

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: P312555

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-CP187-W2A-U-3000K**

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: P312555  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-39HE-UNV-L83050-HRP-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET  
Light Source: (168) 3000K 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**

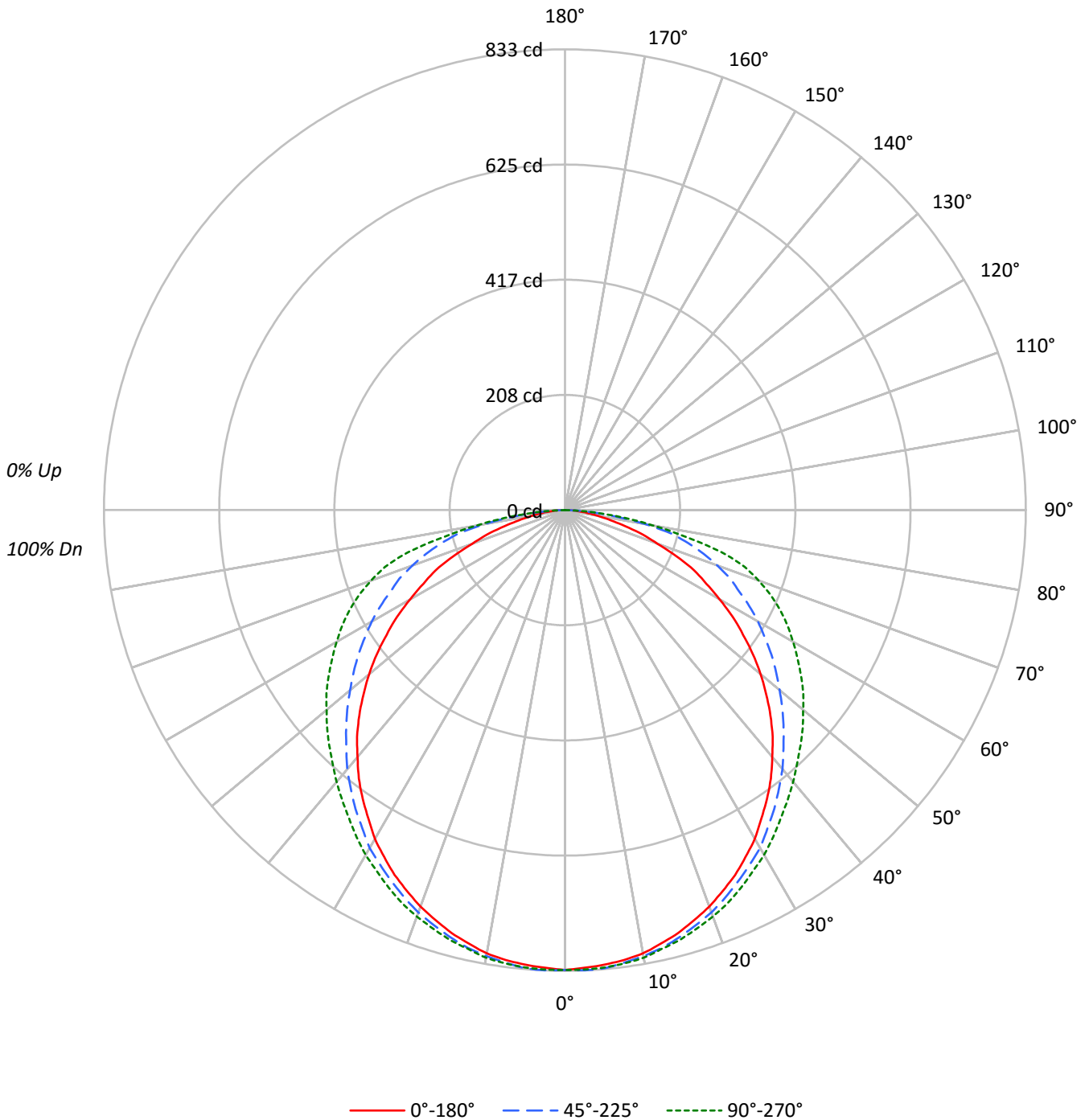
Lumens per Lamp: N/A  
Luminaire Lumens: 2525.0 lumens  
Efficiency: N/A  
Efficacy: 78.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 32.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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

