

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: P313815

Luminaire Tested: **24FCZ2-30-UNV-L83050-CA08-W2A-U-3000K**

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: P313815  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
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-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 3000K 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**

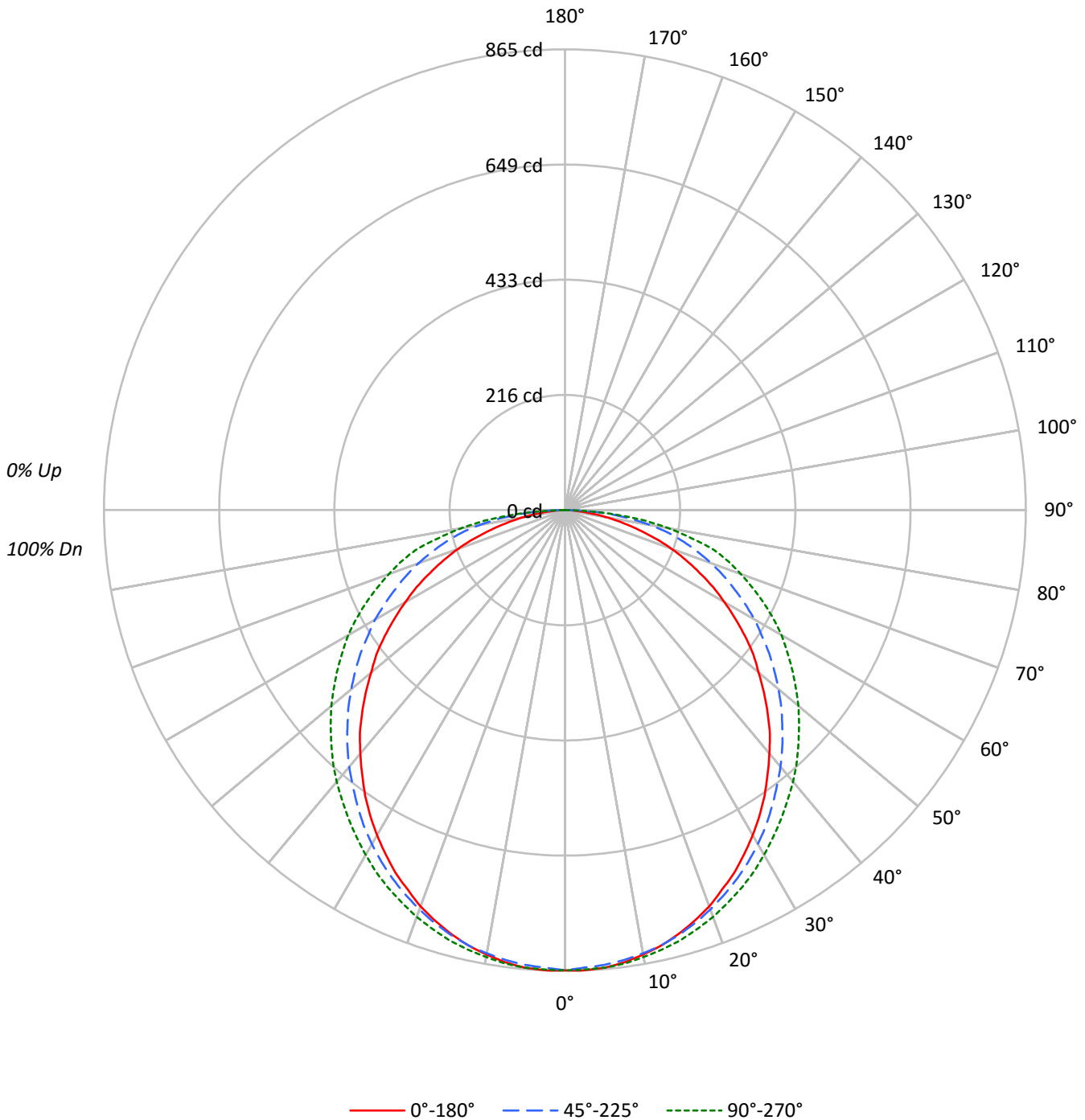
Lumens per Lamp: N/A  
Luminaire Lumens: 2620.0 lumens  
Efficiency: N/A  
Efficacy: 112.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 24FC22-30-UNV-L83050-CA08-W2A-U-3000K

