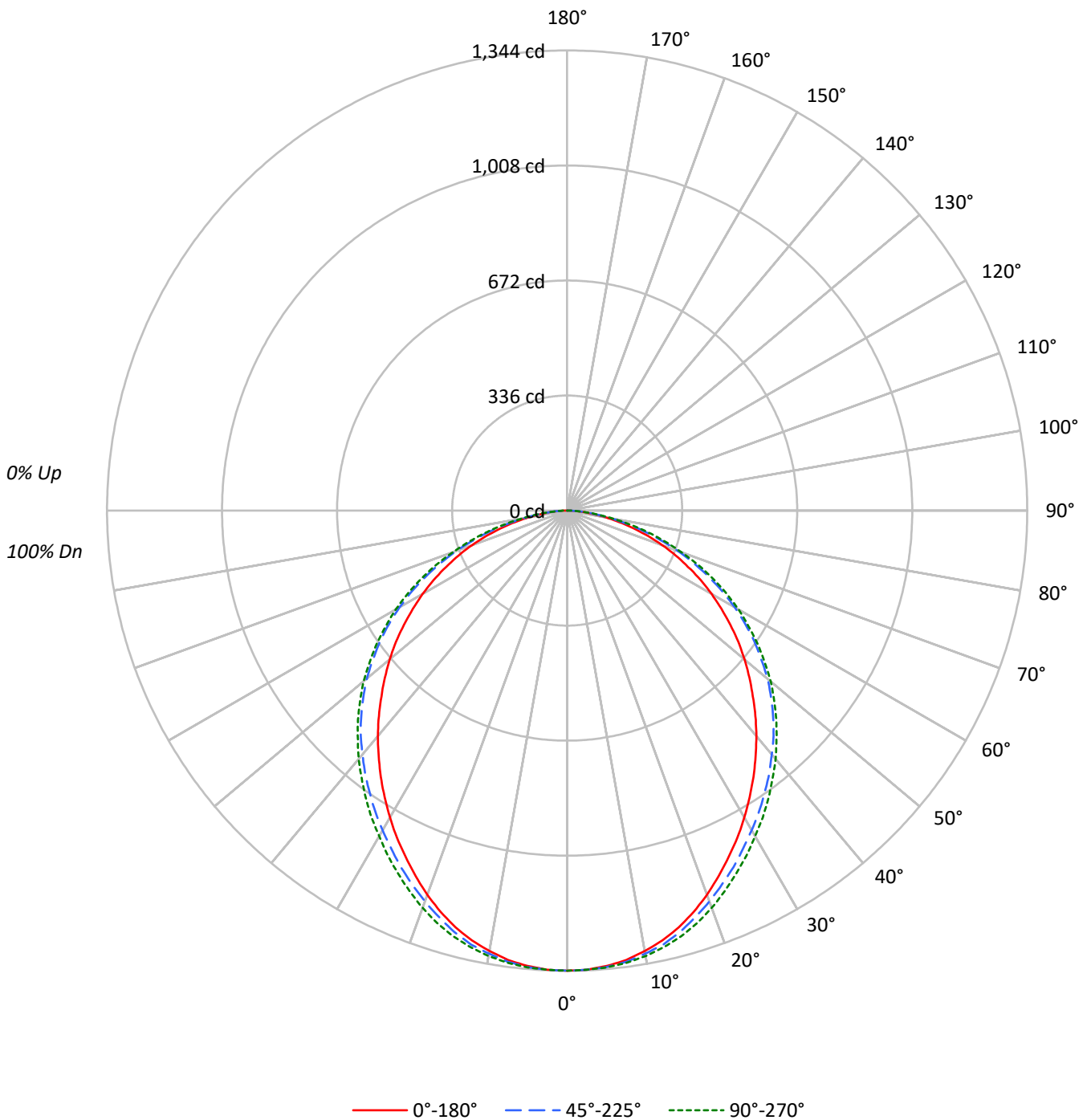
**Summary**

Lumens per Lamp: 1350 (4 lamps)  
Luminaire Lumens: 3597.6 lumens  
Efficiency: 66.6%  
Efficacy: 60.0 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.22 / 1.34  
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')  
CIE Type: Direct

