

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: P309892

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P309892
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 1797.0 lumens
Efficiency: N/A
Efficacy: 75.2 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

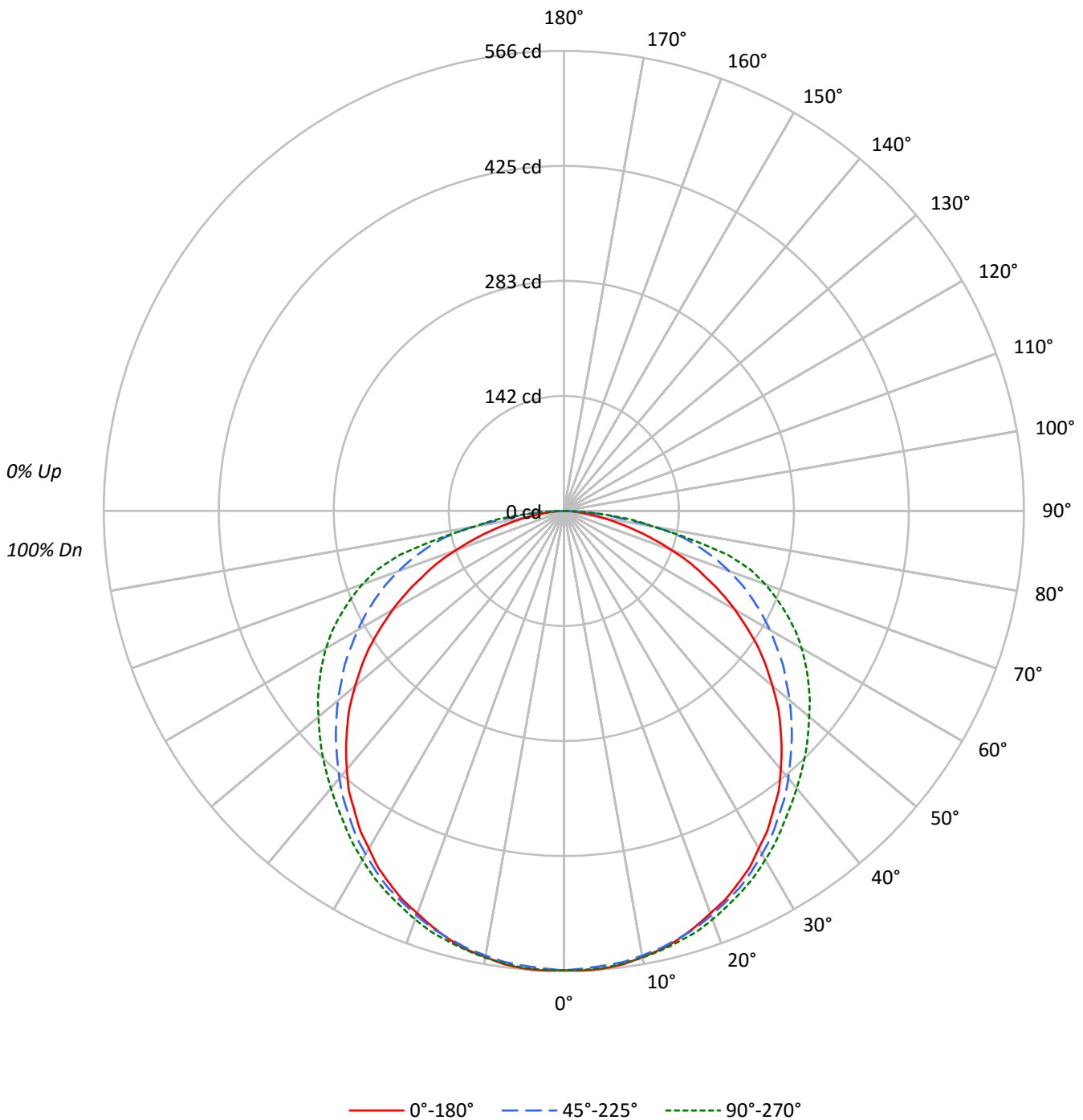
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82				82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67				67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56				56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47				47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40				40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35				35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31				31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27				27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24				24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22				22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	760	760	760
5°	763	758	762
10°	761	759	762
15°	760	759	764
20°	754	758	766
25°	752	760	768
30°	745	758	770
35°	738	755	773
40°	730	755	783
45°	717	755	801
50°	701	759	825
55°	684	772	861
60°	655	787	909
65°	613	814	965
70°	557	852	1038
75°	473	899	1084
80°	373	905	877
85°	275	689	770



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	3.0
10°-20°	154.3	8.6
20°-30°	235.9	13.1
30°-40°	288.4	16.0
40°-50°	307.4	17.1
50°-60°	293.9	16.4
60°-70°	249.0	13.9
70°-80°	167.3	9.3
80°-90°	47.2	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°	443.8	24.7
0°-40°	732.2	40.7
0°-60°	1333.5	74.2
0°-90°	1797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1797.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	565	565	565	565	565	
5°	565	564	562	564	564	54
15°	546	546	545	549	548	154
25°	506	508	512	516	517	233
35°	449	453	460	469	471	281
45°	377	383	397	414	421	291
55°	292	302	329	355	367	260
65°	192	212	256	290	303	191
75°	91	124	173	202	209	97
85°	18	36	45	48	50	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	565.1	565.1	565.1	565.1	565.1
2.5°	566.0	566.0	563.3	565.1	565.1
5°	565.1	564.2	561.5	564.2	564.2
7.5°	562.4	561.5	559.8	562.4	561.5
10°	557.1	557.1	555.3	558.0	558.0
12.5°	552.6	551.7	550.8	554.4	553.5
15°	545.5	545.5	544.6	549.1	548.2
17.5°	536.6	537.5	538.4	541.9	542.8
20°	526.8	528.6	529.5	534.8	534.8
22.5°	517.9	518.8	520.5	525.9	525.9
25°	506.3	508.1	511.6	516.1	517.0
27.5°	494.7	495.6	500.0	506.3	507.2
30°	479.5	482.2	487.6	494.7	495.6
32.5°	466.2	468.8	475.1	482.2	484.0
35°	449.2	452.8	459.9	468.8	470.6
37.5°	434.1	436.8	445.7	455.5	458.1
40°	415.4	420.7	429.6	441.2	445.7
42.5°	396.6	402.0	412.7	427.8	433.2
45°	377.0	383.3	396.6	413.6	420.7
47.5°	357.4	364.6	379.7	399.3	407.3
50°	335.1	344.1	362.8	385.1	394.0
52.5°	313.7	324.4	344.9	369.9	381.5
55°	291.5	302.2	328.9	354.8	367.2
57.5°	266.5	280.8	310.2	339.6	353.0
60°	243.3	256.7	292.4	324.4	337.8
62.5°	218.4	236.2	274.5	308.4	321.8
65°	192.5	212.1	255.8	289.7	303.1
67.5°	169.4	190.7	237.1	271.0	284.3
70°	141.7	168.5	216.6	250.5	263.8
72.5°	115.9	145.3	195.2	228.2	240.7
75°	90.9	123.9	172.9	202.3	208.6
77.5°	67.7	102.5	149.7	162.2	157.8
80°	48.1	82.0	116.8	110.5	113.2
82.5°	31.2	62.4	72.2	82.0	84.7
85°	17.8	36.5	44.6	48.1	49.9
87.5°	8.0	13.4	17.8	17.8	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)