

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: P310075

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P310075  
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: 24FCZ2-40-UNV-L82765-RDP-CP187-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (168) 6500K 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: 2434.0 lumens  
Efficiency: N/A  
Efficacy: 71.2 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

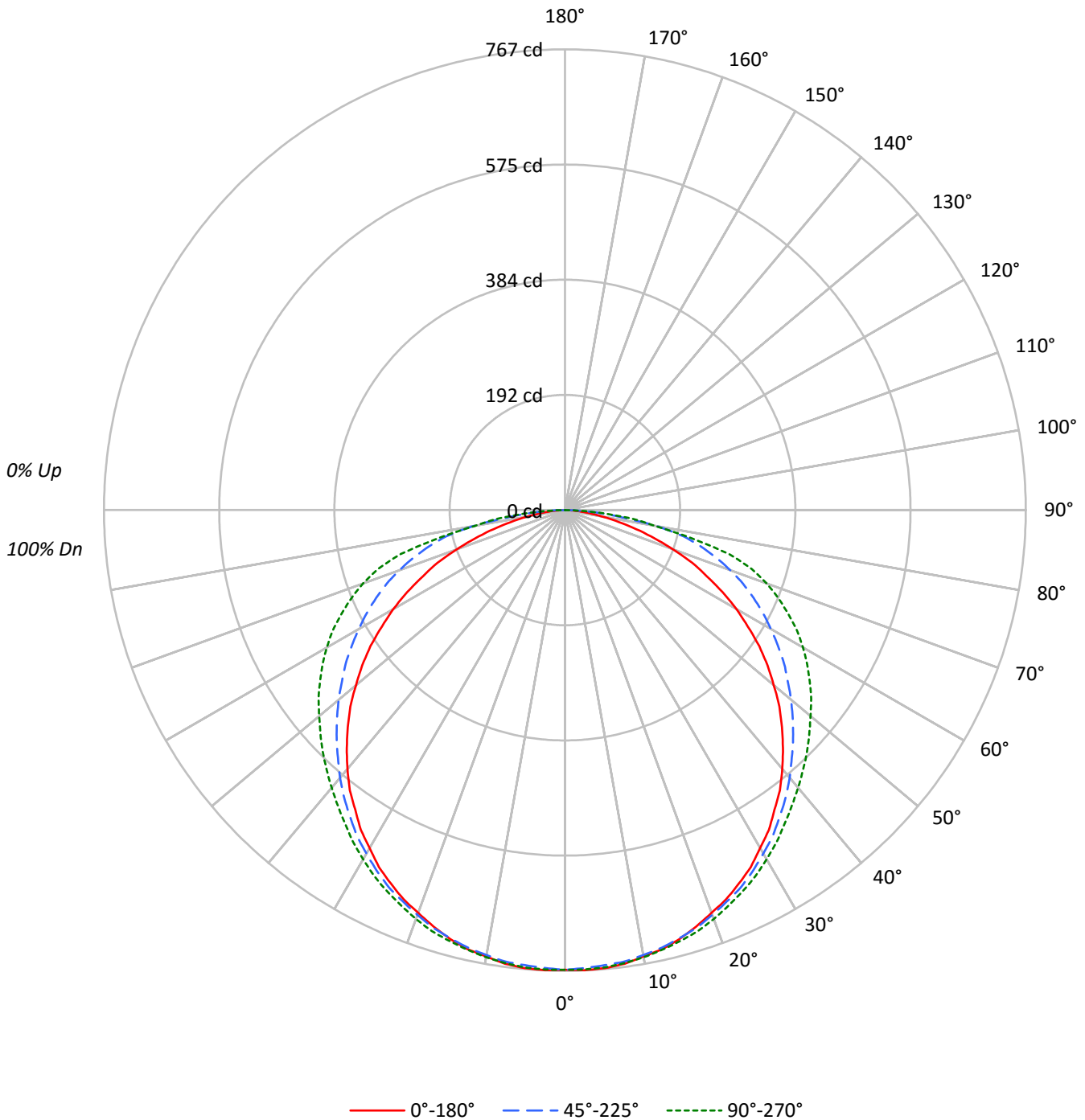
Input Watts (W): 34.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P310075

