

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: P309891

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CP187-W2A-U-4500K**

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: P309891  
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: 24FCZ2-30-UNV-L82765-RDP-CP187-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (168) 4500K 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**

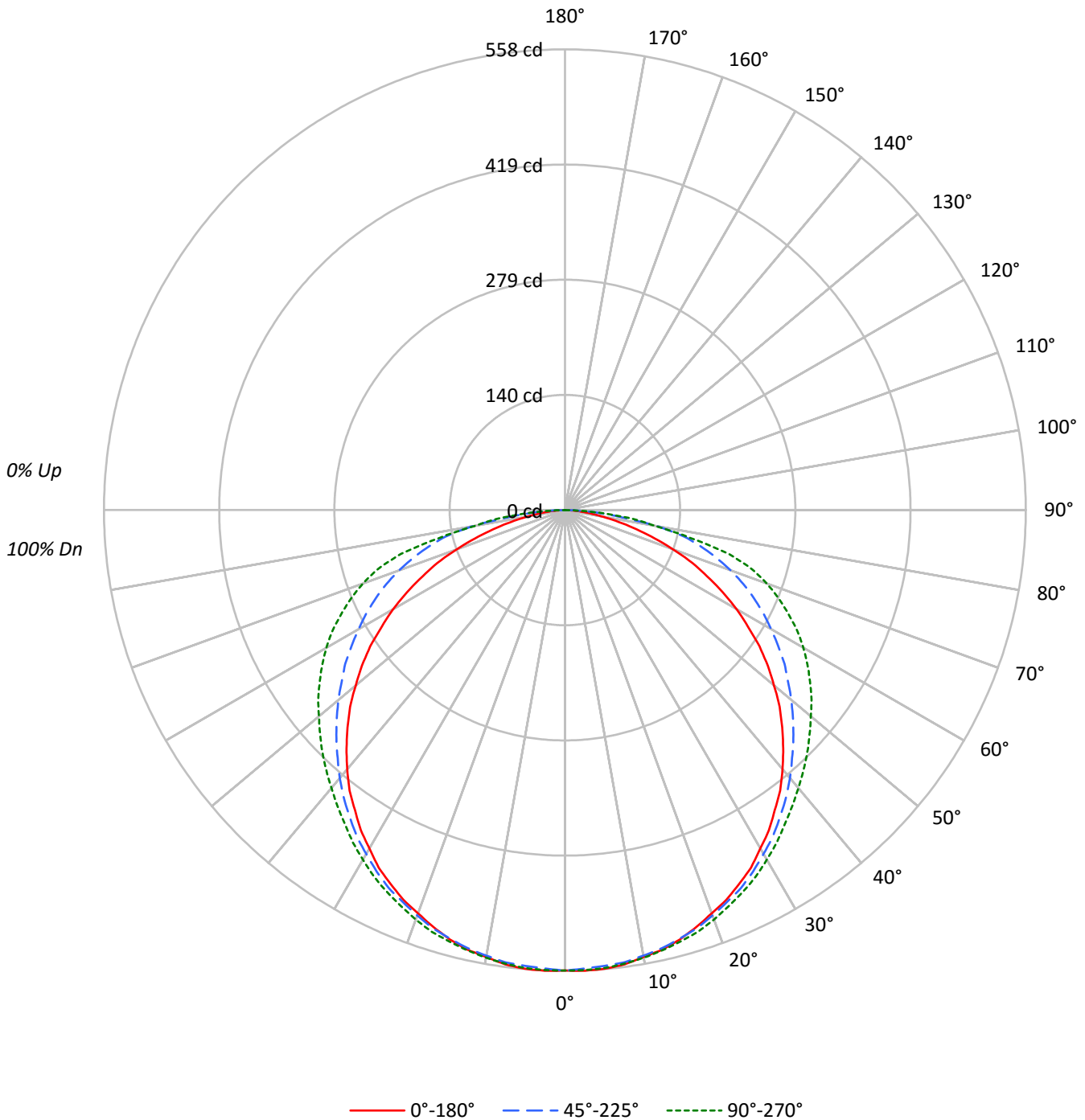
Lumens per Lamp: N/A  
Luminaire Lumens: 1773.0 lumens  
Efficiency: N/A  
Efficacy: 74.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	68	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°	750	750	750
5°	753	748	752
10°	751	749	752
15°	750	748	753
20°	744	748	756
25°	742	749	757
30°	735	747	760
35°	728	745	763
40°	720	745	772
45°	708	745	790
50°	692	749	814
55°	675	761	850
60°	646	776	897
65°	605	804	952
70°	550	841	1024
75°	466	887	1070
80°	368	893	865
85°	272	679	760



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.9	3.0
10°-20°	152.2	8.6
20°-30°	232.8	13.1
30°-40°	284.6	16.0
40°-50°	303.3	17.1
50°-60°	290.0	16.4
60°-70°	245.6	13.9
70°-80°	165.1	9.3
80°-90°	46.6	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°	437.9	24.7
0°-40°	722.4	40.7
0°-60°	1315.7	74.2
0°-90°	1773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1773.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	558	557	554	557	557	53
15°	538	538	537	542	541	152
25°	500	501	505	509	510	230
35°	443	447	454	463	464	278
45°	372	378	391	408	415	287
55°	288	298	324	350	362	256
65°	190	209	252	286	299	189
75°	90	122	171	200	206	96
85°	18	36	44	48	49	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	557.6	557.6	557.6	557.6	557.6
2.5°	558.4	558.4	555.8	557.6	557.6
5°	557.6	556.7	554.0	556.7	556.7
7.5°	554.9	554.0	552.3	554.9	554.0
10°	549.6	549.6	547.9	550.5	550.5
12.5°	545.2	544.4	543.5	547.0	546.1
15°	538.2	538.2	537.3	541.7	540.8
17.5°	529.4	530.3	531.2	534.7	535.6
20°	519.7	521.5	522.4	527.7	527.7
22.5°	510.9	511.8	513.6	518.9	518.9
25°	499.5	501.3	504.8	509.2	510.1
27.5°	488.1	489.0	493.4	499.5	500.4
30°	473.1	475.8	481.0	488.1	489.0
32.5°	459.9	462.6	468.7	475.8	477.5
35°	443.2	446.7	453.8	462.6	464.3
37.5°	428.3	430.9	439.7	449.4	452.0
40°	409.8	415.1	423.9	435.3	439.7
42.5°	391.3	396.6	407.2	422.1	427.4
45°	372.0	378.2	391.3	408.1	415.1
47.5°	352.7	359.7	374.6	394.0	401.9
50°	330.7	339.5	357.9	379.9	388.7
52.5°	309.6	320.1	340.3	365.0	376.4
55°	287.6	298.1	324.5	350.0	362.3
57.5°	262.9	277.0	306.0	335.1	348.3
60°	240.1	253.3	288.5	320.1	333.3
62.5°	215.5	233.0	270.9	304.3	317.5
65°	190.0	209.3	252.4	285.8	299.0
67.5°	167.1	188.2	233.9	267.3	280.5
70°	139.8	166.2	213.7	247.1	260.3
72.5°	114.3	143.3	192.6	225.1	237.4
75°	89.7	122.2	170.6	199.6	205.8
77.5°	66.8	101.1	147.7	160.1	155.7
80°	47.5	80.9	115.2	109.0	111.7
82.5°	30.8	61.6	71.2	80.9	83.5
85°	17.6	36.1	44.0	47.5	49.2
87.5°	7.9	13.2	17.6	17.6	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)