

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: P309890

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CP187-W2A-U-4000K**

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: P309890
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: 24FCZ2-30-UNV-L82765-RDP-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 4000K 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: 1742.0 lumens
Efficiency: N/A
Efficacy: 73.5 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

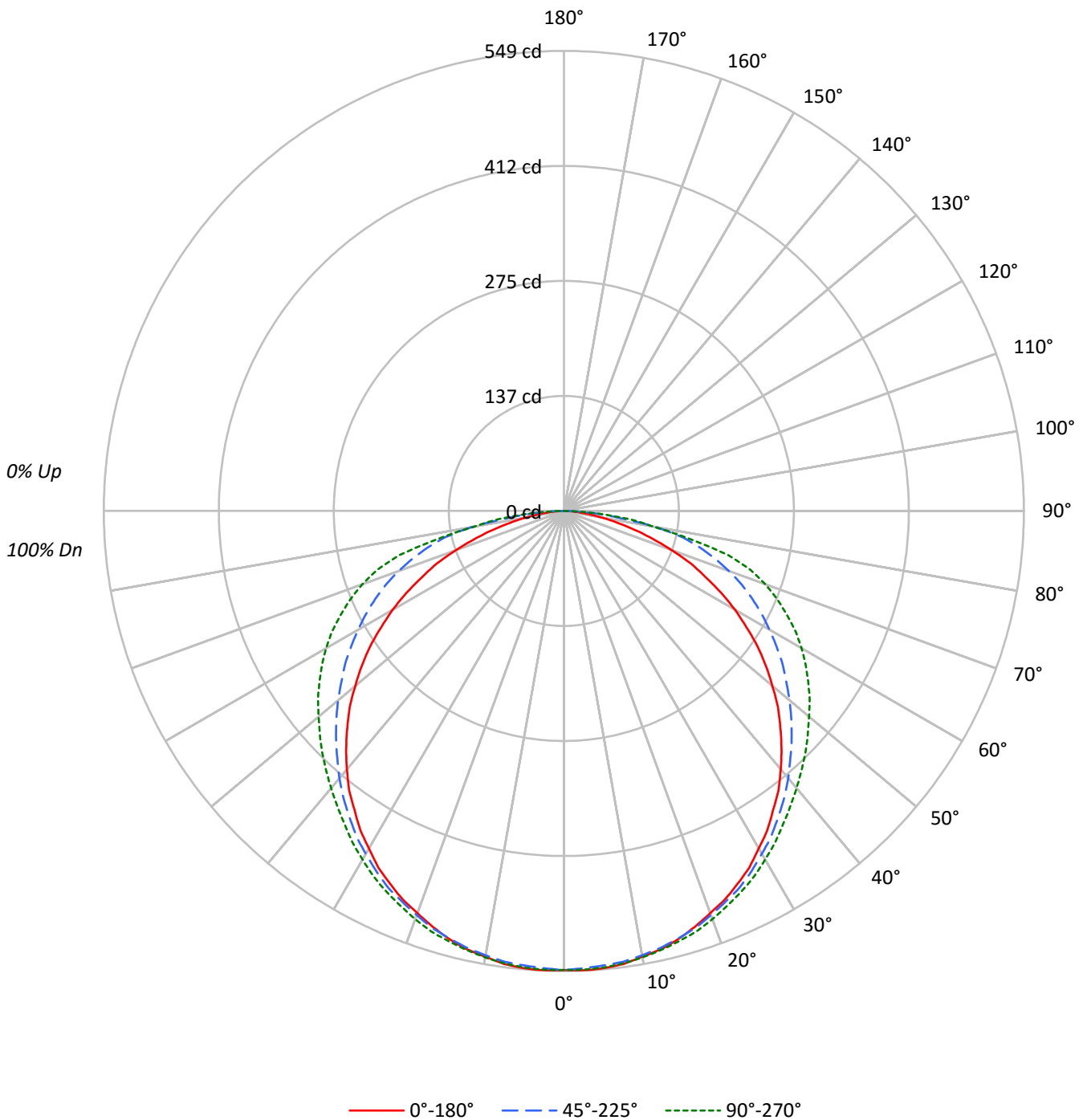
Input Watts (W): 23.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	67	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°	737	737	737
5°	740	735	739
10°	738	735	739
15°	737	735	740
20°	731	735	742
25°	729	736	744
30°	722	734	746
35°	715	732	749
40°	707	732	759
45°	695	732	776
50°	680	736	799
55°	663	748	835
60°	635	763	881
65°	594	790	935
70°	541	826	1006
75°	458	871	1051
80°	362	877	850
85°	267	667	747



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.0	3.0
10°-20°	149.6	8.6
20°-30°	228.7	13.1
30°-40°	279.6	16.0
40°-50°	298.0	17.1
50°-60°	284.9	16.4
60°-70°	241.3	13.9
70°-80°	162.2	9.3
80°-90°	45.8	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°	430.2	24.7
0°-40°	709.8	40.7
0°-60°	1292.7	74.2
0°-90°	1742.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	548	548	548	548	548	
5°	548	547	544	547	547	52
15°	529	529	528	532	531	149
25°	491	492	496	500	501	226
35°	436	439	446	454	456	273
45°	366	372	384	401	408	282
55°	282	293	319	344	356	252
65°	187	206	248	281	294	185
75°	88	120	168	196	202	94
85°	17	35	43	47	48	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	547.8	547.8	547.8	547.8	547.8
2.5°	548.7	548.7	546.1	547.8	547.8
5°	547.8	546.9	544.4	546.9	546.9
7.5°	545.2	544.4	542.6	545.2	544.4
10°	540.0	540.0	538.3	540.9	540.9
12.5°	535.7	534.8	534.0	537.4	536.6
15°	528.8	528.8	527.9	532.3	531.4
17.5°	520.2	521.0	521.9	525.3	526.2
20°	510.7	512.4	513.2	518.4	518.4
22.5°	502.0	502.9	504.6	509.8	509.8
25°	490.8	492.5	496.0	500.3	501.2
27.5°	479.5	480.4	484.7	490.8	491.6
30°	464.9	467.5	472.6	479.5	480.4
32.5°	451.9	454.5	460.5	467.5	469.2
35°	435.5	438.9	445.9	454.5	456.2
37.5°	420.8	423.4	432.0	441.5	444.1
40°	402.6	407.8	416.5	427.7	432.0
42.5°	384.5	389.7	400.1	414.7	419.9
45°	365.5	371.5	384.5	400.9	407.8
47.5°	346.5	353.4	368.1	387.1	394.9
50°	324.9	333.5	351.7	373.3	381.9
52.5°	304.1	314.5	334.4	358.6	369.8
55°	282.5	292.9	318.8	343.9	356.0
57.5°	258.4	272.2	300.7	329.2	342.2
60°	235.9	248.8	283.4	314.5	327.5
62.5°	211.7	229.0	266.1	299.0	311.9
65°	186.6	205.6	248.0	280.8	293.8
67.5°	164.2	184.9	229.8	262.7	275.6
70°	137.4	163.3	210.0	242.8	255.8
72.5°	112.3	140.8	189.2	221.2	233.3
75°	88.1	120.1	167.6	196.1	202.2
77.5°	65.7	99.4	145.2	157.3	152.9
80°	46.7	79.5	113.2	107.1	109.7
82.5°	30.2	60.5	70.0	79.5	82.1
85°	17.3	35.4	43.2	46.7	48.4
87.5°	7.8	13.0	17.3	17.3	16.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)