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP187-W2A-U-6500K

### Luminous Intensity Polar Plot





TEST NUMBER: P310075

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP187-W2A-U-6500K

**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°	1030	1030	1030
5°	1034	1027	1032
10°	1031	1028	1033
15°	1029	1028	1034
20°	1022	1027	1037
25°	1018	1029	1040
30°	1009	1026	1043
35°	999	1023	1047
40°	988	1022	1060
45°	972	1022	1084
50°	950	1029	1117
55°	926	1045	1167
60°	887	1066	1231
65°	830	1103	1307
70°	755	1154	1406
75°	640	1218	1469
80°	505	1226	1188
85°	372	932	1044



TEST NUMBER: P310075

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP187-W2A-U-6500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.6	3.0
10°-20°	209.0	8.6
20°-30°	319.5	13.1
30°-40°	390.6	16.0
40°-50°	416.3	17.1
50°-60°	398.1	16.4
60°-70°	337.2	13.9
70°-80°	226.6	9.3
80°-90°	63.9	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°	601.1	24.7
0°-40°	991.8	40.7
0°-60°	1806.2	74.2
0°-90°	2434.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2434.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	765	764	761	764	764	73
15°	739	739	738	744	742	208
25°	686	688	693	699	700	316
35°	608	613	623	635	638	381
45°	511	519	537	560	570	394
55°	395	409	446	480	497	352
65°	261	287	346	392	410	259
75°	123	168	234	274	282	132
85°	24	50	60	65	68	30
90°	0	0	0	0	0	



TEST NUMBER: P310075

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-RDP-CP187-W2A-U-6500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	765.4	765.4	765.4	765.4	765.4
2.5°	766.6	766.6	763.0	765.4	765.4
5°	765.4	764.2	760.6	764.2	764.2
7.5°	761.8	760.6	758.2	761.8	760.6
10°	754.6	754.6	752.1	755.8	755.8
12.5°	748.5	747.3	746.1	750.9	749.7
15°	738.9	738.9	737.7	743.7	742.5
17.5°	726.8	728.0	729.2	734.0	735.2
20°	713.5	715.9	717.1	724.4	724.4
22.5°	701.4	702.6	705.1	712.3	712.3
25°	685.7	688.2	693.0	699.0	700.2
27.5°	670.0	671.3	677.3	685.7	686.9
30°	649.5	653.1	660.4	670.0	671.3
32.5°	631.4	635.0	643.5	653.1	655.6
35°	608.5	613.3	623.0	635.0	637.5
37.5°	588.0	591.6	603.6	616.9	620.5
40°	562.6	569.8	581.9	597.6	603.6
42.5°	537.2	544.5	559.0	579.5	586.7
45°	510.7	519.1	537.2	560.2	569.8
47.5°	484.1	493.8	514.3	540.9	551.7
50°	453.9	466.0	491.4	521.6	533.6
52.5°	425.0	439.5	467.2	501.0	516.7
55°	394.8	409.3	445.5	480.5	497.4
57.5°	361.0	380.3	420.1	460.0	478.1
60°	329.6	347.7	396.0	439.5	457.6
62.5°	295.8	319.9	371.8	417.7	435.8
65°	260.8	287.3	346.5	392.4	410.5
67.5°	229.4	258.4	321.1	367.0	385.1
70°	192.0	228.2	293.4	339.2	357.4
72.5°	156.9	196.8	264.4	309.1	326.0
75°	123.1	167.8	234.2	274.1	282.5
77.5°	91.8	138.8	202.8	219.7	213.7
80°	65.2	111.1	158.2	149.7	153.3
82.5°	42.3	84.5	97.8	111.1	114.7
85°	24.1	49.5	60.4	65.2	67.6
87.5°	10.9	18.1	24.1	24.1	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)