

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: P311932

Luminaire Tested: **14FCZ2-35-UNV-L83050-HRP-CP187-W2A-U-4000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P311932  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 14FCZ2-35-UNV-L83050-HRP-CP187-W2A-U-4000K  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (168) 4000K TUNABLE CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: 

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

**Summary**

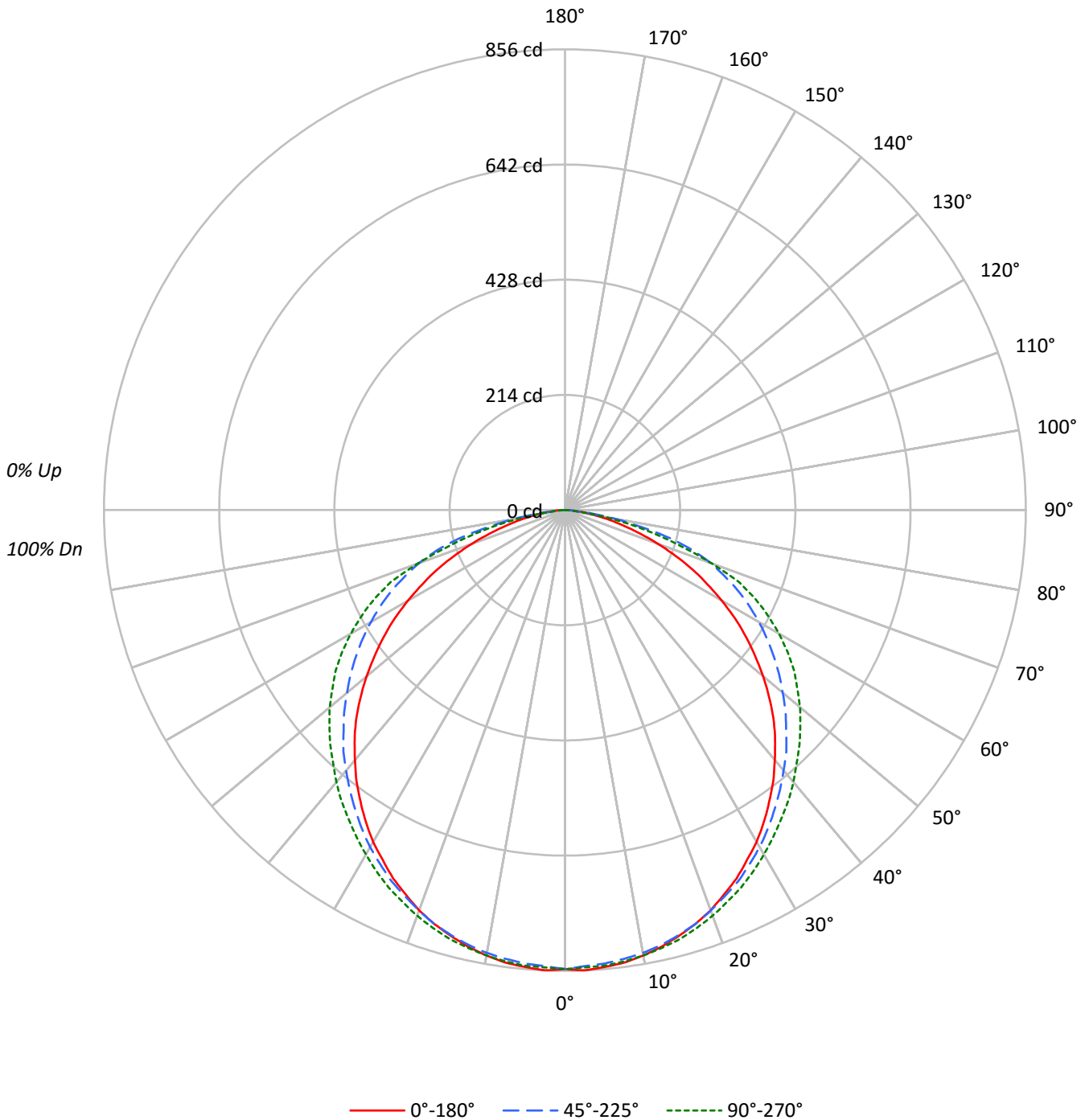
Lumens per Lamp: N/A  
Luminaire Lumens: 2511.0 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	2295	2295	2295
5°	2301	2284	2295
10°	2296	2283	2296
15°	2281	2277	2299
20°	2266	2268	2297
25°	2241	2260	2298
30°	2213	2247	2296
35°	2174	2231	2301
40°	2130	2219	2319
45°	2085	2211	2344
50°	2013	2211	2387
55°	1926	2222	2437
60°	1810	2239	2469
65°	1669	2262	2484
70°	1454	2268	2286
75°	1199	2110	1848
80°	942	1517	1235
85°	732	584	293