	0°	45°	90°
0°	2238	2238	2238
5°	2229	2246	2242
10°	2224	2237	2246
15°	2205	2228	2241
20°	2185	2217	2240
25°	2161	2199	2237
30°	2133	2192	2237
35°	2093	2166	2234
40°	2048	2148	2255
45°	2000	2128	2291
50°	1934	2120	2354
55°	1846	2137	2444
60°	1740	2169	2563
65°	1643	2211	2739
70°	1404	2306	2932
75°	1176	2402	3047
80°	962	2320	2543
85°	837	1720	1868



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.8	3.1
10°-20°	225.4	8.9
20°-30°	341.6	13.5
30°-40°	412.5	16.3
40°-50°	433.5	17.2
50°-60°	407.8	16.2
60°-70°	340.0	13.5
70°-80°	225.3	8.9
80°-90°	60.0	2.4
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°	645.8	25.6
0°-40°	1058.3	41.9
0°-60°	1899.6	75.2
0°-90°	2525.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2525.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	832	832	832	832	832	
5°	825	827	832	832	830	78
15°	792	795	800	803	804	223
25°	728	733	741	750	753	335
35°	637	644	659	674	680	398
45°	526	534	559	588	602	405
55°	393	411	456	502	521	352
65°	258	280	347	405	430	251
75°	113	158	231	279	293	123
85°	27	41	56	60	60	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	831.5	831.5	831.5	831.5	831.5
2.5°	828.3	829.9	833.0	833.0	831.5
5°	825.1	826.7	831.5	831.5	829.9
7.5°	820.3	821.9	825.1	828.3	826.7
10°	813.9	815.5	818.7	821.9	821.9
12.5°	802.8	804.4	810.7	812.3	812.3
15°	791.6	794.8	799.6	802.8	804.4
17.5°	777.3	780.5	786.9	793.2	793.2
20°	763.0	766.1	774.1	780.5	782.1
22.5°	745.4	750.2	758.2	766.1	769.3
25°	727.9	732.7	740.7	750.2	753.4
27.5°	707.2	712.0	723.1	734.3	735.9
30°	686.5	691.3	705.6	715.2	720.0
32.5°	661.0	667.4	681.7	696.1	700.8
35°	637.1	643.5	659.4	673.8	680.1
37.5°	611.6	618.0	635.5	653.1	661.0
40°	583.0	590.9	611.6	630.8	641.9
42.5°	555.9	563.9	584.6	610.1	621.2
45°	525.6	533.6	559.1	587.8	602.1
47.5°	493.8	503.3	533.6	568.6	583.0
50°	461.9	473.1	506.5	546.3	562.3
52.5°	428.5	442.8	481.0	524.0	543.2
55°	393.4	410.9	455.5	501.7	520.9
57.5°	360.0	375.9	428.5	477.8	498.6
60°	323.3	344.0	403.0	454.0	476.3
62.5°	288.3	310.6	375.9	430.1	454.0
65°	258.0	280.3	347.2	404.6	430.1
67.5°	218.2	248.5	323.3	377.5	403.0
70°	178.4	219.8	293.1	348.8	372.7
72.5°	148.1	188.0	262.8	318.6	340.9
75°	113.1	157.7	231.0	278.7	293.1
77.5°	84.4	130.6	197.5	221.4	223.0
80°	62.1	100.3	149.7	157.7	164.1
82.5°	43.0	70.1	97.2	106.7	109.9
85°	27.1	41.4	55.7	60.5	60.5
87.5°	14.3	15.9	19.1	19.1	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)