Input Watts (W): 60  
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	79	79	79	79	77	77	77	77	74	74	74	71	71	71	68	68	68	67
1	73	69	67	64	71	68	65	63	65	63	61	62	61	59	60	59	57	56
2	66	61	56	52	64	59	55	52	57	53	50	55	52	49	53	50	48	47
3	60	53	48	43	59	52	47	43	50	46	42	48	45	42	47	43	41	39
4	55	47	41	37	54	46	41	37	45	40	36	43	39	36	42	38	35	34
5	51	42	36	32	49	41	36	32	40	35	31	39	34	31	37	34	31	29
6	47	38	32	28	46	37	32	28	36	31	27	35	31	27	34	30	27	26
7	43	34	29	25	42	34	28	24	33	28	24	32	27	24	31	27	24	23
8	40	31	26	22	39	31	26	22	30	25	22	29	25	22	28	24	21	20
9	38	29	23	20	37	28	23	20	28	23	20	27	23	19	26	22	19	18
10	35	27	21	18	35	26	21	18	26	21	18	25	21	18	24	20	18	16

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

	0°	45°	90°
0°	4724	4724	4724
5°	4710	4721	4724
10°	4661	4690	4715
15°	4585	4636	4683
20°	4466	4544	4619
25°	4328	4456	4533
30°	4201	4375	4456
35°	4072	4316	4398
40°	3946	4267	4345
45°	3812	4230	4295
50°	3696	4178	4243
55°	3566	4093	4161
60°	3423	3972	4063
65°	3243	3784	3909
70°	3042	3535	3648
75°	2730	3137	3300
80°	2307	2591	2773
85°	1774	1895	2097



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	127.0	3.5	2.4	0°	1344	1344	1344	1344	1344	
10°-20°	358.7	10.0	6.6	5°	1335	1336	1338	1339	1339	127
20°-30°	528.2	14.7	9.8	15°	1260	1265	1274	1285	1287	354
30°-40°	624.1	17.3	11.6	25°	1116	1125	1149	1168	1169	514
40°-50°	642.2	17.9	11.9	35°	949	967	1006	1029	1025	593
50°-60°	578.7	16.1	10.7	45°	767	796	851	867	864	593
60°-70°	437.9	12.2	8.1	55°	582	613	668	681	679	520
70°-80°	241.1	6.7	4.5	65°	390	417	455	468	470	387
80°-90°	59.8	1.7	1.1	75°	201	216	231	242	243	214
90°-100°	0.0	0.0	0.0	85°	44	48	47	51	52	54
100°-110°	0.0	0.0	0.0	90°	3	3	3	3	4	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1013.9	28.2	18.8							
0°-40°	1637.9	45.5	30.3							
0°-60°	2858.8	79.5	52.9							
0°-90°	3597.6	100.0	66.6							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	3597.6	100.0	66.6							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1344	1344	1344	1344	1344
2.5°	1342	1342	1342	1344	1342
5°	1335	1336	1338	1339	1339
7.5°	1324	1326	1329	1333	1332
10°	1306	1309	1314	1320	1321
12.5°	1286	1290	1298	1305	1306
15°	1260	1265	1274	1285	1287
17.5°	1229	1233	1245	1261	1263
20°	1194	1200	1215	1231	1235
22.5°	1156	1162	1182	1200	1203
25°	1116	1125	1149	1168	1169
27.5°	1077	1086	1113	1135	1135
30°	1035	1047	1078	1100	1098
32.5°	992	1007	1043	1066	1063
35°	949	967	1006	1029	1025
37.5°	904	926	969	991	986
40°	860	883	930	952	947
42.5°	814	840	892	911	905
45°	767	796	851	867	864
47.5°	722	751	808	823	820
50°	676	707	764	777	776
52.5°	630	660	715	729	727
55°	582	613	668	681	679
57.5°	534	566	617	628	628
60°	487	517	565	577	578
62.5°	440	468	511	524	524
65°	390	417	455	468	470
67.5°	343	368	399	413	414
70°	296	317	344	355	355
72.5°	248	266	286	296	298
75°	201	216	231	242	243
77.5°	156	167	177	185	187
80°	114	122	128	135	137
82.5°	78	83	85	88	92
85°	44	48	47	51	52
87.5°	18	21	20	22	22
90°	3	3	3	3	4

(END OF REPORT)