

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: P311956

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-CP187-W2A-U-3500K**

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: P311956
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: 14FCZ2-39-UNV-L83050-HRP-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 3500K 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: 2639.0 lumens
Efficiency: N/A
Efficacy: 79.2 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

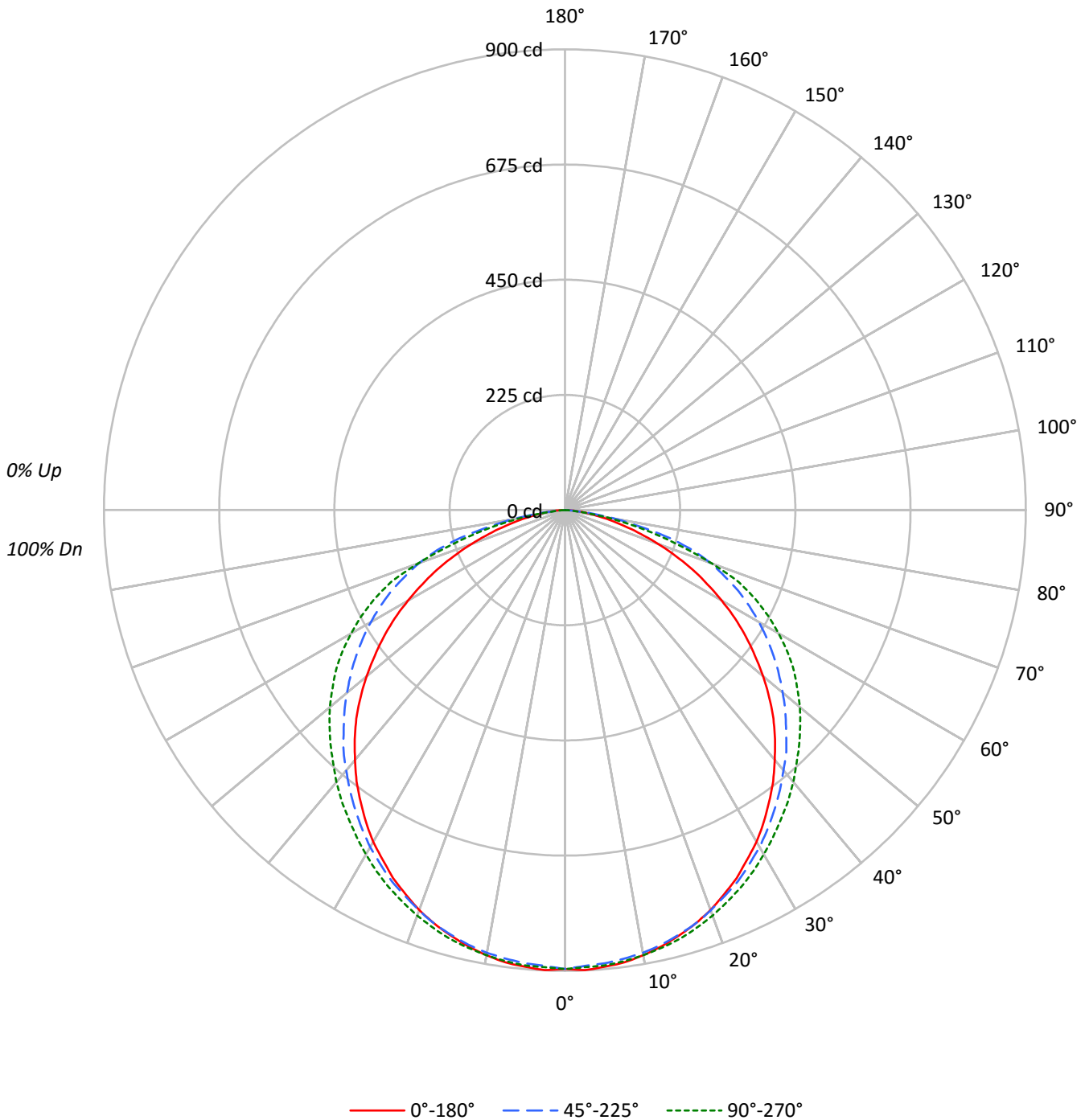
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2412	2412	2412
5°	2419	2401	2412
10°	2413	2399	2413
15°	2397	2393	2416
20°	2381	2383	2414
25°	2355	2375	2415
30°	2326	2362	2413
35°	2284	2345	2418
40°	2239	2332	2437
45°	2192	2324	2463
50°	2116	2324	2508
55°	2024	2336	2562
60°	1903	2354	2595
65°	1754	2378	2610
70°	1528	2383	2403
75°	1260	2218	1941
80°	990	1595	1299
85°	769	614	309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	3.2
10°-20°	243.5	9.2
20°-30°	369.7	14.0
30°-40°	448.0	17.0
40°-50°	472.1	17.9
50°-60°	440.7	16.7
60°-70°	352.2	13.3
70°-80°	193.8	7.3
80°-90°	34.2	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°	698.0	26.5
0°-40°	1146.0	43.4
0°-60°	2058.8	78.0
0°-90°	2639.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2639.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	895	893	889	895	893	85
15°	860	860	859	867	867	243
25°	793	795	800	812	813	365
35°	695	702	714	732	736	435
45°	576	587	611	638	647	443
55°	432	453	498	533	546	385
65°	276	310	373	404	410	271
75°	121	173	213	192	187	130
85°	25	32	20	12	10	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	896.2	896.2	896.2	896.2	896.2
2.5°	899.5	897.0	891.2	896.2	893.7
5°	895.4	892.9	888.7	894.6	892.9
7.5°	891.2	887.9	883.8	890.4	888.7
10°	882.9	880.5	878.0	883.8	882.9
12.5°	873.0	872.2	869.7	876.3	875.5
15°	860.5	860.5	858.9	867.2	867.2
17.5°	847.3	846.4	847.3	856.4	855.6
20°	831.5	831.5	832.3	843.1	843.1
22.5°	812.4	813.2	815.7	829.0	828.2
25°	793.3	795.0	800.0	811.6	813.2
27.5°	770.1	774.2	780.0	794.1	795.8
30°	748.5	751.0	760.1	773.4	776.7
32.5°	722.8	727.8	737.7	752.7	756.8
35°	695.4	702.0	713.7	731.9	736.1
37.5°	668.0	673.8	689.6	708.7	716.1
40°	637.3	647.3	663.9	685.4	693.7
42.5°	607.4	617.4	639.8	662.2	669.7
45°	575.9	586.7	610.8	638.1	647.3
47.5°	541.1	553.5	584.2	613.2	623.2
50°	505.4	521.1	555.2	587.5	599.1
52.5°	468.0	487.9	526.9	561.0	571.8
55°	431.5	453.1	497.9	532.8	546.0
57.5°	394.2	417.4	468.0	507.9	515.3
60°	353.5	381.7	437.3	472.2	482.1
62.5°	313.7	346.0	405.8	439.0	447.3
65°	275.5	310.4	373.4	404.1	409.9
67.5°	234.0	275.5	337.7	366.0	367.6
70°	194.2	242.3	302.9	316.2	305.4
72.5°	155.2	206.6	262.2	251.4	242.3
75°	121.2	173.4	213.3	191.7	186.7
77.5°	89.6	141.9	152.7	141.1	131.9
80°	63.9	112.0	102.9	88.0	83.8
82.5°	44.0	70.5	56.4	44.0	38.2
85°	24.9	31.5	19.9	12.4	10.0
87.5°	10.8	7.5	4.1	3.3	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)