**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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

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

	0°	45°	90°
0°	1163	1163	1163
5°	1165	1158	1165
10°	1158	1154	1164
15°	1148	1150	1165
20°	1134	1143	1164
25°	1116	1134	1163
30°	1095	1125	1161
35°	1074	1114	1162
40°	1049	1105	1170
45°	1024	1098	1179
50°	993	1095	1197
55°	969	1097	1221
60°	931	1107	1263
65°	888	1118	1309
70°	841	1152	1382
75°	750	1202	1509
80°	640	1273	1543
85°	457	1261	1476



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.8	3.1
10°-20°	233.8	8.9
20°-30°	353.2	13.5
30°-40°	425.6	16.2
40°-50°	446.8	17.1
50°-60°	418.1	16.0
60°-70°	345.2	13.2
70°-80°	235.2	9.0
80°-90°	80.2	3.1
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°	668.8	25.5
0°-40°	1094.4	41.8
0°-60°	1959.3	74.8
0°-90°	2620.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2620.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	862	861	857	862	862	82
15°	824	825	826	834	836	232
25°	752	755	764	779	783	346
35°	654	661	678	701	708	409
45°	538	549	577	608	620	415
55°	413	429	468	506	521	369
65°	279	302	351	396	411	277
75°	144	177	231	275	290	154
85°	30	58	82	92	96	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	864.1	864.1	864.1	864.1	864.1
2.5°	864.9	864.1	859.7	864.1	863.2
5°	862.3	861.4	857.1	862.3	862.3
7.5°	856.2	856.2	851.9	858.0	858.8
10°	847.5	847.5	844.9	851.9	851.9
12.5°	837.1	837.1	837.1	844.1	844.9
15°	824.1	824.9	825.8	834.5	836.2
17.5°	808.4	810.2	812.8	823.2	824.9
20°	791.9	793.6	798.0	810.2	812.8
22.5°	771.0	775.4	781.5	795.4	798.0
25°	751.9	755.4	764.1	778.9	783.2
27.5°	728.4	733.7	745.0	760.6	766.7
30°	705.0	710.2	724.1	742.4	747.6
32.5°	679.8	687.6	702.4	721.5	727.6
35°	653.7	660.6	678.0	700.6	707.6
37.5°	625.0	634.6	653.7	678.0	686.7
40°	597.2	607.6	629.4	655.4	665.9
42.5°	569.4	579.8	604.1	633.7	644.1
45°	538.1	549.4	577.2	608.5	619.8
47.5°	506.8	520.7	551.1	584.1	596.3
50°	474.6	490.3	523.3	558.1	572.0
52.5°	445.9	460.7	495.5	532.9	545.9
55°	412.9	429.4	467.7	505.9	520.7
57.5°	379.0	397.3	438.1	479.8	494.6
60°	346.0	366.0	411.2	452.9	469.4
62.5°	313.8	333.8	380.7	424.2	440.7
65°	279.0	302.5	351.2	395.5	411.2
67.5°	246.0	271.2	322.5	366.0	381.6
70°	213.8	238.2	292.9	335.5	351.2
72.5°	179.1	206.9	261.6	306.0	322.5
75°	144.3	177.3	231.2	274.7	290.3
77.5°	112.1	146.0	199.9	235.6	243.4
80°	82.6	117.4	164.3	189.5	199.1
82.5°	53.0	87.8	125.2	143.4	151.3
85°	29.6	58.2	81.7	92.1	95.6
87.5°	12.2	25.2	33.0	37.4	37.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)