

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: P310046

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-5500K**

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: P310046  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (168) 5500K 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**

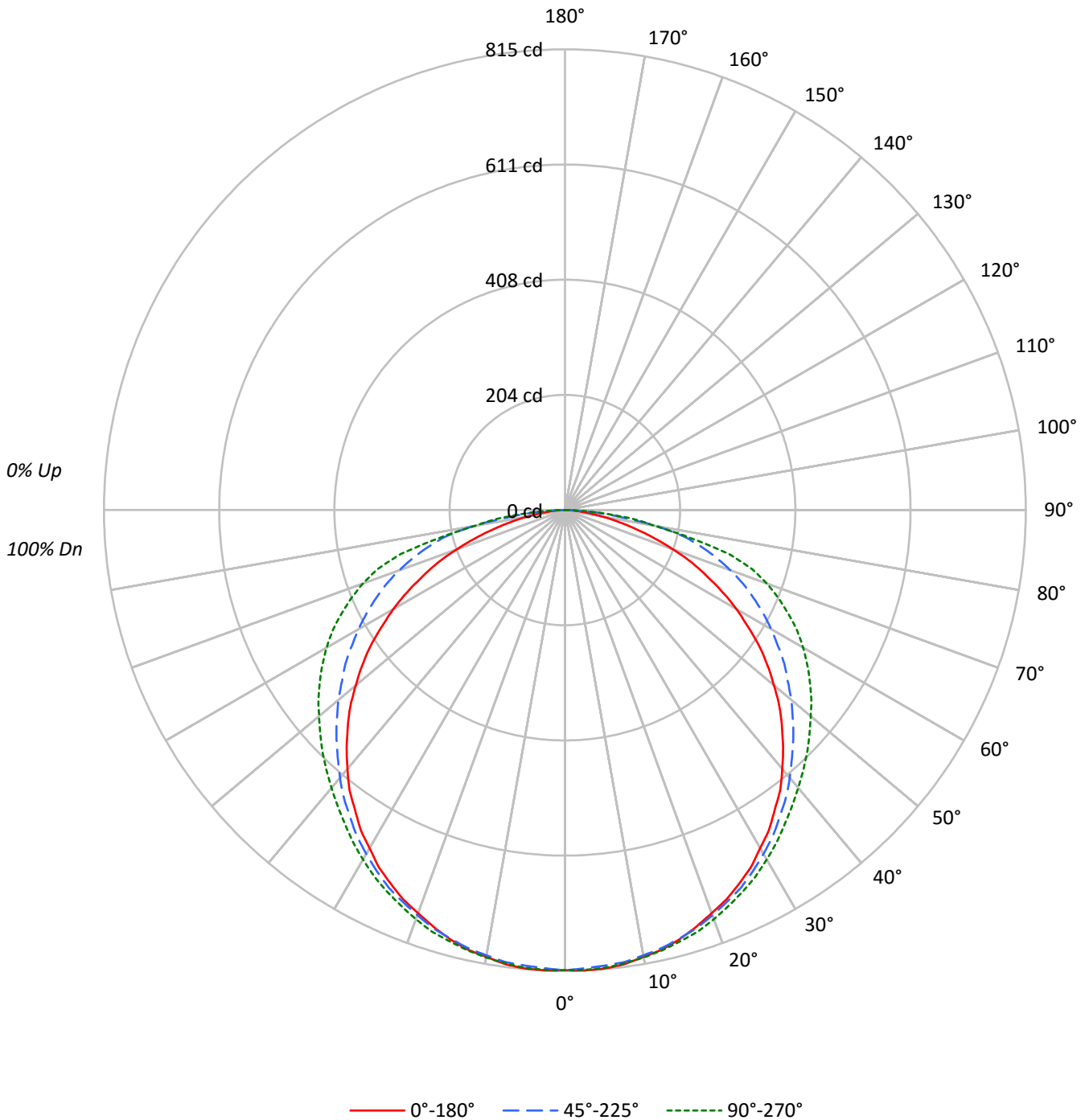
Lumens per Lamp: N/A  
Luminaire Lumens: 2588.0 lumens  
Efficiency: N/A  
Efficacy: 77.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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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**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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1095	1095	1095
5°	1099	1092	1098
10°	1096	1093	1098
15°	1094	1092	1100
20°	1086	1092	1103
25°	1082	1094	1105
30°	1073	1091	1109
35°	1063	1088	1113
40°	1051	1087	1127
45°	1033	1087	1153
50°	1010	1094	1188
55°	985	1111	1241
60°	943	1133	1309
65°	883	1173	1390
70°	803	1227	1495
75°	680	1294	1562
80°	537	1303	1263
85°	397	991	1110



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.2	3.0
10°-20°	222.2	8.6
20°-30°	339.8	13.1
30°-40°	415.4	16.0
40°-50°	442.7	17.1
50°-60°	423.3	16.4
60°-70°	358.6	13.9
70°-80°	241.0	9.3
80°-90°	68.0	2.6
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°	639.1	24.7
0°-40°	1054.5	40.7
0°-60°	1920.5	74.2
0°-90°	2588.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2588.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	814	813	809	813	813	77
15°	786	786	784	791	790	222
25°	729	732	737	743	744	336
35°	647	652	662	675	678	405
45°	543	552	571	596	606	419
55°	420	435	474	511	529	374
65°	277	306	368	417	436	275
75°	131	178	249	291	300	140
85°	26	53	64	69	72	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	813.9	813.9	813.9	813.9	813.9
2.5°	815.1	815.1	811.3	813.9	813.9
5°	813.9	812.6	808.7	812.6	812.6
7.5°	810.0	808.7	806.2	810.0	808.7
10°	802.3	802.3	799.7	803.6	803.6
12.5°	795.9	794.6	793.3	798.4	797.2
15°	785.6	785.6	784.3	790.7	789.5
17.5°	772.8	774.1	775.3	780.5	781.8
20°	758.7	761.2	762.5	770.2	770.2
22.5°	745.8	747.1	749.7	757.4	757.4
25°	729.1	731.7	736.8	743.2	744.5
27.5°	712.4	713.7	720.1	729.1	730.4
30°	690.6	694.5	702.2	712.4	713.7
32.5°	671.4	675.2	684.2	694.5	697.0
35°	647.0	652.1	662.4	675.2	677.8
37.5°	625.2	629.0	641.8	656.0	659.8
40°	598.2	605.9	618.7	635.4	641.8
42.5°	571.2	578.9	594.3	616.2	623.9
45°	543.0	552.0	571.2	595.6	605.9
47.5°	514.8	525.0	546.8	575.1	586.6
50°	482.7	495.5	522.5	554.5	567.4
52.5°	451.9	467.3	496.8	532.7	549.4
55°	419.8	435.2	473.7	510.9	528.9
57.5°	383.8	404.4	446.7	489.1	508.3
60°	350.4	369.7	421.0	467.3	486.5
62.5°	314.5	340.2	395.4	444.2	463.4
65°	277.3	305.5	368.4	417.2	436.5
67.5°	243.9	274.7	341.5	390.2	409.5
70°	204.1	242.6	311.9	360.7	380.0
72.5°	166.9	209.2	281.1	328.6	346.6
75°	130.9	178.4	249.0	291.4	300.4
77.5°	97.6	147.6	215.7	233.6	227.2
80°	69.3	118.1	168.2	159.2	163.0
82.5°	44.9	89.9	104.0	118.1	121.9
85°	25.7	52.6	64.2	69.3	71.9
87.5°	11.6	19.3	25.7	25.7	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)