

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: P311844

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CA08-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: P311844
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-HRP-CA08-W2A-U-5000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 1615.0 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

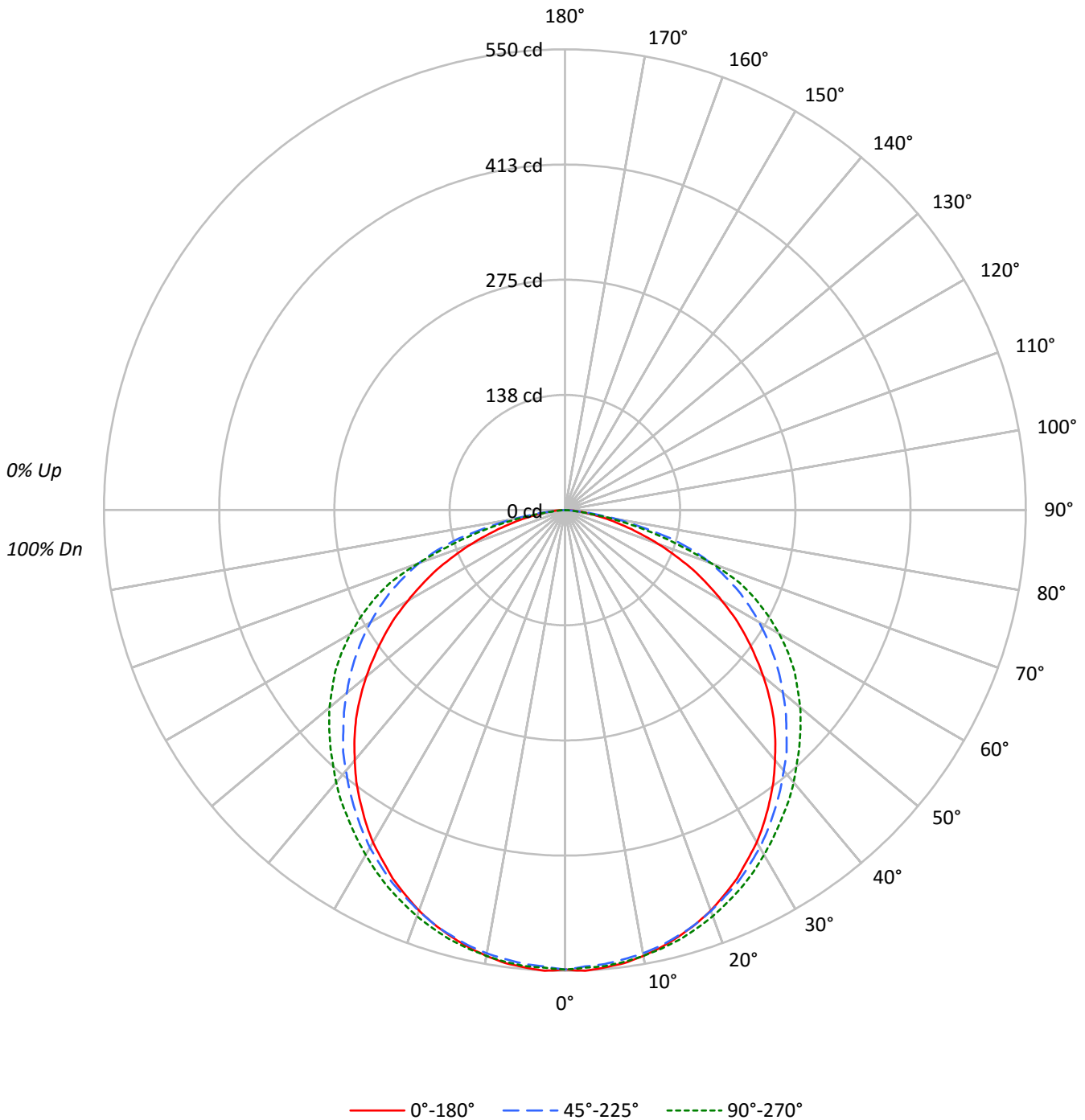
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1476	1476	1476
5°	1480	1469	1476
10°	1476	1468	1476
15°	1467	1464	1478
20°	1457	1459	1478
25°	1442	1454	1478
30°	1423	1446	1477
35°	1398	1435	1480
40°	1370	1427	1492
45°	1341	1423	1507
50°	1295	1422	1535
55°	1239	1430	1568
60°	1164	1440	1588
65°	1074	1455	1598
70°	935	1459	1471
75°	770	1357	1188
80°	606	976	795
85°	469	377	188



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.9	3.2
10°-20°	149.0	9.2
20°-30°	226.3	14.0
30°-40°	274.2	17.0
40°-50°	288.9	17.9
50°-60°	269.7	16.7
60°-70°	215.5	13.3
70°-80°	118.6	7.3
80°-90°	20.9	1.3
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°	427.2	26.5
0°-40°	701.3	43.4
0°-60°	1259.9	78.0
0°-90°	1615.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1615.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	548	548	548	548	548	
5°	548	546	544	547	546	52
15°	527	527	526	531	531	149
25°	486	486	490	497	498	224
35°	426	430	437	448	450	266
45°	352	359	374	390	396	271
55°	264	277	305	326	334	236
65°	169	190	228	247	251	166
75°	74	106	130	117	114	80
85°	15	19	12	8	6	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	548.5	548.5	548.5	548.5	548.5
2.5°	550.5	549.0	545.4	548.5	546.9
5°	548.0	546.4	543.9	547.4	546.4
7.5°	545.4	543.4	540.8	544.9	543.9
10°	540.3	538.8	537.3	540.8	540.3
12.5°	534.2	533.7	532.2	536.3	535.8
15°	526.6	526.6	525.6	530.7	530.7
17.5°	518.5	518.0	518.5	524.1	523.6
20°	508.9	508.9	509.4	516.0	516.0
22.5°	497.2	497.7	499.2	507.3	506.8
25°	485.5	486.5	489.6	496.7	497.7
27.5°	471.3	473.8	477.4	486.0	487.0
30°	458.1	459.6	465.2	473.3	475.3
32.5°	442.3	445.4	451.5	460.6	463.1
35°	425.6	429.6	436.7	447.9	450.4
37.5°	408.8	412.4	422.0	433.7	438.3
40°	390.0	396.1	406.3	419.5	424.6
42.5°	371.7	377.8	391.5	405.3	409.8
45°	352.4	359.0	373.8	390.5	396.1
47.5°	331.1	338.7	357.5	375.3	381.4
50°	309.3	318.9	339.7	359.5	366.7
52.5°	286.4	298.6	322.5	343.3	349.9
55°	264.1	277.3	304.7	326.0	334.2
57.5°	241.2	255.4	286.4	310.8	315.4
60°	216.3	233.6	267.6	289.0	295.1
62.5°	192.0	211.8	248.3	268.6	273.7
65°	168.6	189.9	228.5	247.3	250.9
67.5°	143.2	168.6	206.7	224.0	225.0
70°	118.8	148.3	185.4	193.5	186.9
72.5°	95.0	126.5	160.5	153.9	148.3
75°	74.1	106.1	130.5	117.3	114.3
77.5°	54.8	86.8	93.4	86.3	80.7
80°	39.1	68.6	63.0	53.8	51.3
82.5°	26.9	43.2	34.5	26.9	23.4
85°	15.2	19.3	12.2	7.6	6.1
87.5°	6.6	4.6	2.5	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)