

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: P309844

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-3500K**

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: P309844
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: 24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 1725.0 lumens
Efficiency: N/A
Efficacy: 81.4 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

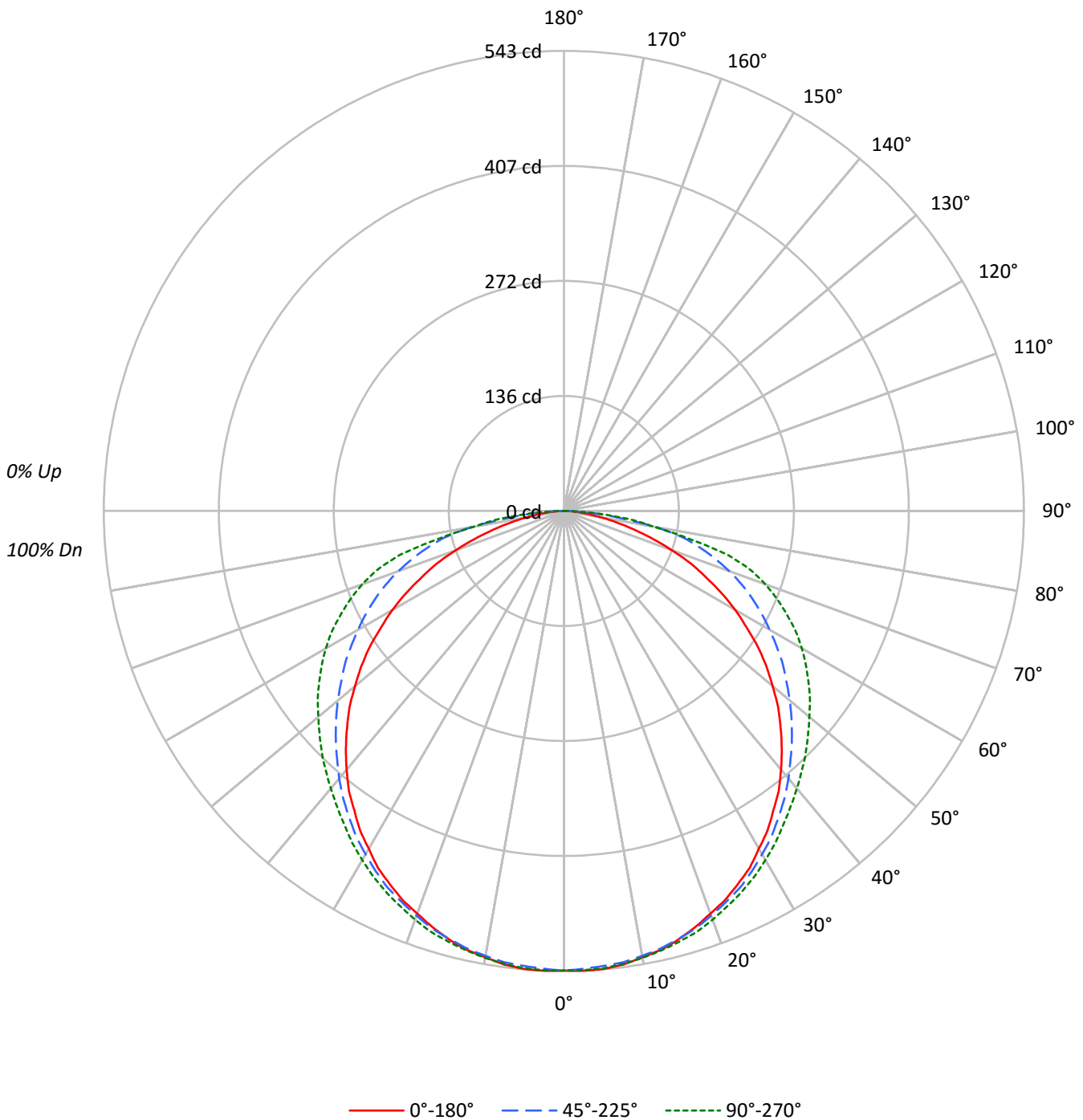
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	730	730	730
5°	733	728	732
10°	731	728	732
15°	729	728	733
20°	724	728	735
25°	722	729	737
30°	715	727	739
35°	708	725	742
40°	700	724	751
45°	689	725	769
50°	673	729	792
55°	656	741	827
60°	629	755	873
65°	588	782	926
70°	535	818	996
75°	454	863	1041
80°	358	869	842
85°	264	661	739



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	3.0
10°-20°	148.1	8.6
20°-30°	226.5	13.1
30°-40°	276.9	16.1
40°-50°	295.1	17.1
50°-60°	282.1	16.4
60°-70°	239.0	13.9
70°-80°	160.6	9.3
80°-90°	45.3	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°	426.0	24.7
0°-40°	702.9	40.7
0°-60°	1280.1	74.2
0°-90°	1725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	542	542	542	542	542	
5°	542	542	539	542	542	52
15°	524	524	523	527	526	148
25°	486	488	491	495	496	224
35°	431	435	442	450	452	270
45°	362	368	381	397	404	279
55°	280	290	316	340	352	249
65°	185	204	246	278	291	183
75°	87	119	166	194	200	93
85°	17	35	43	46	48	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	542.5	542.5	542.5	542.5	542.5
2.5°	543.3	543.3	540.8	542.5	542.5
5°	542.5	541.6	539.0	541.6	541.6
7.5°	539.9	539.0	537.3	539.9	539.0
10°	534.8	534.8	533.1	535.6	535.6
12.5°	530.5	529.6	528.8	532.2	531.3
15°	523.6	523.6	522.8	527.1	526.2
17.5°	515.1	515.9	516.8	520.2	521.1
20°	505.7	507.4	508.2	513.4	513.4
22.5°	497.1	498.0	499.7	504.8	504.8
25°	486.0	487.7	491.1	495.4	496.3
27.5°	474.9	475.7	480.0	486.0	486.8
30°	460.3	462.9	468.0	474.9	475.7
32.5°	447.5	450.1	456.0	462.9	464.6
35°	431.2	434.7	441.5	450.1	451.8
37.5°	416.7	419.3	427.8	437.2	439.8
40°	398.7	403.9	412.4	423.5	427.8
42.5°	380.8	385.9	396.2	410.7	415.8
45°	361.9	367.9	380.8	397.0	403.9
47.5°	343.1	349.9	364.5	383.3	391.0
50°	321.7	330.3	348.2	369.6	378.2
52.5°	301.2	311.4	331.1	355.1	366.2
55°	279.8	290.1	315.7	340.5	352.5
57.5°	255.8	269.5	297.8	326.0	338.8
60°	233.6	246.4	280.6	311.4	324.3
62.5°	209.6	226.7	263.5	296.0	308.9
65°	184.8	203.6	245.6	278.1	290.9
67.5°	162.6	183.1	227.6	260.1	272.9
70°	136.0	161.7	207.9	240.4	253.3
72.5°	111.2	139.5	187.4	219.0	231.0
75°	87.3	118.9	166.0	194.2	200.2
77.5°	65.0	98.4	143.7	155.7	151.4
80°	46.2	78.7	112.1	106.1	108.7
82.5°	29.9	59.9	69.3	78.7	81.3
85°	17.1	35.1	42.8	46.2	47.9
87.5°	7.7	12.8	17.1	17.1	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)