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.7	3.2
10°-20°	231.7	9.2
20°-30°	351.8	14.0
30°-40°	426.3	17.0
40°-50°	449.2	17.9
50°-60°	419.3	16.7
60°-70°	335.1	13.3
70°-80°	184.4	7.3
80°-90°	32.5	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	664.2	26.5
0°-40°	1090.4	43.4
0°-60°	1958.9	78.0
0°-90°	2511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2511.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	852	850	846	851	850	81
15°	819	819	817	825	825	231
25°	755	756	761	772	774	347
35°	662	668	679	696	700	414
45°	548	558	581	607	616	422
55°	411	431	474	507	520	367
65°	262	295	355	384	390	258
75°	115	165	203	182	178	124
85°	24	30	19	12	10	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	852.7	852.7	852.7	852.7	852.7
2.5°	855.9	853.5	848.0	852.7	850.4
5°	852.0	849.6	845.6	851.2	849.6
7.5°	848.0	844.9	840.9	847.2	845.6
10°	840.1	837.7	835.4	840.9	840.1
12.5°	830.6	829.9	827.5	833.8	833.0
15°	818.8	818.8	817.2	825.1	825.1
17.5°	806.2	805.4	806.2	814.8	814.1
20°	791.2	791.2	792.0	802.2	802.2
22.5°	773.0	773.8	776.2	788.8	788.0
25°	754.8	756.4	761.2	772.2	773.8
27.5°	732.7	736.7	742.2	755.6	757.2
30°	712.2	714.6	723.3	735.9	739.0
32.5°	687.7	692.5	701.9	716.2	720.1
35°	661.7	668.0	679.0	696.4	700.4
37.5°	635.6	641.1	656.1	674.3	681.4
40°	606.4	615.9	631.7	652.2	660.1
42.5°	578.0	587.4	608.8	630.1	637.2
45°	548.0	558.2	581.1	607.2	615.9
47.5°	514.8	526.7	555.9	583.5	593.0
50°	480.9	495.9	528.2	559.0	570.1
52.5°	445.3	464.3	501.4	533.8	544.0
55°	410.6	431.1	473.7	506.9	519.5
57.5°	375.1	397.2	445.3	483.2	490.3
60°	336.4	363.2	416.1	449.3	458.7
62.5°	298.5	329.3	386.1	417.7	425.6
65°	262.1	295.3	355.3	384.5	390.1
67.5°	222.7	262.1	321.4	348.2	349.8
70°	184.8	230.6	288.2	300.8	290.6
72.5°	147.7	196.6	249.5	239.2	230.6
75°	115.3	165.0	202.9	182.4	177.7
77.5°	85.3	135.0	145.3	134.2	125.5
80°	60.8	106.6	97.9	83.7	79.7
82.5°	41.8	67.1	53.7	41.8	36.3
85°	23.7	30.0	18.9	11.8	9.5
87.5°	10.3	7.1	3.9	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)