

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: P309213

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP187-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: P309213  
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-L82765-HRP-CP187-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB 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**

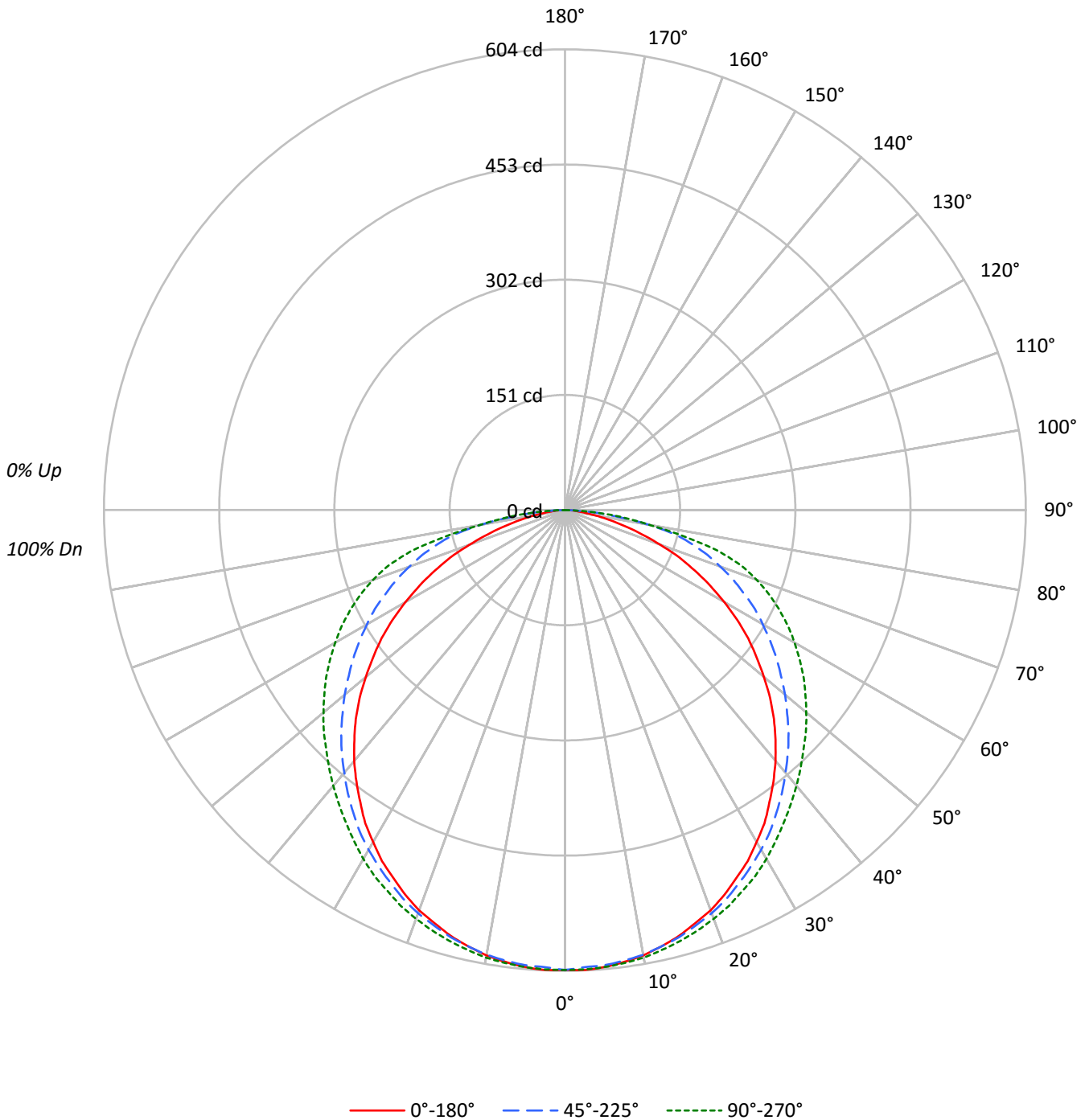
Lumens per Lamp: N/A  
Luminaire Lumens: 1858.0 lumens  
Efficiency: N/A  
Efficacy: 80.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	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°	811	811	811
5°	812	809	812
10°	810	809	814
15°	805	807	815
20°	800	805	816
25°	790	801	818
30°	781	799	821
35°	768	795	822
40°	754	790	829
45°	737	789	842
50°	713	788	864
55°	688	794	896
60°	649	806	936
65°	599	825	988
70°	523	854	1053
75°	425	898	1088
80°	313	880	880
85°	241	648	732



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.1	3.1
10°-20°	164.0	8.8
20°-30°	249.7	13.4
30°-40°	303.1	16.3
40°-50°	320.3	17.2
50°-60°	302.2	16.3
60°-70°	251.3	13.5
70°-80°	165.3	8.9
80°-90°	45.1	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°	470.8	25.3
0°-40°	773.9	41.7
0°-60°	1396.4	75.2
0°-90°	1858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1858.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	603	603	603	603	603	
5°	601	601	599	601	601	57
15°	578	579	580	585	585	163
25°	532	535	540	549	551	245
35°	468	473	484	496	500	293
45°	387	395	415	435	443	298
55°	293	306	338	370	382	261
65°	188	210	259	297	310	186
75°	82	119	173	205	209	88
85°	16	34	42	47	47	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	602.8	602.8	602.8	602.8	602.8
2.5°	603.6	602.8	599.7	602.8	602.8
5°	601.3	601.3	598.9	601.3	601.3
7.5°	597.4	597.4	595.8	598.9	598.9
10°	592.7	592.7	591.9	595.8	595.8
12.5°	585.7	586.5	585.7	590.4	590.4
15°	577.9	578.7	579.5	584.9	584.9
17.5°	567.8	569.4	570.9	577.2	577.9
20°	558.5	559.3	562.4	569.4	570.2
22.5°	546.0	548.4	552.3	559.3	561.6
25°	532.0	535.2	539.8	549.2	550.7
27.5°	518.8	521.2	527.4	537.5	540.6
30°	502.5	506.4	514.2	524.3	528.2
32.5°	486.9	490.8	500.2	511.0	514.2
35°	467.5	472.9	483.8	496.3	500.2
37.5°	448.8	454.3	467.5	481.5	486.2
40°	429.4	435.6	449.6	465.9	472.2
42.5°	408.4	416.9	432.5	450.4	457.4
45°	387.4	395.1	414.6	434.8	442.6
47.5°	364.8	374.1	395.1	419.3	428.6
50°	340.7	352.4	376.5	402.9	413.0
52.5°	316.6	329.8	357.0	386.6	397.5
55°	293.2	305.7	338.4	370.3	381.9
57.5°	267.6	283.1	318.9	353.1	364.8
60°	241.1	258.2	299.5	335.3	347.7
62.5°	214.7	234.1	280.8	316.6	329.8
65°	188.2	210.0	259.0	297.1	310.4
67.5°	162.6	186.7	238.8	276.9	290.1
70°	133.0	163.3	217.0	254.4	267.6
72.5°	105.8	140.8	196.0	231.0	242.7
75°	81.7	119.0	172.7	204.6	209.2
77.5°	59.9	97.2	148.6	159.5	160.2
80°	40.4	77.8	113.6	112.0	113.6
82.5°	26.4	58.3	71.6	80.1	80.9
85°	15.6	34.2	42.0	46.7	47.4
87.5°	7.8	11.7	14.8	15.6	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)