

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: P309888

Luminaire Tested: **24FCZ2-30-UNV-L82765-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: P309888
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-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: 1647.0 lumens
Efficiency: N/A
Efficacy: 71.0 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

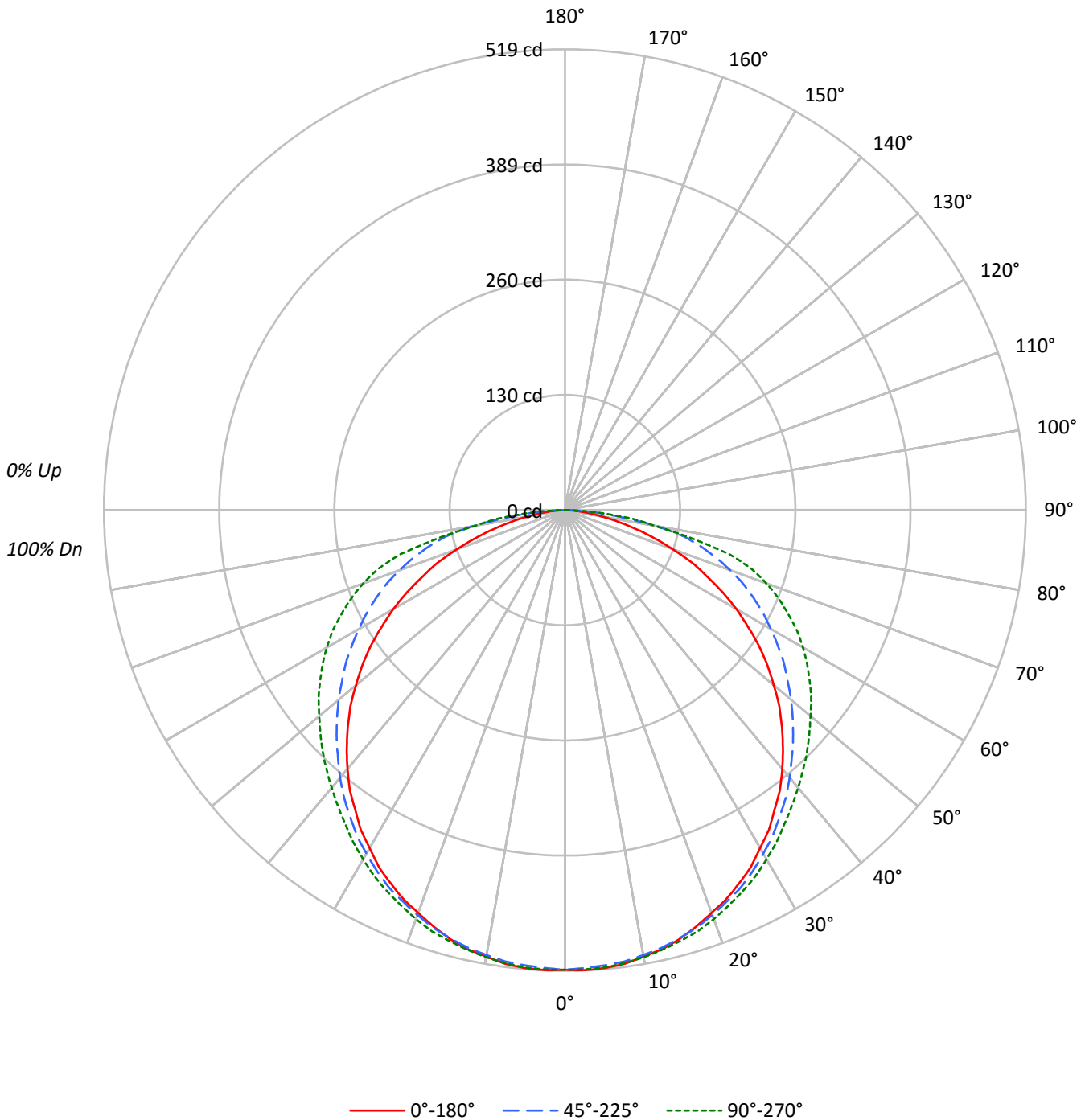
Input Watts (W): 23.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	697	697	697
5°	699	695	698
10°	698	695	699
15°	696	695	700
20°	691	695	702
25°	689	696	703
30°	683	694	706
35°	676	692	708
40°	669	692	717
45°	658	692	734
50°	643	696	756
55°	627	707	790
60°	600	721	833
65°	562	747	884
70°	511	781	951
75°	433	824	994
80°	342	829	804
85°	252	630	706



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.1	3.0
10°-20°	141.4	8.6
20°-30°	216.2	13.1
30°-40°	264.3	16.0
40°-50°	281.7	17.1
50°-60°	269.4	16.4
60°-70°	228.2	13.9
70°-80°	153.4	9.3
80°-90°	43.3	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°	406.8	24.7
0°-40°	671.1	40.7
0°-60°	1222.2	74.2
0°-90°	1647.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1647.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	518	518	518	518	518	
5°	518	517	515	517	517	49
15°	500	500	499	503	502	141
25°	464	466	469	473	474	214
35°	412	415	422	430	431	258
45°	346	351	364	379	386	267
55°	267	277	301	325	337	238
65°	176	194	234	266	278	175
75°	83	114	158	185	191	89
85°	16	34	41	44	46	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	517.9	517.9	517.9	517.9	517.9
2.5°	518.8	518.8	516.3	517.9	517.9
5°	517.9	517.1	514.7	517.1	517.1
7.5°	515.5	514.7	513.0	515.5	514.7
10°	510.6	510.6	508.9	511.4	511.4
12.5°	506.5	505.7	504.9	508.1	507.3
15°	500.0	500.0	499.1	503.2	502.4
17.5°	491.8	492.6	493.4	496.7	497.5
20°	482.8	484.4	485.3	490.2	490.2
22.5°	474.6	475.5	477.1	482.0	482.0
25°	464.0	465.7	468.9	473.0	473.8
27.5°	453.4	454.2	458.3	464.0	464.8
30°	439.5	442.0	446.9	453.4	454.2
32.5°	427.3	429.7	435.4	442.0	443.6
35°	411.7	415.0	421.5	429.7	431.3
37.5°	397.8	400.3	408.5	417.5	419.9
40°	380.7	385.6	393.8	404.4	408.5
42.5°	363.5	368.4	378.2	392.1	397.0
45°	345.6	351.3	363.5	379.1	385.6
47.5°	327.6	334.1	348.0	366.0	373.3
50°	307.2	315.3	332.5	352.9	361.1
52.5°	287.6	297.4	316.2	339.0	349.6
55°	267.1	276.9	301.4	325.1	336.6
57.5°	244.3	257.3	284.3	311.3	323.5
60°	223.0	235.3	268.0	297.4	309.6
62.5°	200.1	216.5	251.6	282.7	294.9
65°	176.5	194.4	234.5	265.5	277.8
67.5°	155.2	174.8	217.3	248.3	260.6
70°	129.9	154.4	198.5	229.6	241.8
72.5°	106.2	133.2	178.9	209.1	220.6
75°	83.3	113.6	158.5	185.4	191.2
77.5°	62.1	93.9	137.2	148.7	144.6
80°	44.1	75.2	107.0	101.3	103.8
82.5°	28.6	57.2	66.2	75.2	77.6
85°	16.3	33.5	40.8	44.1	45.7
87.5°	7.4	12.3	16.3	16.3	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)