

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: P311856

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-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: P311856  
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-CP187-W2A-U-3500K  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (168) 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**

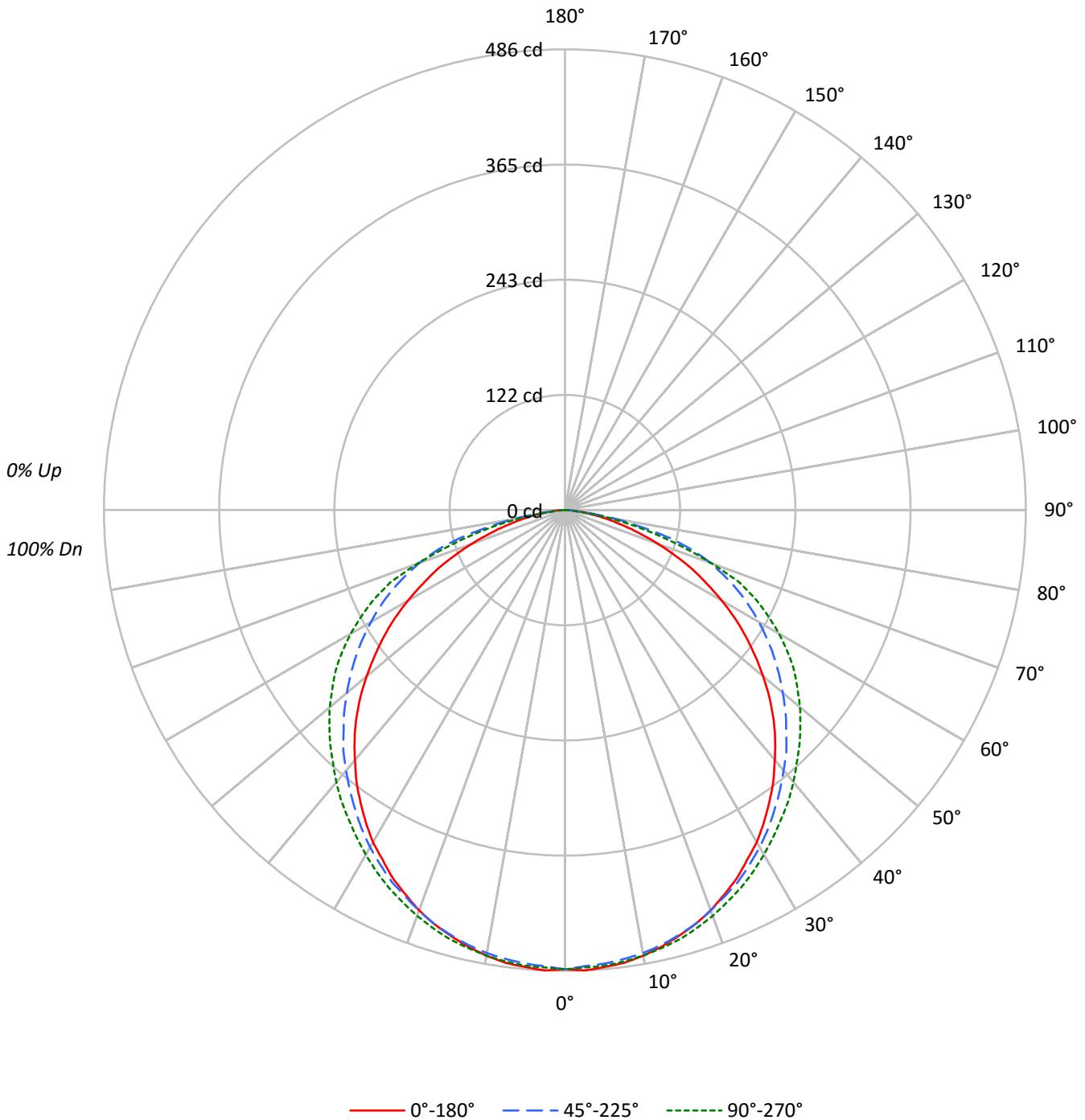
Lumens per Lamp: N/A  
Luminaire Lumens: 1426.0 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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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CATALOG NUMBER: 14FC22-20-UNV-L83050-HRP-CP187-W2A-U-3500K

**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°	1303	1303	1303
5°	1307	1297	1303
10°	1304	1296	1304
15°	1295	1293	1305
20°	1287	1288	1305
25°	1273	1284	1305
30°	1257	1276	1304
35°	1235	1267	1306
40°	1210	1260	1317
45°	1184	1256	1331
50°	1143	1256	1355
55°	1094	1262	1384
60°	1028	1272	1402
65°	948	1285	1410
70°	825	1288	1298
75°	681	1198	1049
80°	535	862	702
85°	417	333	167



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.8	3.2
10°-20°	131.6	9.2
20°-30°	199.8	14.0
30°-40°	242.1	17.0
40°-50°	255.1	17.9
50°-60°	238.1	16.7
60°-70°	190.3	13.3
70°-80°	104.7	7.3
80°-90°	18.5	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°	377.2	26.5
0°-40°	619.3	43.4
0°-60°	1112.5	78.0
0°-90°	1426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1426.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	484	484	484	484	484	
5°	484	482	480	483	482	46
15°	465	465	464	469	469	131
25°	429	430	432	438	439	197
35°	376	379	386	396	398	235
45°	311	317	330	345	350	239
55°	233	245	269	288	295	208
65°	149	168	202	218	222	147
75°	66	94	115	104	101	70
85°	14	17	11	7	5	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	484.3	484.3	484.3	484.3	484.3
2.5°	486.1	484.7	481.6	484.3	482.9
5°	483.8	482.5	480.2	483.4	482.5
7.5°	481.6	479.8	477.6	481.1	480.2
10°	477.1	475.8	474.4	477.6	477.1
12.5°	471.7	471.3	469.9	473.5	473.1
15°	465.0	465.0	464.1	468.6	468.6
17.5°	457.8	457.4	457.8	462.8	462.3
20°	449.3	449.3	449.7	455.6	455.6
22.5°	439.0	439.4	440.8	448.0	447.5
25°	428.7	429.6	432.3	438.5	439.4
27.5°	416.1	418.4	421.5	429.1	430.0
30°	404.5	405.8	410.7	417.9	419.7
32.5°	390.6	393.3	398.6	406.7	408.9
35°	375.8	379.4	385.6	395.5	397.7
37.5°	361.0	364.1	372.6	382.9	387.0
40°	344.4	349.8	358.7	370.4	374.9
42.5°	328.2	333.6	345.7	357.8	361.9
45°	311.2	317.0	330.0	344.8	349.8
47.5°	292.4	299.1	315.7	331.4	336.8
50°	273.1	281.6	300.0	317.5	323.7
52.5°	252.9	263.7	284.7	303.1	309.0
55°	233.2	244.8	269.0	287.9	295.1
57.5°	213.0	225.5	252.9	274.4	278.5
60°	191.0	206.3	236.3	255.1	260.5
62.5°	169.5	187.0	219.3	237.2	241.7
65°	148.9	167.7	201.8	218.4	221.5
67.5°	126.5	148.9	182.5	197.7	198.6
70°	104.9	130.9	163.7	170.8	165.0
72.5°	83.9	111.7	141.7	135.9	130.9
75°	65.5	93.7	115.2	103.6	100.9
77.5°	48.4	76.7	82.5	76.2	71.3
80°	34.5	60.5	55.6	47.5	45.3
82.5°	23.8	38.1	30.5	23.8	20.6
85°	13.5	17.0	10.8	6.7	5.4
87.5°	5.8	4.0	2.2	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)