

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: P313430

Luminaire Tested: **24FCZ2-30HE-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: P313430
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-L83050-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 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: 1669.0 lumens
Efficiency: N/A
Efficacy: 79.1 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

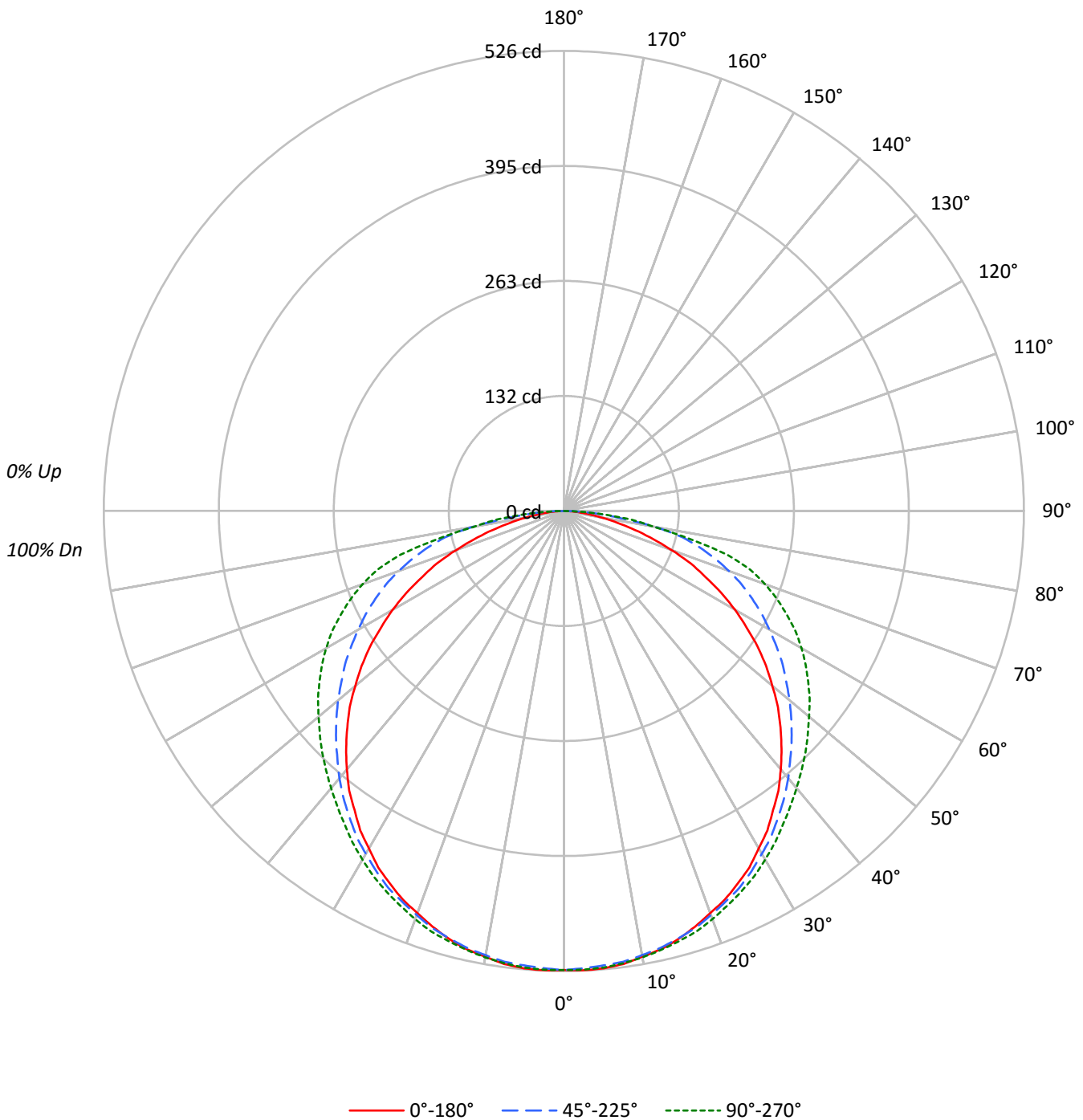
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	706	706	706
5°	709	704	708
10°	707	705	708
15°	706	705	709
20°	701	704	711
25°	698	705	713
30°	692	703	715
35°	685	702	718
40°	678	701	727
45°	666	701	743
50°	652	705	766
55°	635	717	800
60°	608	731	844
65°	569	756	896
70°	518	792	964
75°	439	835	1007
80°	346	840	814
85°	256	639	716



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.8	3.0
10°-20°	143.3	8.6
20°-30°	219.1	13.1
30°-40°	267.9	16.0
40°-50°	285.5	17.1
50°-60°	273.0	16.4
60°-70°	231.2	13.9
70°-80°	155.4	9.3
80°-90°	43.8	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°	412.2	24.7
0°-40°	680.0	40.7
0°-60°	1238.5	74.2
0°-90°	1669.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1669.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	525	525	525	525	525	
5°	525	524	522	524	524	50
15°	507	507	506	510	509	143
25°	470	472	475	479	480	217
35°	417	420	427	435	437	261
45°	350	356	368	384	391	270
55°	271	281	306	330	341	241
65°	179	197	238	269	282	178
75°	84	115	161	188	194	90
85°	17	34	41	45	46	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	524.9	524.9	524.9	524.9	524.9
2.5°	525.7	525.7	523.2	524.9	524.9
5°	524.9	524.0	521.5	524.0	524.0
7.5°	522.4	521.5	519.9	522.4	521.5
10°	517.4	517.4	515.7	518.2	518.2
12.5°	513.3	512.4	511.6	514.9	514.1
15°	506.6	506.6	505.8	510.0	509.1
17.5°	498.4	499.2	500.0	503.3	504.2
20°	489.3	490.9	491.7	496.7	496.7
22.5°	481.0	481.8	483.5	488.4	488.4
25°	470.2	471.9	475.2	479.3	480.1
27.5°	459.5	460.3	464.4	470.2	471.0
30°	445.4	447.9	452.8	459.5	460.3
32.5°	433.0	435.4	441.2	447.9	449.5
35°	417.2	420.5	427.2	435.4	437.1
37.5°	403.2	405.6	413.9	423.0	425.5
40°	385.8	390.7	399.0	409.8	413.9
42.5°	368.4	373.4	383.3	397.4	402.3
45°	350.2	356.0	368.4	384.1	390.7
47.5°	332.0	338.6	352.7	370.9	378.3
50°	311.3	319.5	336.9	357.6	365.9
52.5°	291.4	301.3	320.4	343.6	354.3
55°	270.7	280.6	305.5	329.5	341.1
57.5°	247.5	260.8	288.1	315.4	327.8
60°	226.0	238.4	271.5	301.3	313.8
62.5°	202.8	219.4	255.0	286.4	298.9
65°	178.8	197.0	237.6	269.0	281.5
67.5°	157.3	177.2	220.2	251.7	264.1
70°	131.6	156.5	201.2	232.6	245.0
72.5°	107.6	134.9	181.3	211.9	223.5
75°	84.4	115.1	160.6	187.9	193.7
77.5°	62.9	95.2	139.1	150.7	146.5
80°	44.7	76.2	108.4	102.7	105.1
82.5°	29.0	57.9	67.1	76.2	78.6
85°	16.6	33.9	41.4	44.7	46.4
87.5°	7.5	12.4	16.6	16.6	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)