

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: P309982

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P309982  
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-CP187-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (168) 5000K 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: 2107.0 lumens  
Efficiency: N/A  
Efficacy: 73.4 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

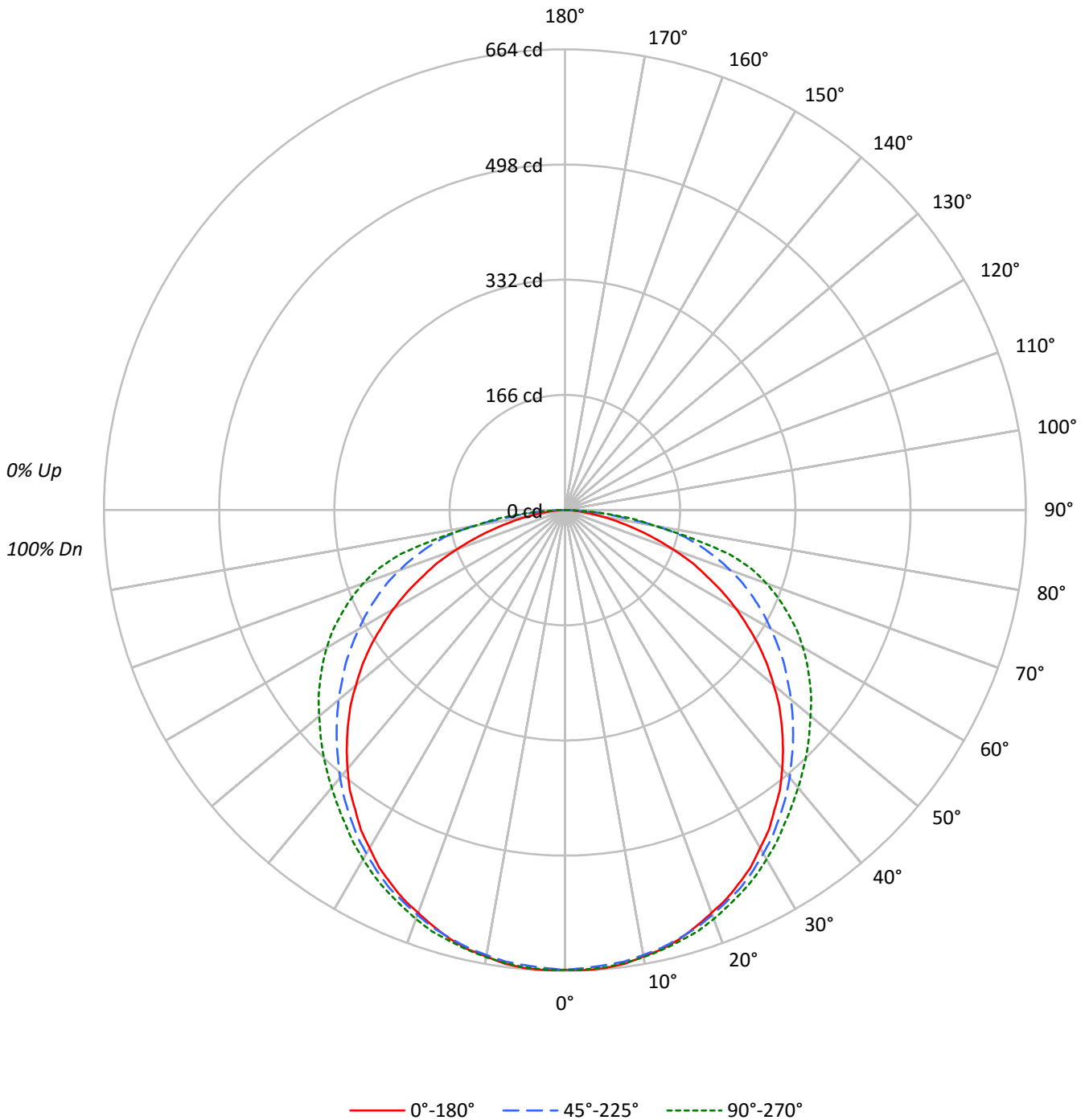
Input Watts (W): 28.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	892	892	892
5°	895	889	893
10°	892	890	894
15°	891	890	895
20°	884	889	898
25°	881	891	900
30°	874	888	903
35°	865	886	906
40°	855	885	918
45°	841	885	939
50°	823	890	967
55°	802	905	1010
60°	768	922	1066
65°	719	955	1131
70°	654	999	1217
75°	554	1054	1272
80°	437	1061	1028
85°	323	807	903



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	3.0
10°-20°	180.9	8.6
20°-30°	276.6	13.1
30°-40°	338.2	16.0
40°-50°	360.4	17.1
50°-60°	344.6	16.4
60°-70°	291.9	13.9
70°-80°	196.2	9.3
80°-90°	55.3	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°	520.4	24.7
0°-40°	858.5	40.7
0°-60°	1563.5	74.2
0°-90°	2107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2107.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	663	662	658	662	662	63
15°	640	640	639	644	643	180
25°	594	596	600	605	606	274
35°	527	531	539	550	552	330
45°	442	449	465	485	493	341
55°	342	354	386	416	431	304
65°	226	249	300	340	355	224
75°	107	145	203	237	245	114
85°	21	43	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°	662.6	662.6	662.6	662.6	662.6
2.5°	663.6	663.6	660.5	662.6	662.6
5°	662.6	661.5	658.4	661.5	661.5
7.5°	659.5	658.4	656.3	659.5	658.4
10°	653.2	653.2	651.1	654.2	654.2
12.5°	648.0	646.9	645.9	650.1	649.0
15°	639.6	639.6	638.6	643.8	642.7
17.5°	629.1	630.2	631.2	635.4	636.5
20°	617.7	619.7	620.8	627.1	627.1
22.5°	607.2	608.2	610.3	616.6	616.6
25°	593.6	595.7	599.9	605.1	606.2
27.5°	580.0	581.1	586.3	593.6	594.7
30°	562.3	565.4	571.7	580.0	581.1
32.5°	546.6	549.7	557.0	565.4	567.5
35°	526.7	530.9	539.3	549.7	551.8
37.5°	509.0	512.1	522.5	534.0	537.2
40°	487.0	493.3	503.7	517.3	522.5
42.5°	465.1	471.3	483.9	501.6	507.9
45°	442.1	449.4	465.1	484.9	493.3
47.5°	419.1	427.4	445.2	468.2	477.6
50°	393.0	403.4	425.4	451.5	461.9
52.5°	367.9	380.4	404.5	433.7	447.3
55°	341.7	354.3	385.6	415.9	430.6
57.5°	312.5	329.2	363.7	398.2	413.9
60°	285.3	301.0	342.8	380.4	396.1
62.5°	256.0	277.0	321.9	361.6	377.3
65°	225.7	248.7	299.9	339.7	355.3
67.5°	198.6	223.7	278.0	317.7	333.4
70°	166.2	197.5	254.0	293.7	309.3
72.5°	135.9	170.4	228.9	267.5	282.2
75°	106.6	145.3	202.7	237.2	244.6
77.5°	79.4	120.2	175.6	190.2	185.0
80°	56.4	96.1	136.9	129.6	132.7
82.5°	36.6	73.2	84.7	96.1	99.3
85°	20.9	42.8	52.3	56.4	58.5
87.5°	9.4	15.7	20.9	20.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)