

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: P312106

Luminaire Tested: **14FCZ2-39-UNV-L83050-RDP-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: P312106
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
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-RDP-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 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: 2232.0 lumens
Efficiency: N/A
Efficacy: 67.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

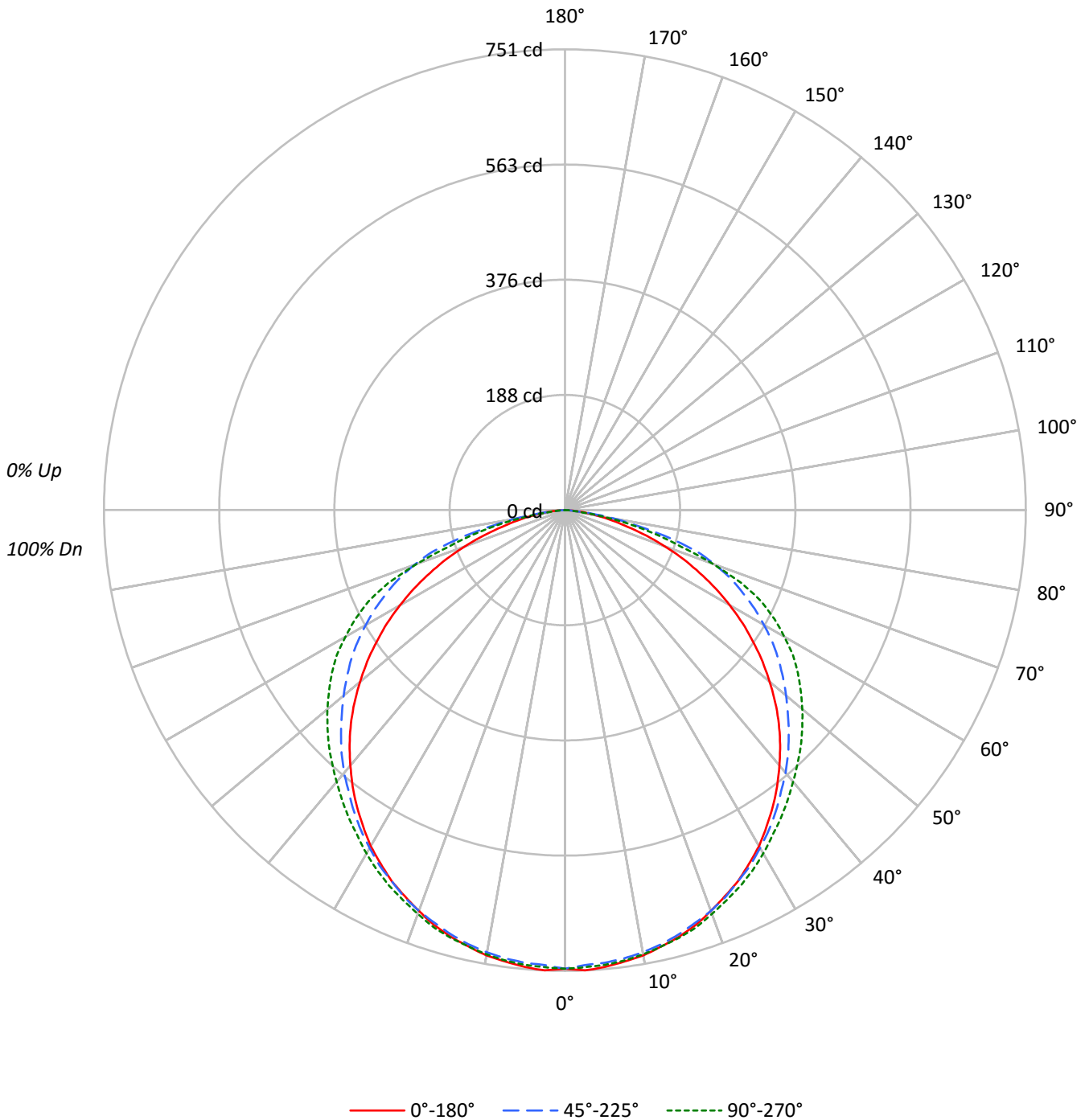
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2012	2012	2012
5°	2019	2001	2010
10°	2014	2000	2009
15°	2005	1995	2010
20°	1991	1991	2006
25°	1982	1982	2007
30°	1965	1976	2009
35°	1940	1969	2015
40°	1910	1965	2032
45°	1877	1963	2069
50°	1824	1970	2115
55°	1757	1995	2175
60°	1669	2016	2223
65°	1542	2041	2252
70°	1371	2057	2016
75°	1105	1848	1613
80°	865	1296	1054
85°	593	377	269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.8	3.2
10°-20°	203.0	9.1
20°-30°	309.1	13.8
30°-40°	376.5	16.9
40°-50°	399.4	17.9
50°-60°	377.0	16.9
60°-70°	304.4	13.6
70°-80°	165.1	7.4
80°-90°	26.7	1.2
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°	582.9	26.1
0°-40°	959.4	43.0
0°-60°	1735.8	77.8
0°-90°	2232.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2232.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	748	746	741	746	744	71
15°	720	718	716	721	721	203
25°	667	666	667	674	676	307
35°	591	594	599	612	613	369
45°	493	500	516	535	544	380
55°	375	390	425	453	464	335
65°	242	272	321	347	354	240
75°	106	155	178	160	155	116
85°	19	21	12	10	9	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	747.6	747.6	747.6	747.6	747.6
2.5°	751.0	747.6	742.3	747.6	745.8
5°	747.6	745.8	740.6	745.8	744.1
7.5°	742.3	742.3	737.1	740.6	740.6
10°	737.1	735.4	731.9	737.1	735.4
12.5°	728.4	726.6	724.9	730.1	728.4
15°	719.7	717.9	716.2	721.4	721.4
17.5°	709.2	707.5	705.7	712.7	712.7
20°	695.3	695.3	695.3	702.2	700.5
22.5°	681.3	681.3	683.1	690.0	688.3
25°	667.4	665.7	667.4	674.4	676.1
27.5°	650.0	651.7	653.5	660.4	662.2
30°	632.5	634.3	636.0	644.7	646.5
32.5°	611.6	615.1	618.6	629.1	629.1
35°	590.7	594.2	599.4	611.6	613.4
37.5°	568.1	571.6	578.5	592.5	596.0
40°	543.7	548.9	559.4	573.3	578.5
42.5°	519.3	526.2	538.4	554.1	561.1
45°	493.1	500.1	515.8	535.0	543.7
47.5°	465.3	474.0	493.1	517.5	524.5
50°	435.6	447.8	470.5	496.6	505.3
52.5°	406.0	420.0	447.8	475.7	484.4
55°	374.6	390.3	425.2	453.1	463.5
57.5°	343.3	360.7	400.8	430.4	440.9
60°	310.2	331.1	374.6	404.3	413.0
62.5°	277.1	301.5	348.5	378.1	385.1
65°	242.2	271.8	320.6	346.8	353.7
67.5°	209.1	244.0	292.7	311.9	311.9
70°	174.3	212.6	261.4	266.6	256.2
72.5°	139.4	183.0	226.5	207.4	198.7
75°	106.3	155.1	177.7	160.3	155.1
77.5°	80.2	125.5	125.5	115.0	111.5
80°	55.8	95.8	83.6	73.2	68.0
82.5°	36.6	54.0	43.6	34.9	29.6
85°	19.2	20.9	12.2	10.5	8.7
87.5°	7.0	3.5	1.7	3.5	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)