

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: P312108

Luminaire Tested: **14FCZ2-39-UNV-L83050-RDP-CP187-W2A-U-4500K**

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: P312108
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-4500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 2366.0 lumens
Efficiency: N/A
Efficacy: 67.8 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

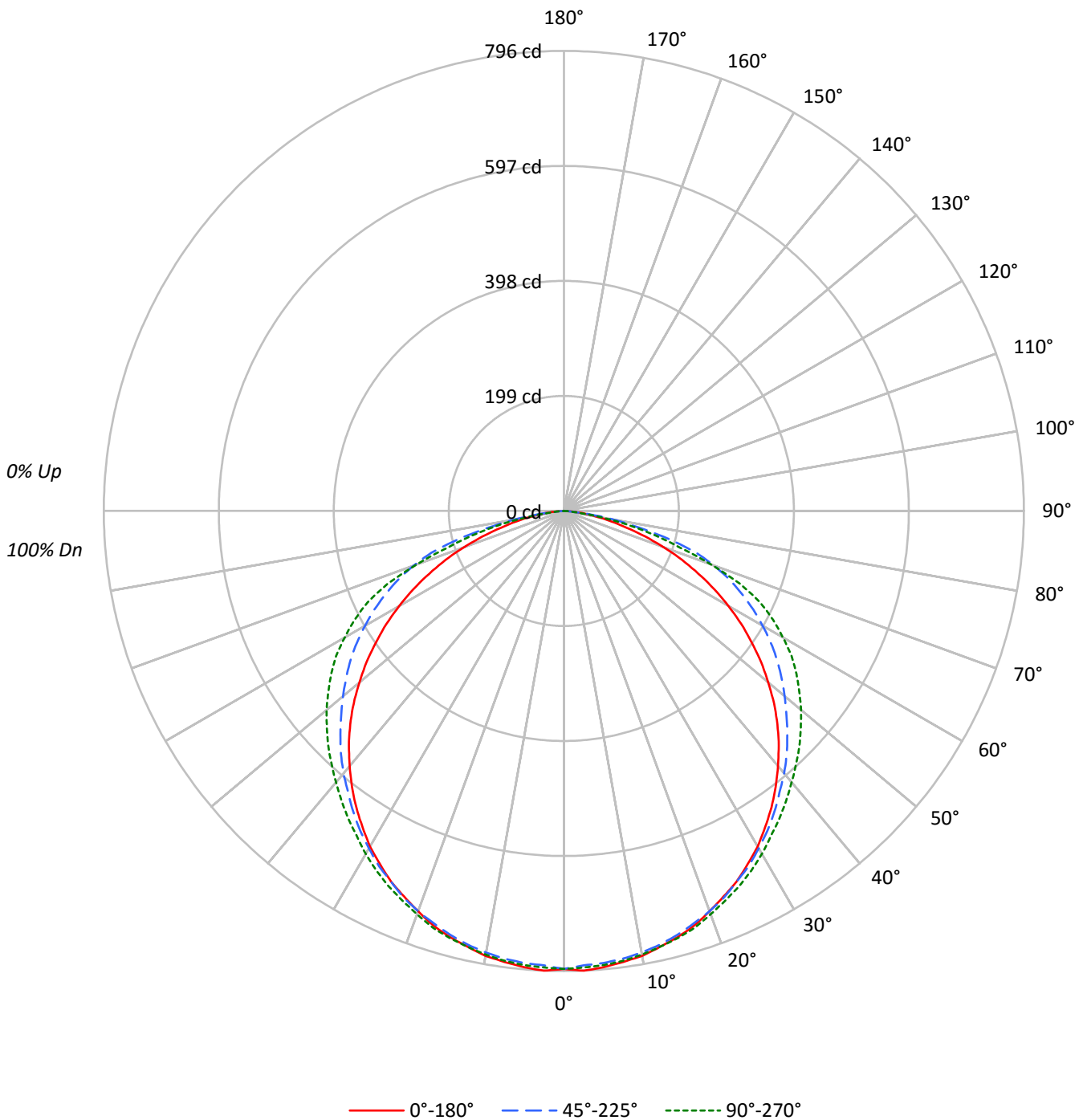
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2132	2132	2132
5°	2140	2120	2130
10°	2135	2120	2130
15°	2125	2115	2130
20°	2111	2111	2127
25°	2101	2101	2128
30°	2083	2095	2129
35°	2057	2087	2136
40°	2024	2083	2154
45°	1989	2081	2193
50°	1933	2088	2243
55°	1863	2114	2305
60°	1770	2137	2356
65°	1635	2164	2388
70°	1453	2180	2136
75°	1172	1959	1709
80°	916	1375	1116
85°	627	398	284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.0	3.2
10°-20°	215.2	9.1
20°-30°	327.7	13.8
30°-40°	399.1	16.9
40°-50°	423.4	17.9
50°-60°	399.6	16.9
60°-70°	322.7	13.6
70°-80°	175.0	7.4
80°-90°	28.3	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°	617.9	26.1
0°-40°	1017.0	43.0
0°-60°	1840.0	77.8
0°-90°	2366.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2366.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	792	791	785	791	789	75
15°	763	761	759	765	765	215
25°	708	706	708	715	717	326
35°	626	630	635	648	650	392
45°	523	530	547	567	576	403
55°	397	414	451	480	491	355
65°	257	288	340	368	375	254
75°	113	164	188	170	164	123
85°	20	22	13	11	9	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	792.4	792.4	792.4	792.4	792.4
2.5°	796.1	792.4	786.9	792.4	790.6
5°	792.4	790.6	785.0	790.6	788.7
7.5°	786.9	786.9	781.4	785.0	785.0
10°	781.4	779.5	775.8	781.4	779.5
12.5°	772.1	770.3	768.4	774.0	772.1
15°	762.9	761.0	759.2	764.7	764.7
17.5°	751.8	749.9	748.1	755.5	755.5
20°	737.0	737.0	737.0	744.4	742.6
22.5°	722.2	722.2	724.1	731.5	729.6
25°	707.5	705.6	707.5	714.9	716.7
27.5°	689.0	690.8	692.7	700.1	701.9
30°	670.5	672.4	674.2	683.5	685.3
32.5°	648.4	652.0	655.7	666.8	666.8
35°	626.2	629.9	635.4	648.4	650.2
37.5°	602.2	605.9	613.3	628.0	631.7
40°	576.3	581.9	592.9	607.7	613.3
42.5°	550.5	557.8	570.8	587.4	594.8
45°	522.7	530.1	546.8	567.1	576.3
47.5°	493.2	502.4	522.7	548.6	556.0
50°	461.8	474.7	498.7	526.4	535.7
52.5°	430.4	445.2	474.7	504.3	513.5
55°	397.1	413.8	450.7	480.3	491.3
57.5°	363.9	382.4	424.8	456.2	467.3
60°	328.8	351.0	397.1	428.5	437.8
62.5°	293.7	319.6	369.4	400.8	408.2
65°	256.8	288.2	339.9	367.6	375.0
67.5°	221.7	258.6	310.3	330.6	330.6
70°	184.7	225.4	277.1	282.6	271.5
72.5°	147.8	194.0	240.1	219.8	210.6
75°	112.7	164.4	188.4	169.9	164.4
77.5°	85.0	133.0	133.0	121.9	118.2
80°	59.1	101.6	88.7	77.6	72.0
82.5°	38.8	57.3	46.2	36.9	31.4
85°	20.3	22.2	12.9	11.1	9.2
87.5°	7.4	3.7	1.8	3.7	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)