

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: P310249

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP187-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: P310249
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: 24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 2811.0 lumens
Efficiency: N/A
Efficacy: 65.5 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

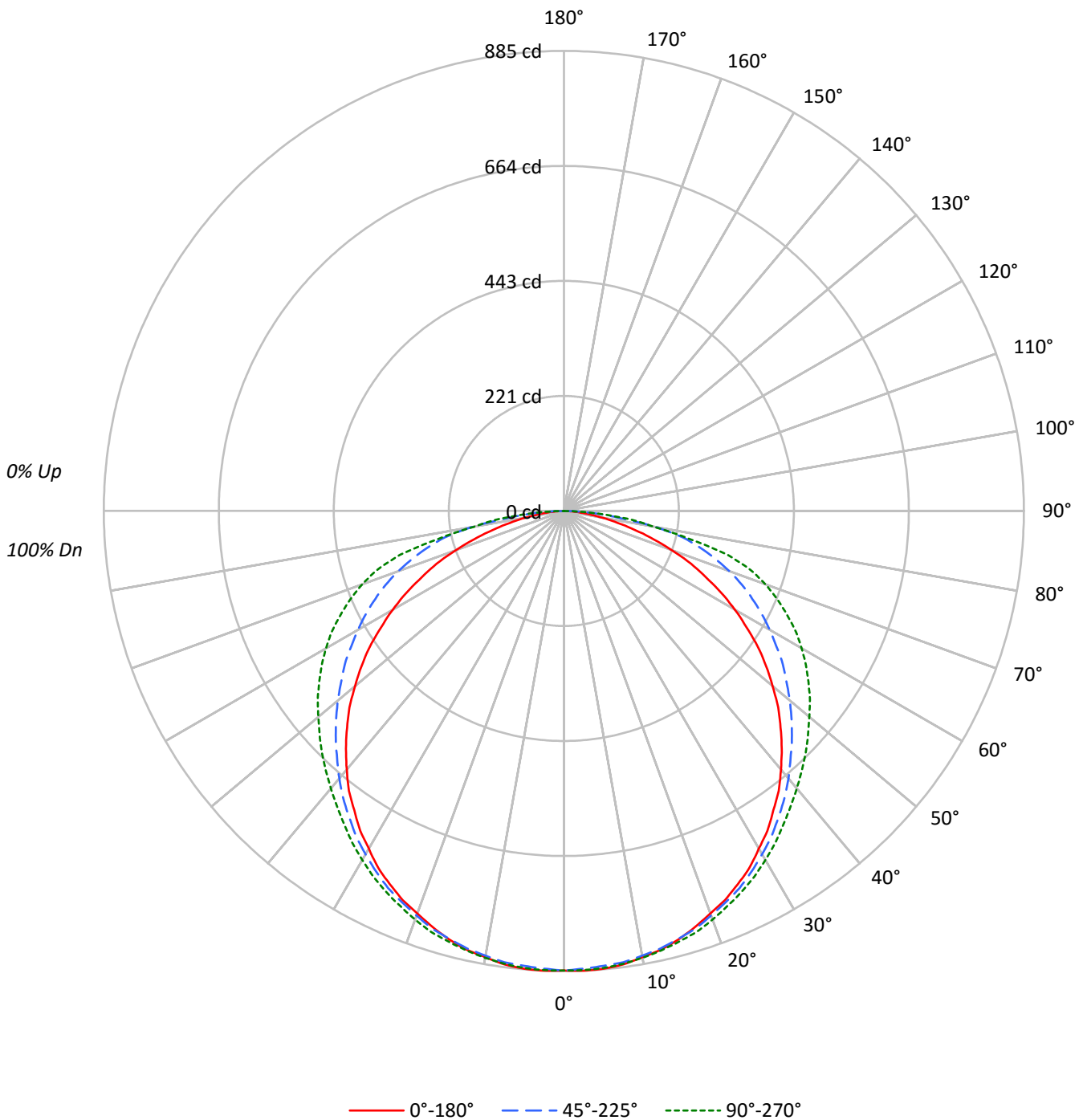
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1189	1189	1189
5°	1194	1186	1192
10°	1191	1187	1192
15°	1189	1187	1194
20°	1180	1186	1198
25°	1176	1188	1201
30°	1165	1185	1204
35°	1154	1182	1209
40°	1141	1180	1224
45°	1122	1181	1252
50°	1097	1188	1290
55°	1069	1207	1347
60°	1024	1231	1422
65°	959	1274	1509
70°	872	1333	1624
75°	739	1406	1696
80°	583	1416	1372
85°	431	1076	1206



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	3.0
10°-20°	241.3	8.6
20°-30°	369.0	13.1
30°-40°	451.2	16.0
40°-50°	480.8	17.1
50°-60°	459.7	16.4
60°-70°	389.5	13.9
70°-80°	261.7	9.3
80°-90°	73.8	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°	694.2	24.7
0°-40°	1145.4	40.7
0°-60°	2086.0	74.2
0°-90°	2811.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	884	884	884	884	884	
5°	884	883	878	883	883	84
15°	853	853	852	859	858	241
25°	792	795	800	807	809	365
35°	703	708	720	733	736	440
45°	590	600	620	647	658	455
55°	456	473	514	555	574	406
65°	301	332	400	453	474	299
75°	142	194	270	316	326	152
85°	28	57	70	75	78	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	884.0	884.0	884.0	884.0	884.0
2.5°	885.4	885.4	881.2	884.0	884.0
5°	884.0	882.6	878.4	882.6	882.6
7.5°	879.8	878.4	875.6	879.8	878.4
10°	871.4	871.4	868.6	872.8	872.8
12.5°	864.5	863.1	861.7	867.2	865.9
15°	853.3	853.3	851.9	858.9	857.5
17.5°	839.4	840.8	842.2	847.7	849.1
20°	824.0	826.8	828.2	836.6	836.6
22.5°	810.1	811.5	814.3	822.6	822.6
25°	792.0	794.7	800.3	807.3	808.7
27.5°	773.8	775.2	782.2	792.0	793.4
30°	750.1	754.3	762.7	773.8	775.2
32.5°	729.2	733.4	743.2	754.3	757.1
35°	702.7	708.3	719.5	733.4	736.2
37.5°	679.0	683.2	697.1	712.5	716.7
40°	649.7	658.1	672.0	690.2	697.1
42.5°	620.5	628.8	645.6	669.3	677.6
45°	589.8	599.5	620.5	647.0	658.1
47.5°	559.1	570.3	594.0	624.6	637.2
50°	524.3	538.2	567.5	602.3	616.3
52.5°	490.8	507.5	539.6	578.6	596.8
55°	455.9	472.7	514.5	554.9	574.4
57.5°	416.9	439.2	485.2	531.2	552.1
60°	380.6	401.6	457.3	507.5	528.4
62.5°	341.6	369.5	429.4	482.4	503.3
65°	301.2	331.8	400.2	453.1	474.1
67.5°	264.9	298.4	370.9	423.9	444.8
70°	221.7	263.5	338.8	391.8	412.7
72.5°	181.3	227.3	305.3	356.9	376.5
75°	142.2	193.8	270.5	316.5	326.3
77.5°	106.0	160.3	234.2	253.8	246.8
80°	75.3	128.3	182.7	172.9	177.1
82.5°	48.8	97.6	112.9	128.3	132.5
85°	27.9	57.2	69.7	75.3	78.1
87.5°	12.5	20.9	27.9	27.9	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)