

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: P30112

Luminaire Tested: **CRF-24-217-UNV-IK12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P30112
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CRF-24-217-UNV-IK12
Description: FAILSAFE TRISEAL CRF SERIES 2x2 2L T8
Light Source: (2) DOUBLE ENDED T8 2 FOOT LINEAR FLUORESCENT LAMPS
F17W T8 17 WATTS
Ballast/Driver: GE PROLINE T8
GE 232-MNV

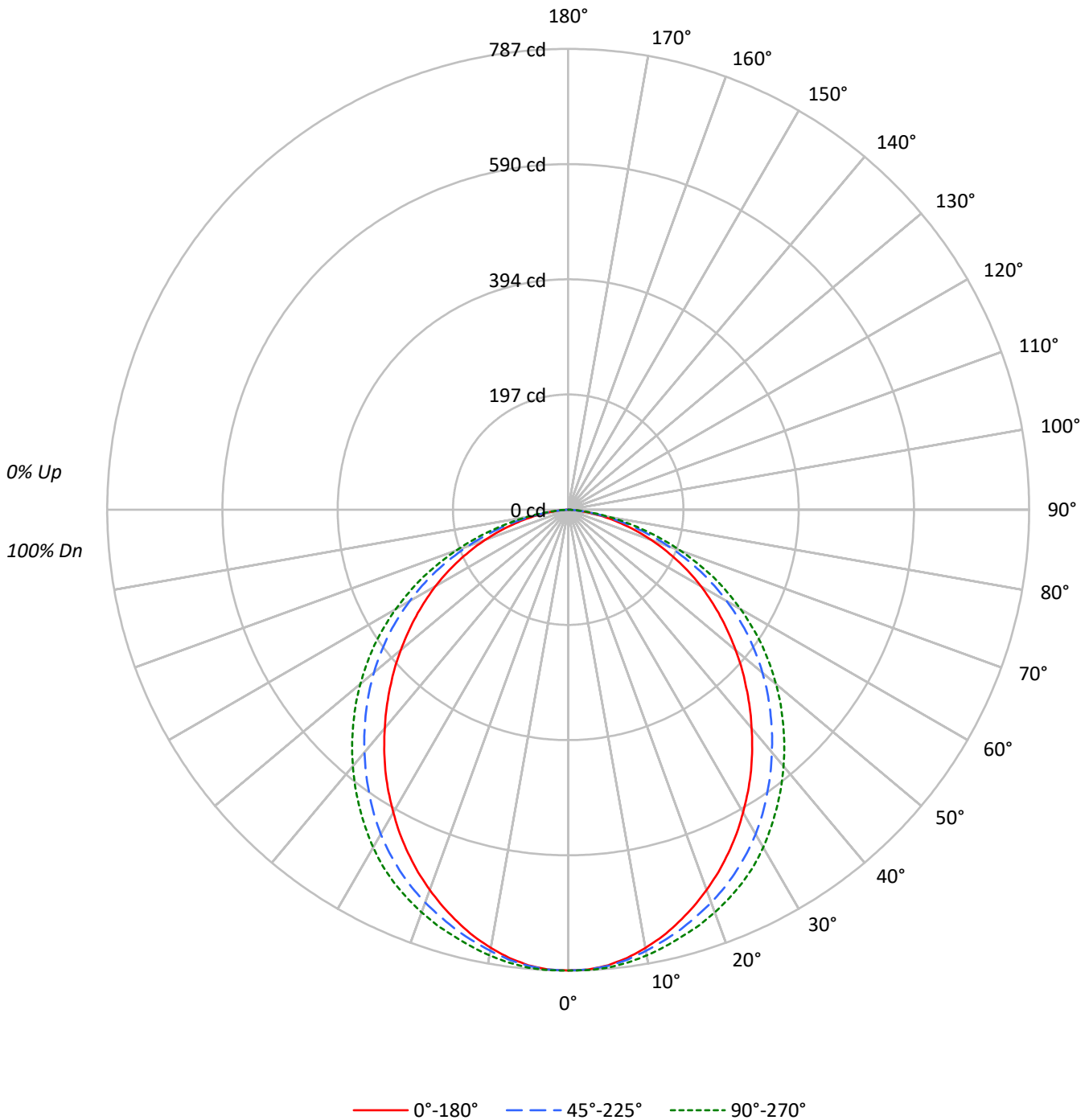
Summary

Lumens per Lamp: 1325 (2 lamps)
Luminaire Lumens: 2054.8 lumens
Efficiency: 77.5%
Efficacy: 61.5 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.25 / 1.33
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')
CIE Type: Direct

