

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: P313555

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-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: P313555
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L83050-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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

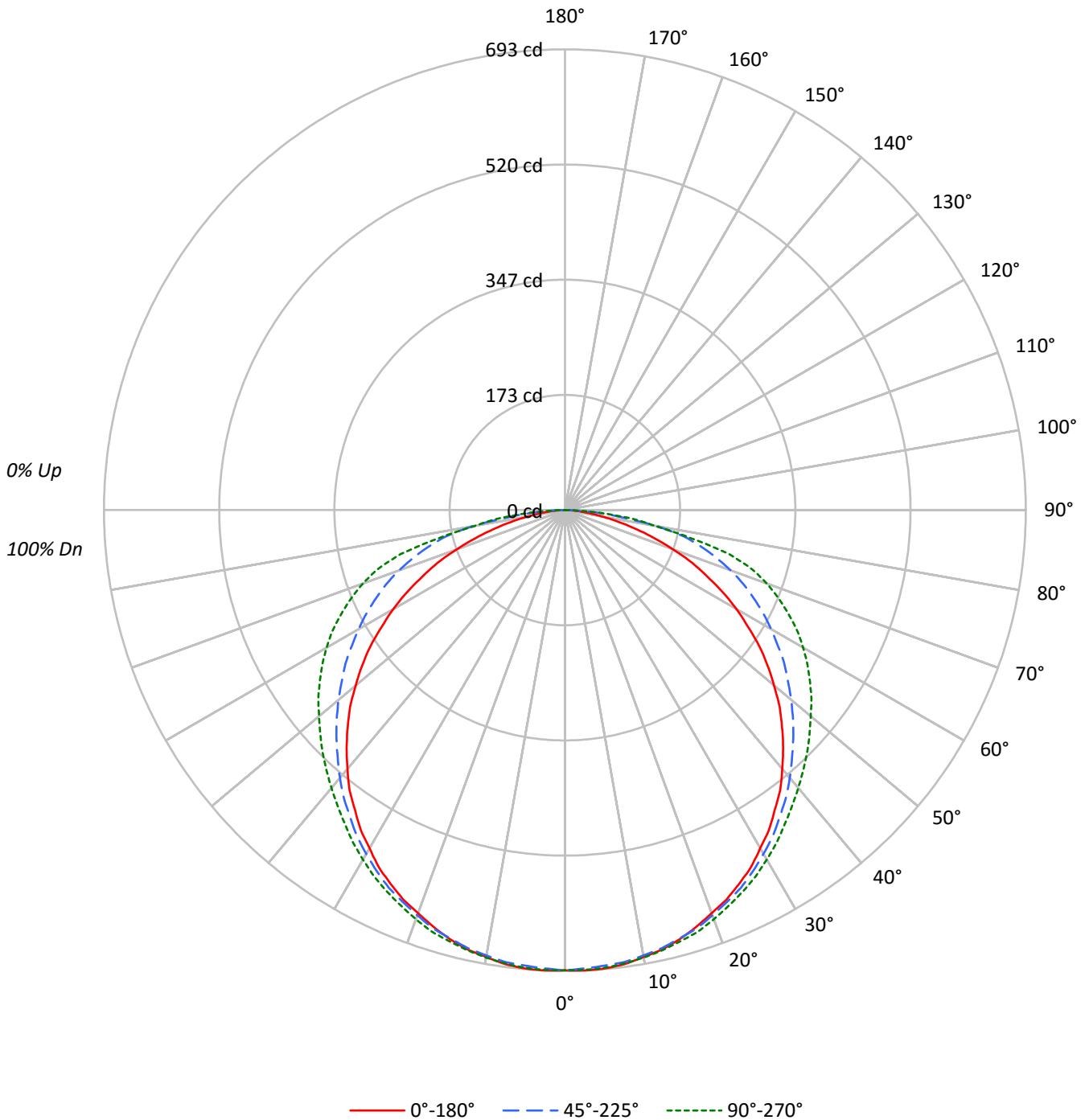
Lumens per Lamp: N/A
Luminaire Lumens: 2201.0 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 32.6
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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	931	931	931
5°	935	929	933
10°	932	929	934
15°	931	929	935
20°	924	929	938
25°	921	930	940
30°	912	928	943
35°	904	925	947
40°	893	924	959
45°	879	924	981
50°	859	930	1010
55°	837	945	1055
60°	802	964	1114
65°	751	997	1182
70°	683	1044	1271
75°	579	1101	1328
80°	457	1108	1074
85°	337	843	943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.7	3.0
10°-20°	189.0	8.6
20°-30°	289.0	13.1
30°-40°	353.2	16.0
40°-50°	376.5	17.1
50°-60°	360.0	16.4
60°-70°	304.9	13.9
70°-80°	204.9	9.3
80°-90°	57.8	2.6
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°	543.6	24.7
0°-40°	896.8	40.7
0°-60°	1633.3	74.2
0°-90°	2201.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2201.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	692	692	692	692	692	
5°	692	691	688	691	691	66
15°	668	668	667	672	671	188
25°	620	622	627	632	633	286
35°	550	555	563	574	576	345
45°	462	469	486	507	515	356
55°	357	370	403	434	450	318
65°	236	260	313	355	371	234
75°	111	152	212	248	256	119
85°	22	45	55	59	61	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	692.2	692.2	692.2	692.2	692.2
2.5°	693.2	693.2	690.0	692.2	692.2
5°	692.2	691.1	687.8	691.1	691.1
7.5°	688.9	687.8	685.6	688.9	687.8
10°	682.3	682.3	680.1	683.4	683.4
12.5°	676.9	675.8	674.7	679.1	678.0
15°	668.1	668.1	667.0	672.5	671.4
17.5°	657.2	658.3	659.4	663.8	664.9
20°	645.2	647.4	648.5	655.0	655.0
22.5°	634.3	635.4	637.6	644.1	644.1
25°	620.1	622.3	626.6	632.1	633.2
27.5°	605.9	607.0	612.5	620.1	621.2
30°	587.3	590.6	597.2	605.9	607.0
32.5°	571.0	574.2	581.9	590.6	592.8
35°	550.2	554.6	563.3	574.2	576.4
37.5°	531.7	534.9	545.9	557.9	561.1
40°	508.7	515.3	526.2	540.4	545.9
42.5°	485.8	492.4	505.5	524.0	530.6
45°	461.8	469.4	485.8	506.6	515.3
47.5°	437.8	446.5	465.1	489.1	498.9
50°	410.5	421.4	444.3	471.6	482.5
52.5°	384.3	397.4	422.5	453.1	467.3
55°	357.0	370.1	402.8	434.5	449.8
57.5°	326.4	343.9	379.9	415.9	432.3
60°	298.0	314.4	358.1	397.4	413.8
62.5°	267.5	289.3	336.3	377.7	394.1
65°	235.8	259.8	313.3	354.8	371.2
67.5°	207.4	233.6	290.4	331.9	348.3
70°	173.6	206.3	265.3	306.8	323.1
72.5°	141.9	178.0	239.1	279.5	294.8
75°	111.4	151.7	211.8	247.8	255.5
77.5°	83.0	125.5	183.4	198.7	193.2
80°	59.0	100.4	143.0	135.4	138.6
82.5°	38.2	76.4	88.4	100.4	103.7
85°	21.8	44.8	54.6	59.0	61.1
87.5°	9.8	16.4	21.8	21.8	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)