

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: P309837

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP125-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: P309837  
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: 24FCZ2-30HE-UNV-L82765-RDP-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (336) 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: 1874.0 lumens  
Efficiency: N/A  
Efficacy: 87.2 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

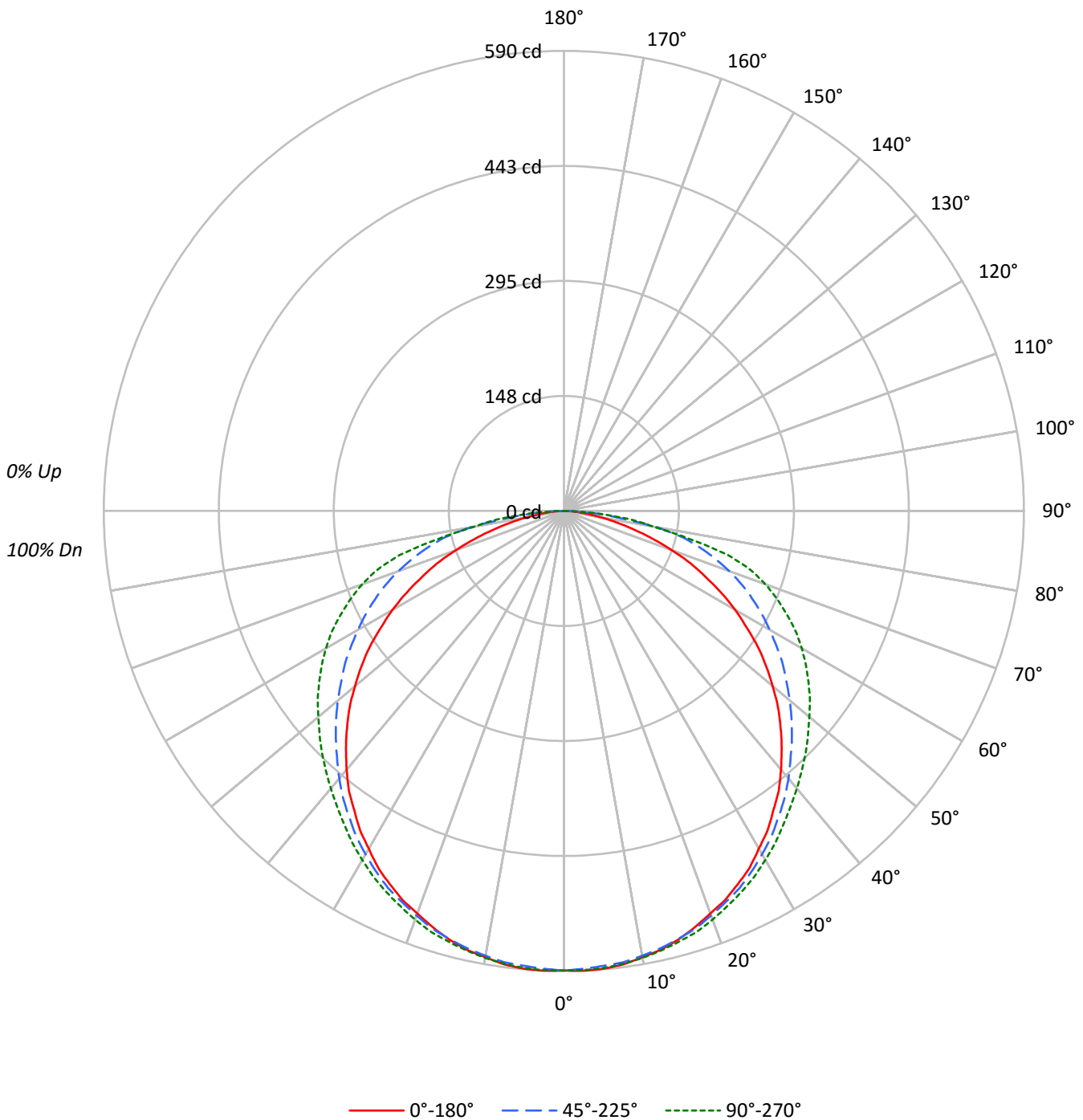
Input Watts (W): 21.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	793	793	793
5°	796	791	795
10°	794	791	795
15°	792	791	796
20°	787	791	799
25°	784	792	800
30°	777	790	803
35°	770	788	806
40°	761	787	816
45°	748	787	835
50°	732	792	860
55°	713	805	898
60°	683	820	948
65°	639	849	1006
70°	581	889	1082
75°	493	937	1131
80°	389	944	914
85°	287	718	804



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.9	3.0
10°-20°	160.9	8.6
20°-30°	246.0	13.1
30°-40°	300.8	16.0
40°-50°	320.6	17.1
50°-60°	306.5	16.4
60°-70°	259.6	13.9
70°-80°	174.5	9.3
80°-90°	49.2	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°	462.8	24.7
0°-40°	763.6	40.7
0°-60°	1390.6	74.2
0°-90°	1874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1874.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	589	589	589	589	589	
5°	589	588	586	588	588	56
15°	569	569	568	573	572	160
25°	528	530	534	538	539	243
35°	468	472	480	489	491	293
45°	393	400	414	431	439	303
55°	304	315	343	370	383	271
65°	201	221	267	302	316	199
75°	95	129	180	211	218	101
85°	19	38	46	50	52	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	589.3	589.3	589.3	589.3	589.3
2.5°	590.2	590.2	587.5	589.3	589.3
5°	589.3	588.4	585.6	588.4	588.4
7.5°	586.5	585.6	583.7	586.5	585.6
10°	581.0	581.0	579.1	581.9	581.9
12.5°	576.3	575.4	574.4	578.2	577.2
15°	568.9	568.9	567.9	572.6	571.7
17.5°	559.6	560.5	561.4	565.2	566.1
20°	549.3	551.2	552.1	557.7	557.7
22.5°	540.1	541.0	542.8	548.4	548.4
25°	528.0	529.8	533.5	538.2	539.1
27.5°	515.9	516.8	521.5	528.0	528.9
30°	500.1	502.9	508.5	515.9	516.8
32.5°	486.1	488.9	495.4	502.9	504.7
35°	468.5	472.2	479.6	488.9	490.8
37.5°	452.7	455.5	464.8	475.0	477.8
40°	433.2	438.7	448.0	460.1	464.8
42.5°	413.6	419.2	430.4	446.2	451.7
45°	393.2	399.7	413.6	431.3	438.7
47.5°	372.7	380.2	396.0	416.4	424.8
50°	349.5	358.8	378.3	401.6	410.9
52.5°	327.2	338.3	359.7	385.8	397.8
55°	304.0	315.1	343.0	370.0	383.0
57.5°	277.9	292.8	323.5	354.1	368.1
60°	253.8	267.7	304.9	338.3	352.3
62.5°	227.7	246.3	286.3	321.6	335.6
65°	200.8	221.2	266.8	302.1	316.0
67.5°	176.6	198.9	247.3	282.6	296.5
70°	147.8	175.7	225.9	261.2	275.1
72.5°	120.8	151.5	203.6	238.0	251.0
75°	94.8	129.2	180.3	211.0	217.5
77.5°	70.6	106.9	156.2	169.2	164.5
80°	50.2	85.5	121.8	115.3	118.0
82.5°	32.5	65.1	75.3	85.5	88.3
85°	18.6	38.1	46.5	50.2	52.1
87.5°	8.4	13.9	18.6	18.6	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)