Input Watts (W): 33.4
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

TEST NUMBER: P30112
CATALOG NUMBER: CRF-24-217-UNV-IK12

Luminous Intensity Polar Plot





TEST NUMBER: P30112

CATALOG NUMBER: CRF-24-217-UNV-IK12

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	50	30	10	0	
RCR																						
0	92	92	92	92	90	90	90	90	86	86	86	82	82	82	79	79	79	78				78
1	85	81	78	75	83	79	76	74	76	74	72	73	71	69	70	69	67	66				66
2	77	71	66	61	75	69	65	61	67	63	59	64	61	58	62	59	57	55				55
3	70	62	56	51	69	61	55	51	59	54	50	57	53	49	55	51	48	47				47
4	65	55	49	44	63	54	48	43	52	47	43	51	46	42	49	45	42	40				40
5	59	50	43	38	58	49	42	37	47	41	37	46	41	37	44	40	36	35				35
6	55	45	38	33	53	44	38	33	43	37	32	41	36	32	40	35	32	30				30
7	51	41	34	29	50	40	34	29	39	33	29	38	32	29	37	32	28	27				27
8	47	37	31	26	46	37	30	26	36	30	26	35	29	26	34	29	25	24				24
9	44	34	28	23	43	34	28	23	33	27	23	32	27	23	31	26	23	22				22
10	42	31	25	21	41	31	25	21	30	25	21	30	25	21	29	24	21	20				20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2766	2766	2766
5°	2756	2759	2770
10°	2712	2730	2759
15°	2653	2700	2744
20°	2585	2671	2738
25°	2509	2637	2726
30°	2423	2597	2703
35°	2334	2540	2665
40°	2234	2482	2624
45°	2137	2426	2580
50°	2040	2368	2532
55°	1943	2298	2476
60°	1842	2200	2390
65°	1713	2071	2279
70°	1552	1870	2086
75°	1331	1602	1820
80°	1053	1235	1437
85°	645	726	847



TEST NUMBER: P30112

CATALOG NUMBER: CRF-24-217-UNV-IK12

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	74.1	3.6	2.8	0°	787	787	787	787	787	
10°-20°	209.2	10.2	7.9	5°	781	781	782	784	785	74
20°-30°	312.1	15.2	11.8	15°	729	733	742	751	754	205
30°-40°	367.1	17.9	13.9	25°	647	658	680	698	703	298
40°-50°	371.4	18.1	14.0	35°	544	558	592	615	621	340
50°-60°	328.7	16.0	12.4	45°	430	449	488	514	519	332
60°-70°	242.0	11.8	9.1	55°	317	337	375	400	404	284
70°-80°	125.5	6.1	4.7	65°	206	222	249	270	274	204
80°-90°	24.7	1.2	0.9	75°	98	106	118	131	134	105
90°-100°	0.0	0.0	0.0	85°	16	17	18	20	21	21
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	1
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	595.5	29.0	22.5	165°	0	0	0	0	0	0
0°-40°	962.6	46.8	36.3	175°	0	0	0	0	0	0
0°-60°	1662.7	80.9	62.7	180°	0	0	0	0	0	0
0°-90°	2054.8	100.0	77.5							
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°	2054.8	100.0	77.5							



TEST NUMBER: P30112

CATALOG NUMBER: CRF-24-217-UNV-IK12

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	787	787	787	787	787
2.5°	786	786	786	786	787
5°	781	781	782	784	785
7.5°	772	773	775	778	780
10°	760	761	765	770	773
12.5°	746	748	754	761	764
15°	729	733	742	751	754
17.5°	711	716	728	740	744
20°	691	698	714	727	732
22.5°	670	679	698	714	718
25°	647	658	680	698	703
27.5°	623	635	661	681	686
30°	597	610	640	661	666
32.5°	571	584	617	638	644
35°	544	558	592	615	621
37.5°	516	531	567	591	597
40°	487	504	541	566	572
42.5°	459	477	515	540	546
45°	430	449	488	514	519
47.5°	402	421	461	486	492
50°	373	393	433	458	463
52.5°	345	366	404	429	434
55°	317	337	375	400	404
57.5°	289	309	344	369	372
60°	262	281	313	337	340
62.5°	234	251	281	303	307
65°	206	222	249	270	274
67.5°	178	192	215	235	238
70°	151	163	182	200	203
72.5°	124	134	150	165	169
75°	98	106	118	131	134
77.5°	74	80	88	99	101
80°	52	56	61	68	71
82.5°	32	35	37	42	43
85°	16	17	18	20	21
87.5°	4	4	3	4	4
90°	0	0	0	0	0
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



TEST NUMBER: P30112

CATALOG NUMBER: CRF-24-217-UNV-IK12

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)