

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: P311841

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CA08-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: P311841  
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-3500K  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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**

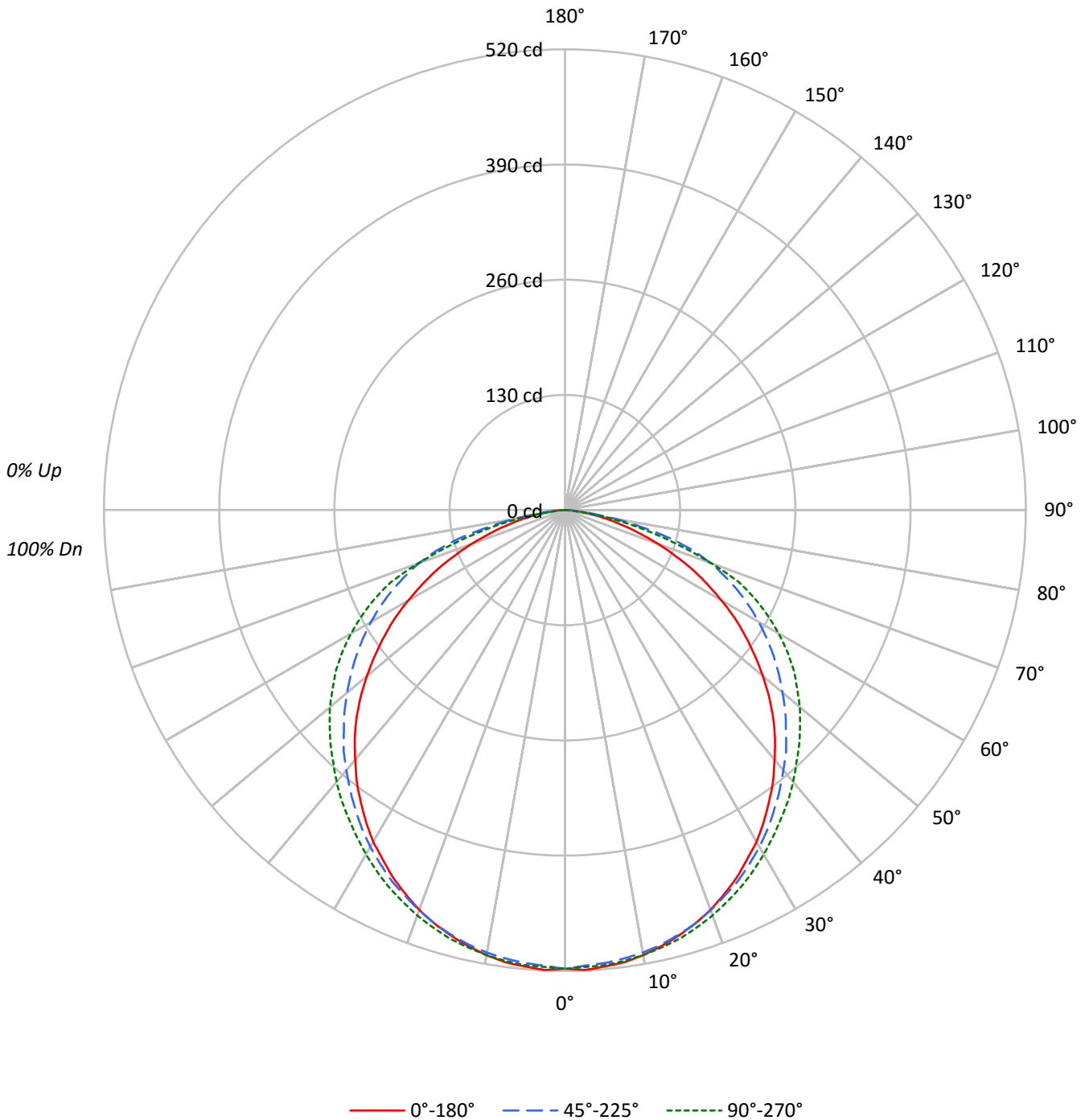
Lumens per Lamp: N/A  
Luminaire Lumens: 1524.0 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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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**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	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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84					84			
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37					37			
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33					33			
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24					24			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1393	1393	1393
5°	1397	1386	1393
10°	1393	1385	1393
15°	1385	1382	1395
20°	1375	1377	1394
25°	1360	1372	1394
30°	1343	1364	1394
35°	1319	1354	1396
40°	1293	1347	1407
45°	1266	1342	1423
50°	1222	1342	1449
55°	1169	1349	1479
60°	1098	1359	1498
65°	1013	1373	1507
70°	882	1376	1388
75°	728	1281	1121
80°	572	921	750
85°	445	355	179



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.0	3.2
10°-20°	140.6	9.2
20°-30°	213.5	14.0
30°-40°	258.7	17.0
40°-50°	272.6	17.9
50°-60°	254.5	16.7
60°-70°	203.4	13.3
70°-80°	111.9	7.3
80°-90°	19.8	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°	403.1	26.5
0°-40°	661.8	43.4
0°-60°	1188.9	78.0
0°-90°	1524.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1524.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	518	518	518	518	518	
5°	517	516	513	517	516	49
15°	497	497	496	501	501	140
25°	458	459	462	469	470	211
35°	402	405	412	423	425	251
45°	333	339	353	368	374	256
55°	249	262	288	308	315	222
65°	159	179	216	233	237	157
75°	70	100	123	111	108	75
85°	14	18	12	7	6	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	517.6	517.6	517.6	517.6	517.6
2.5°	519.5	518.0	514.7	517.6	516.1
5°	517.1	515.6	513.2	516.6	515.6
7.5°	514.7	512.8	510.4	514.2	513.2
10°	509.9	508.5	507.0	510.4	509.9
12.5°	504.1	503.7	502.2	506.1	505.6
15°	497.0	497.0	496.0	500.8	500.8
17.5°	489.3	488.8	489.3	494.6	494.1
20°	480.2	480.2	480.7	486.9	486.9
22.5°	469.2	469.6	471.1	478.7	478.3
25°	458.1	459.1	462.0	468.7	469.6
27.5°	444.7	447.1	450.5	458.6	459.6
30°	432.3	433.7	439.0	446.6	448.6
32.5°	417.4	420.3	426.0	434.7	437.0
35°	401.6	405.4	412.1	422.7	425.1
37.5°	385.8	389.1	398.2	409.3	413.6
40°	368.0	373.8	383.4	395.8	400.6
42.5°	350.8	356.5	369.5	382.4	386.7
45°	332.6	338.8	352.7	368.5	373.8
47.5°	312.5	319.6	337.4	354.1	359.9
50°	291.8	301.0	320.6	339.3	346.0
52.5°	270.3	281.8	304.3	324.0	330.2
55°	249.2	261.7	287.5	307.7	315.3
57.5°	227.6	241.0	270.3	293.3	297.6
60°	204.1	220.4	252.5	272.7	278.4
62.5°	181.1	199.8	234.3	253.5	258.3
65°	159.1	179.2	215.6	233.4	236.7
67.5°	135.1	159.1	195.0	211.3	212.3
70°	112.1	139.9	174.9	182.6	176.4
72.5°	89.6	119.3	151.4	145.2	139.9
75°	70.0	100.2	123.2	110.7	107.8
77.5°	51.8	81.9	88.2	81.5	76.2
80°	36.9	64.7	59.4	50.8	48.4
82.5°	25.4	40.7	32.6	25.4	22.0
85°	14.4	18.2	11.5	7.2	5.8
87.5°	6.2	4.3	2.4	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)