

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: P310074

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP187-W2A-U-5700K**

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: P310074
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5700K 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: 2428.0 lumens
Efficiency: N/A
Efficacy: 72.3 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

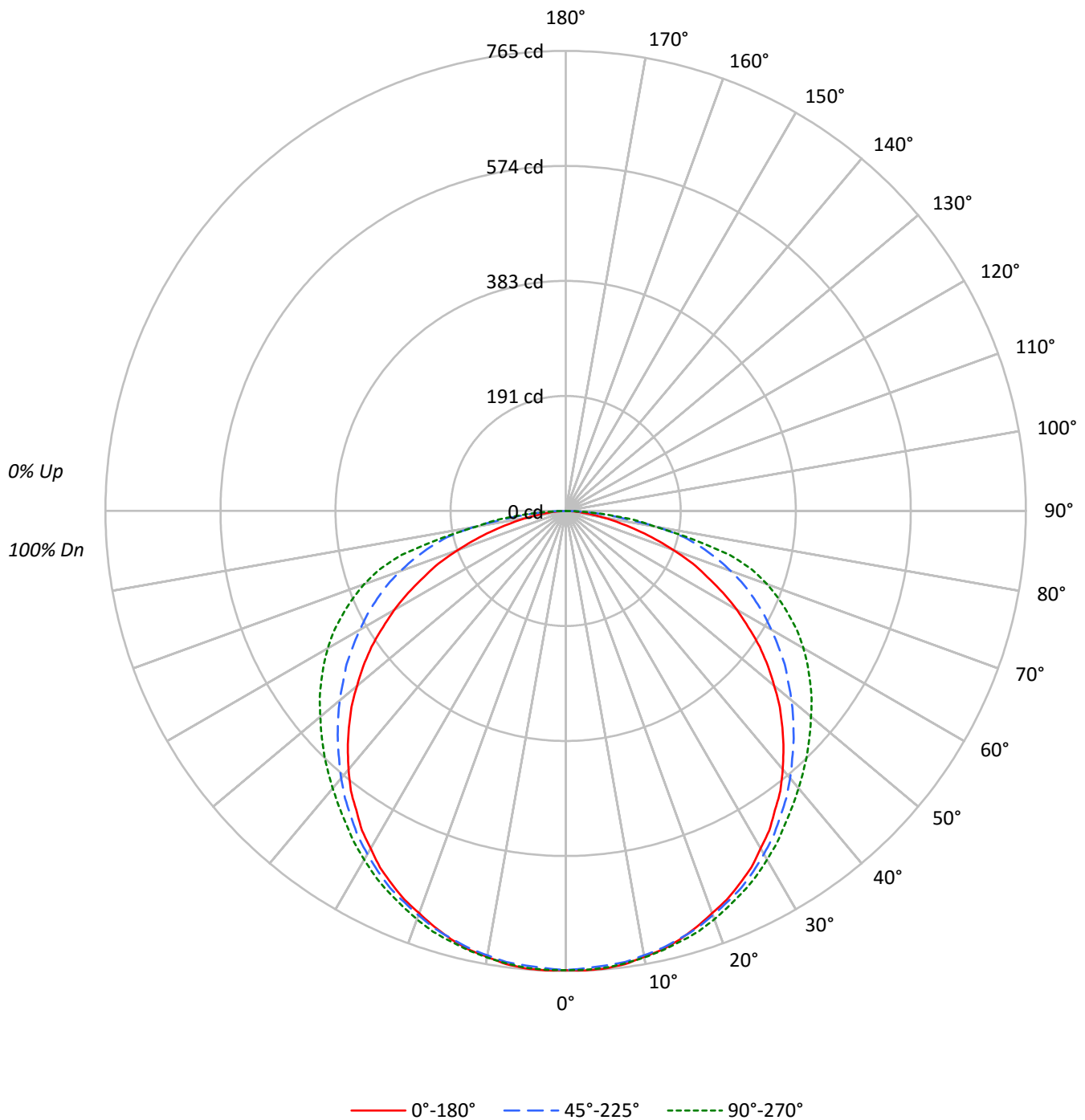
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	68	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1027	1027	1027
5°	1031	1025	1030
10°	1028	1025	1030
15°	1027	1025	1032
20°	1019	1024	1035
25°	1016	1026	1037
30°	1007	1024	1040
35°	997	1021	1044
40°	986	1020	1058
45°	969	1020	1082
50°	948	1026	1114
55°	924	1042	1164
60°	885	1063	1228
65°	828	1100	1304
70°	753	1151	1402
75°	638	1214	1465
80°	504	1223	1185
85°	372	929	1041



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.4	3.0
10°-20°	208.5	8.6
20°-30°	318.8	13.1
30°-40°	389.7	16.0
40°-50°	415.3	17.1
50°-60°	397.1	16.4
60°-70°	336.4	13.9
70°-80°	226.1	9.3
80°-90°	63.8	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°	599.6	24.7
0°-40°	989.3	40.7
0°-60°	1801.8	74.2
0°-90°	2428.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2428.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	764	764	764	764	764	
5°	764	762	759	762	762	73
15°	737	737	736	742	741	208
25°	684	686	691	697	698	315
35°	607	612	621	634	636	380
45°	509	518	536	559	568	393
55°	394	408	444	479	496	351
65°	260	287	346	391	410	258
75°	123	167	234	273	282	132
85°	24	49	60	65	67	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	763.5	763.5	763.5	763.5	763.5
2.5°	764.7	764.7	761.1	763.5	763.5
5°	763.5	762.3	758.7	762.3	762.3
7.5°	759.9	758.7	756.3	759.9	758.7
10°	752.7	752.7	750.3	753.9	753.9
12.5°	746.7	745.5	744.3	749.1	747.9
15°	737.0	737.0	735.8	741.9	740.7
17.5°	725.0	726.2	727.4	732.2	733.4
20°	711.8	714.2	715.4	722.6	722.6
22.5°	699.7	700.9	703.3	710.5	710.5
25°	684.1	686.5	691.3	697.3	698.5
27.5°	668.4	669.6	675.6	684.1	685.3
30°	647.9	651.5	658.8	668.4	669.6
32.5°	629.9	633.5	641.9	651.5	653.9
35°	607.0	611.8	621.4	633.5	635.9
37.5°	586.5	590.1	602.2	615.4	619.0
40°	561.2	568.4	580.5	596.1	602.2
42.5°	535.9	543.1	557.6	578.1	585.3
45°	509.4	517.9	535.9	558.8	568.4
47.5°	482.9	492.6	513.0	539.5	550.4
50°	452.8	464.9	490.2	520.3	532.3
52.5°	423.9	438.4	466.1	499.8	515.4
55°	393.8	408.3	444.4	479.3	496.2
57.5°	360.1	379.4	419.1	458.8	476.9
60°	328.8	346.8	395.0	438.4	456.4
62.5°	295.1	319.1	370.9	416.7	434.8
65°	260.1	286.6	345.6	391.4	409.5
67.5°	228.8	257.7	320.3	366.1	384.2
70°	191.5	227.6	292.6	338.4	356.5
72.5°	156.6	196.3	263.7	308.3	325.2
75°	122.8	167.4	233.6	273.4	281.8
77.5°	91.5	138.5	202.3	219.2	213.2
80°	65.0	110.8	157.8	149.3	152.9
82.5°	42.2	84.3	97.5	110.8	114.4
85°	24.1	49.4	60.2	65.0	67.4
87.5°	10.8	18.1	24.1	24.1	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)