

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: P313069

Luminaire Tested: **24FCZ2-30-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: P313069  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30-UNV-L83050-HRP-CA08-W2A-U-5000K  
Description: 2'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**

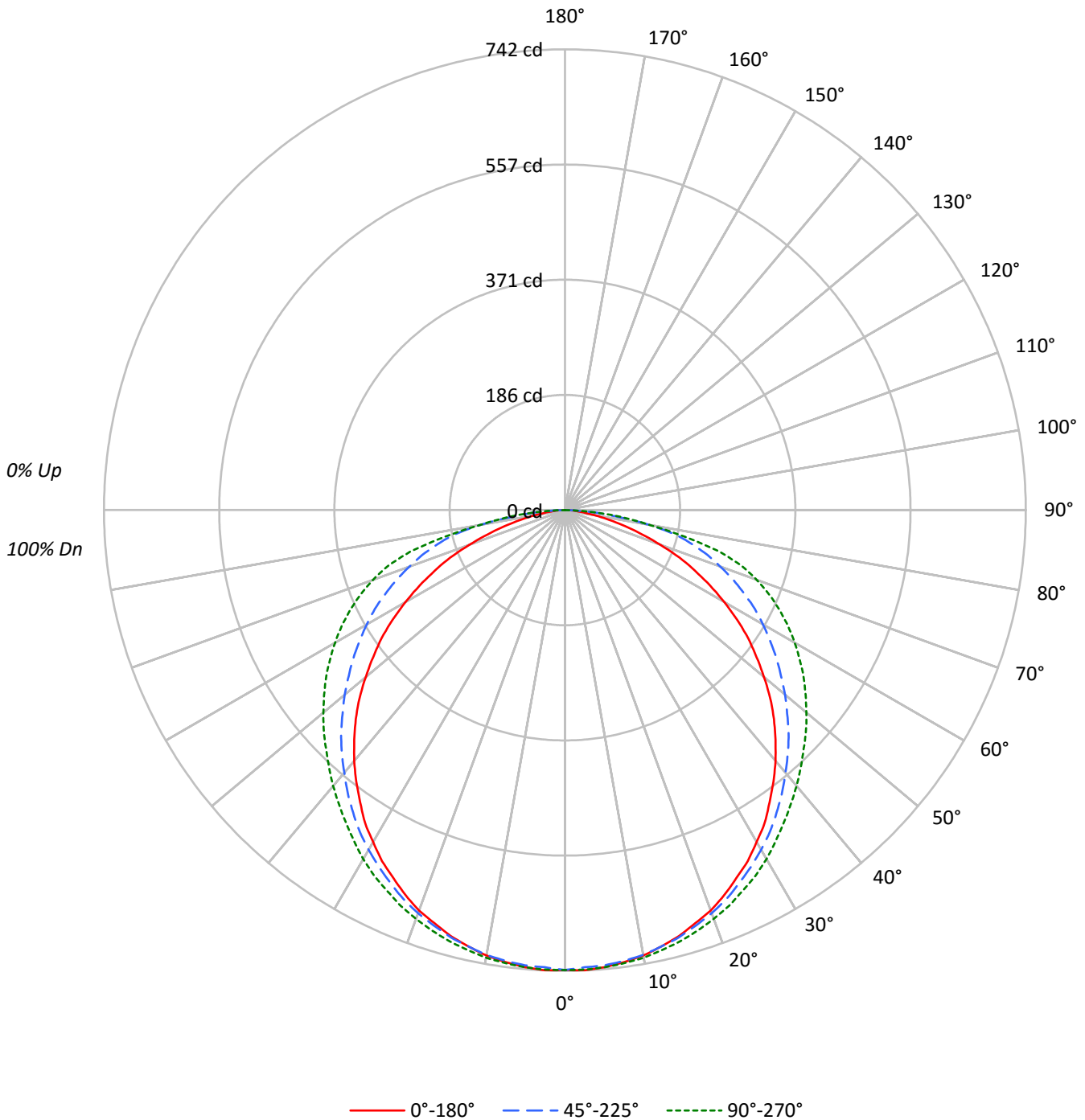
Lumens per Lamp: N/A  
Luminaire Lumens: 2283.0 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 24.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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

	0°	45°	90°
0°	997	997	997
5°	998	994	998
10°	995	994	1000
15°	989	992	1001
20°	983	989	1003
25°	970	985	1005
30°	959	982	1008
35°	943	976	1010
40°	927	970	1019
45°	906	969	1035
50°	876	968	1062
55°	845	975	1101
60°	797	990	1150
65°	736	1013	1214
70°	643	1049	1293
75°	522	1103	1337
80°	385	1081	1081
85°	295	797	900



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.2	3.1
10°-20°	201.5	8.8
20°-30°	306.8	13.4
30°-40°	372.5	16.3
40°-50°	393.5	17.2
50°-60°	371.3	16.3
60°-70°	308.8	13.5
70°-80°	203.1	8.9
80°-90°	55.4	2.4
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°	578.4	25.3
0°-40°	950.9	41.7
0°-60°	1715.8	75.2
0°-90°	2283.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2283.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	741	741	741	741	741	
5°	739	739	736	739	739	70
15°	710	711	712	719	719	200
25°	654	658	663	675	677	302
35°	574	581	594	610	615	360
45°	476	486	509	534	544	367
55°	360	376	416	455	469	321
65°	231	258	318	365	381	229
75°	100	146	212	251	257	108
85°	19	42	52	57	58	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	740.7	740.7	740.7	740.7	740.7
2.5°	741.7	740.7	736.9	740.7	740.7
5°	738.8	738.8	735.9	738.8	738.8
7.5°	734.0	734.0	732.1	735.9	735.9
10°	728.3	728.3	727.3	732.1	732.1
12.5°	719.7	720.6	719.7	725.4	725.4
15°	710.1	711.1	712.0	718.7	718.7
17.5°	697.7	699.6	701.5	709.2	710.1
20°	686.2	687.2	691.0	699.6	700.6
22.5°	670.9	673.8	678.6	687.2	690.1
25°	653.7	657.6	663.3	674.8	676.7
27.5°	637.5	640.4	648.0	660.4	664.3
30°	617.4	622.2	631.8	644.2	649.0
32.5°	598.3	603.1	614.6	627.9	631.8
35°	574.4	581.1	594.5	609.8	614.6
37.5°	551.5	558.2	574.4	591.6	597.4
40°	527.6	535.2	552.4	572.5	580.2
42.5°	501.8	512.3	531.4	553.4	562.0
45°	476.0	485.5	509.4	534.3	543.8
47.5°	448.3	459.7	485.5	515.2	526.6
50°	418.6	433.0	462.6	495.1	507.5
52.5°	389.0	405.2	438.7	475.0	488.4
55°	360.3	375.6	415.8	454.9	469.3
57.5°	328.8	347.9	391.9	433.9	448.3
60°	296.3	317.3	368.0	411.9	427.2
62.5°	263.8	287.7	345.0	389.0	405.2
65°	231.3	258.1	318.3	365.1	381.4
67.5°	199.8	229.4	293.4	340.3	356.5
70°	163.4	200.7	266.7	312.5	328.8
72.5°	130.0	173.0	240.9	283.9	298.2
75°	100.4	146.2	212.2	251.4	257.1
77.5°	73.6	119.5	182.6	195.9	196.9
80°	49.7	95.6	139.5	137.6	139.5
82.5°	32.5	71.7	87.9	98.4	99.4
85°	19.1	42.1	51.6	57.3	58.3
87.5°	9.6	14.3	18.2	19.1	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)