

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: P311842

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CA08-W2A-U-4000K**

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: P311842  
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-4000K  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 4000K 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**

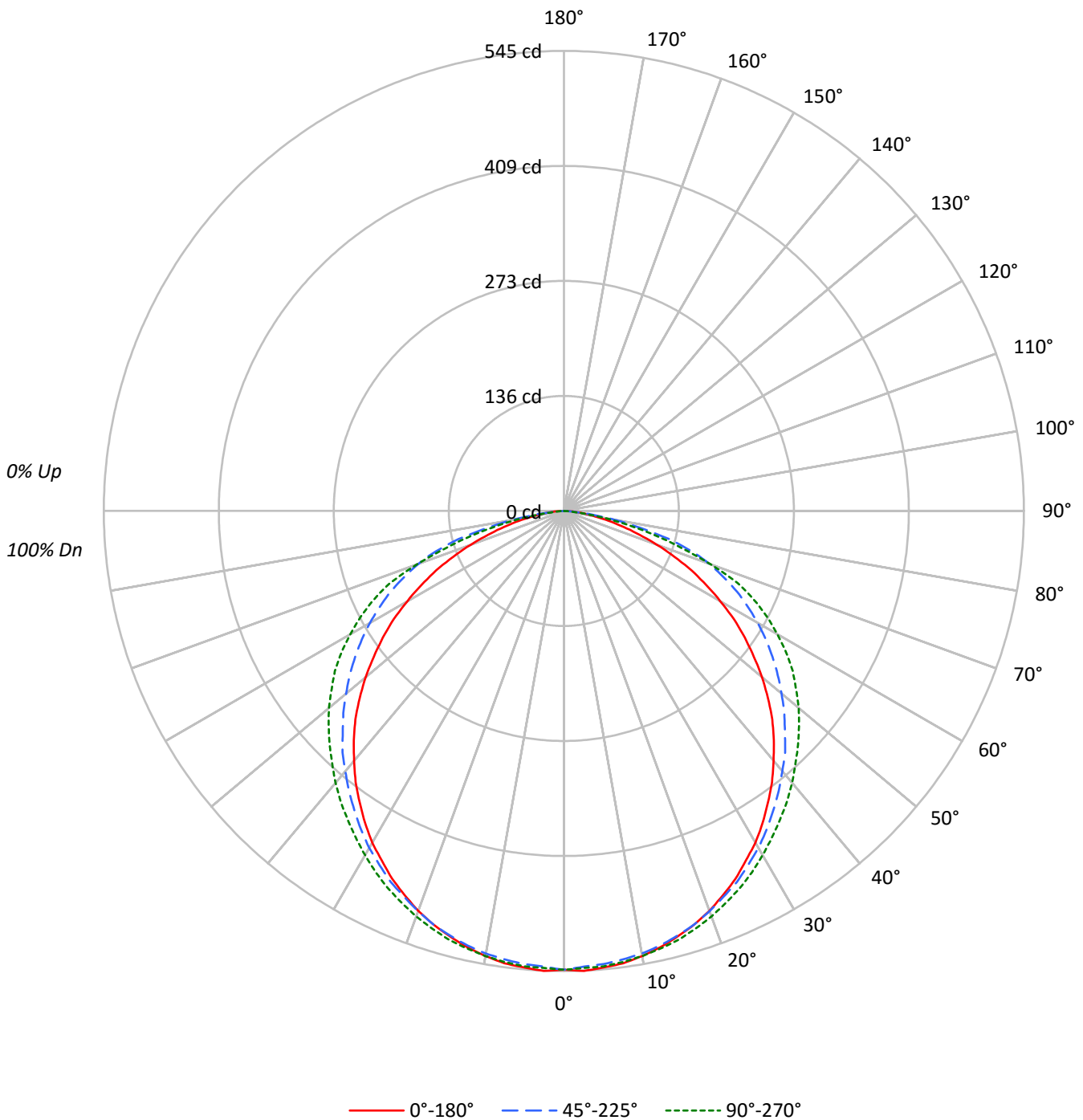
Lumens per Lamp: N/A  
Luminaire Lumens: 1600.0 lumens  
Efficiency: N/A  
Efficacy: 94.7 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1462	1462	1462
5°	1467	1455	1462
10°	1463	1455	1463
15°	1453	1451	1465
20°	1444	1445	1464
25°	1428	1440	1464
30°	1410	1432	1463
35°	1385	1421	1466
40°	1357	1414	1477
45°	1329	1409	1493
50°	1283	1409	1521
55°	1227	1416	1553
60°	1153	1427	1573
65°	1063	1442	1582
70°	926	1445	1456
75°	764	1344	1177
80°	600	967	787
85°	466	374	185



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.4	3.2
10°-20°	147.6	9.2
20°-30°	224.2	14.0
30°-40°	271.6	17.0
40°-50°	286.2	17.9
50°-60°	267.2	16.7
60°-70°	213.5	13.3
70°-80°	117.5	7.3
80°-90°	20.7	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°	423.2	26.5
0°-40°	694.8	43.4
0°-60°	1248.2	78.0
0°-90°	1600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1600.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	543	541	539	542	541	52
15°	522	522	521	526	526	147
25°	481	482	485	492	493	221
35°	422	426	433	444	446	264
45°	349	356	370	387	392	269
55°	262	275	302	323	331	234
65°	167	188	226	245	248	164
75°	74	105	129	116	113	79
85°	15	19	12	8	6	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	543.4	543.4	543.4	543.4	543.4
2.5°	545.4	543.9	540.3	543.4	541.9
5°	542.9	541.4	538.8	542.4	541.4
7.5°	540.3	538.3	535.8	539.8	538.8
10°	535.3	533.8	532.3	535.8	535.3
12.5°	529.3	528.8	527.3	531.3	530.8
15°	521.7	521.7	520.7	525.8	525.8
17.5°	513.7	513.2	513.7	519.2	518.7
20°	504.1	504.1	504.6	511.2	511.2
22.5°	492.6	493.1	494.6	502.6	502.1
25°	481.0	482.0	485.0	492.1	493.1
27.5°	466.9	469.4	472.9	481.5	482.5
30°	453.8	455.3	460.9	468.9	470.9
32.5°	438.2	441.2	447.3	456.3	458.8
35°	421.6	425.6	432.7	443.8	446.3
37.5°	405.0	408.5	418.1	429.7	434.2
40°	386.4	392.4	402.5	415.6	420.6
42.5°	368.3	374.3	387.9	401.5	406.0
45°	349.2	355.7	370.3	386.9	392.4
47.5°	328.0	335.6	354.2	371.8	377.8
50°	306.4	316.0	336.6	356.2	363.3
52.5°	283.8	295.8	319.5	340.1	346.6
55°	261.6	274.7	301.9	323.0	331.1
57.5°	239.0	253.1	283.8	307.9	312.4
60°	214.3	231.4	265.1	286.3	292.3
62.5°	190.2	209.8	246.0	266.1	271.2
65°	167.0	188.2	226.4	245.0	248.5
67.5°	141.9	167.0	204.8	221.9	222.9
70°	117.7	146.9	183.6	191.7	185.1
72.5°	94.1	125.3	159.0	152.4	146.9
75°	73.5	105.2	129.3	116.2	113.2
77.5°	54.3	86.0	92.6	85.5	80.0
80°	38.7	67.9	62.4	53.3	50.8
82.5°	26.7	42.8	34.2	26.7	23.1
85°	15.1	19.1	12.1	7.5	6.0
87.5°	6.5	4.5	2.5	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)