

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: P309970

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP125-W2A-U-3500K**

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: P309970  
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: 24FCZ2-35-UNV-L82765-RDP-CP125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (168) 3500K 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: 2087.0 lumens  
Efficiency: N/A  
Efficacy: 74.3 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

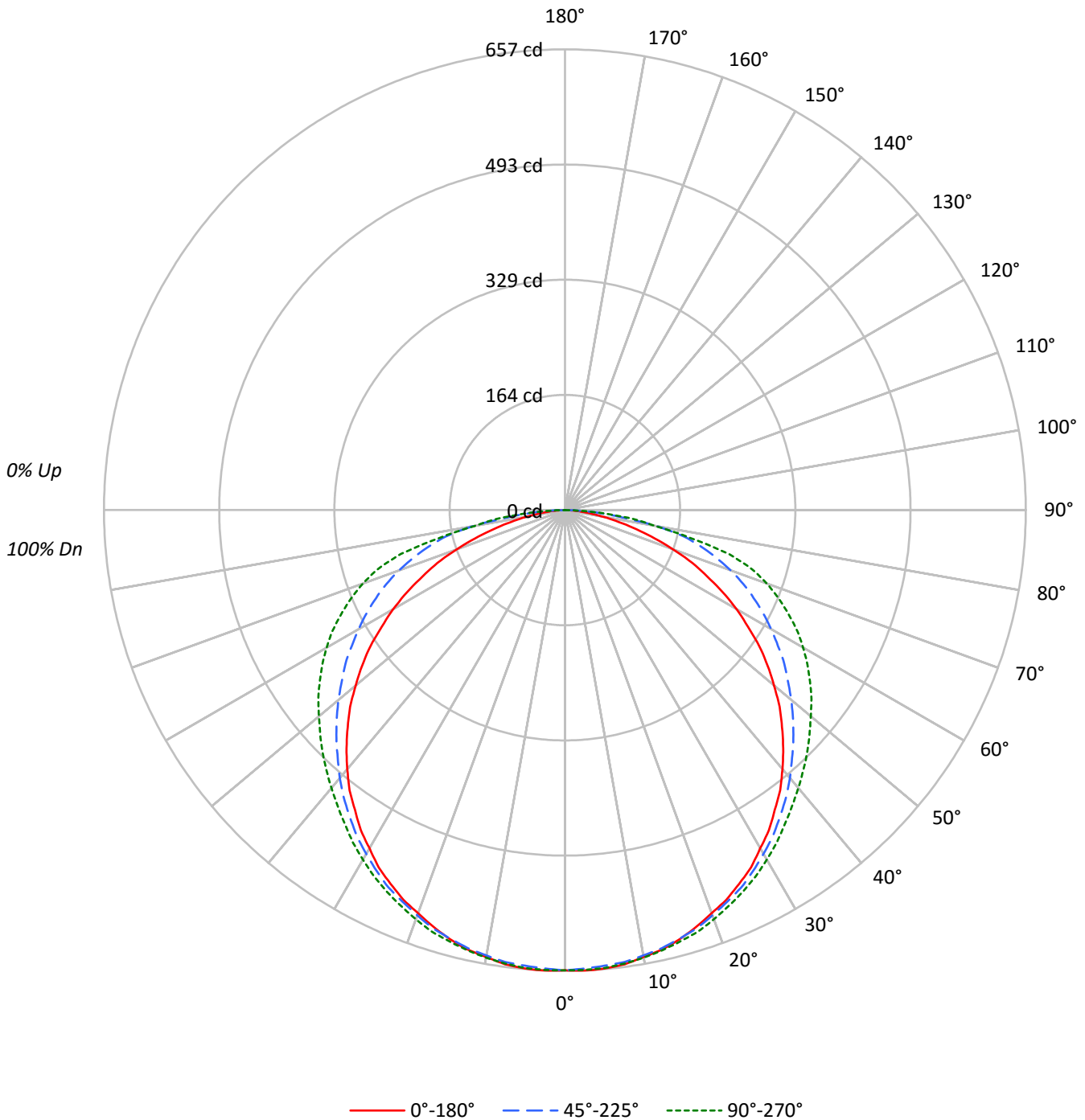
Input Watts (W): 28.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	883	883	883
5°	886	881	885
10°	884	881	885
15°	882	881	887
20°	876	880	889
25°	873	882	891
30°	865	880	894
35°	857	877	898
40°	847	876	909
45°	833	877	930
50°	815	882	958
55°	794	896	1000
60°	760	914	1056
65°	712	946	1121
70°	648	989	1205
75°	549	1044	1259
80°	433	1051	1019
85°	320	800	895



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.3	3.0
10°-20°	179.2	8.6
20°-30°	274.0	13.1
30°-40°	335.0	16.0
40°-50°	357.0	17.1
50°-60°	341.3	16.4
60°-70°	289.1	13.9
70°-80°	194.3	9.3
80°-90°	54.8	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°	515.4	24.7
0°-40°	850.4	40.7
0°-60°	1548.7	74.2
0°-90°	2087.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2087.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	656	656	656	656	656	
5°	656	655	652	655	655	62
15°	634	634	632	638	637	179
25°	588	590	594	599	600	271
35°	522	526	534	544	547	327
45°	438	445	461	480	489	338
55°	338	351	382	412	426	301
65°	224	246	297	336	352	222
75°	106	144	201	235	242	113
85°	21	42	52	56	58	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	656.3	656.3	656.3	656.3	656.3
2.5°	657.3	657.3	654.2	656.3	656.3
5°	656.3	655.3	652.2	655.3	655.3
7.5°	653.2	652.2	650.1	653.2	652.2
10°	647.0	647.0	644.9	648.0	648.0
12.5°	641.8	640.8	639.7	643.9	642.8
15°	633.5	633.5	632.5	637.7	636.6
17.5°	623.2	624.2	625.2	629.4	630.4
20°	611.8	613.9	614.9	621.1	621.1
22.5°	601.4	602.5	604.5	610.8	610.8
25°	588.0	590.1	594.2	599.4	600.4
27.5°	574.5	575.6	580.7	588.0	589.0
30°	556.9	560.0	566.2	574.5	575.6
32.5°	541.4	544.5	551.7	560.0	562.1
35°	521.7	525.9	534.2	544.5	546.6
37.5°	504.1	507.2	517.6	529.0	532.1
40°	482.4	488.6	499.0	512.4	517.6
42.5°	460.7	466.9	479.3	496.9	503.1
45°	437.9	445.1	460.7	480.3	488.6
47.5°	415.1	423.4	441.0	463.8	473.1
50°	389.2	399.6	421.3	447.2	457.5
52.5°	364.4	376.8	400.6	429.6	443.1
55°	338.5	350.9	382.0	412.0	426.5
57.5°	309.5	326.1	360.2	394.4	409.9
60°	282.6	298.1	339.5	376.8	392.3
62.5°	253.6	274.3	318.8	358.2	373.7
65°	223.6	246.4	297.1	336.4	352.0
67.5°	196.7	221.5	275.4	314.7	330.2
70°	164.6	195.6	251.5	290.9	306.4
72.5°	134.6	168.7	226.7	265.0	279.5
75°	105.6	143.9	200.8	235.0	242.2
77.5°	78.7	119.0	173.9	188.4	183.2
80°	55.9	95.2	135.6	128.4	131.5
82.5°	36.2	72.5	83.8	95.2	98.3
85°	20.7	42.4	51.8	55.9	58.0
87.5°	9.3	15.5	20.7	20.7	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)