

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: P310562

Luminaire Tested: **24FCZ2-30-UNV-L82765-CP187-W2A-U-2700K**

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: P310562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L82765-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 2700K 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: 2381.0 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

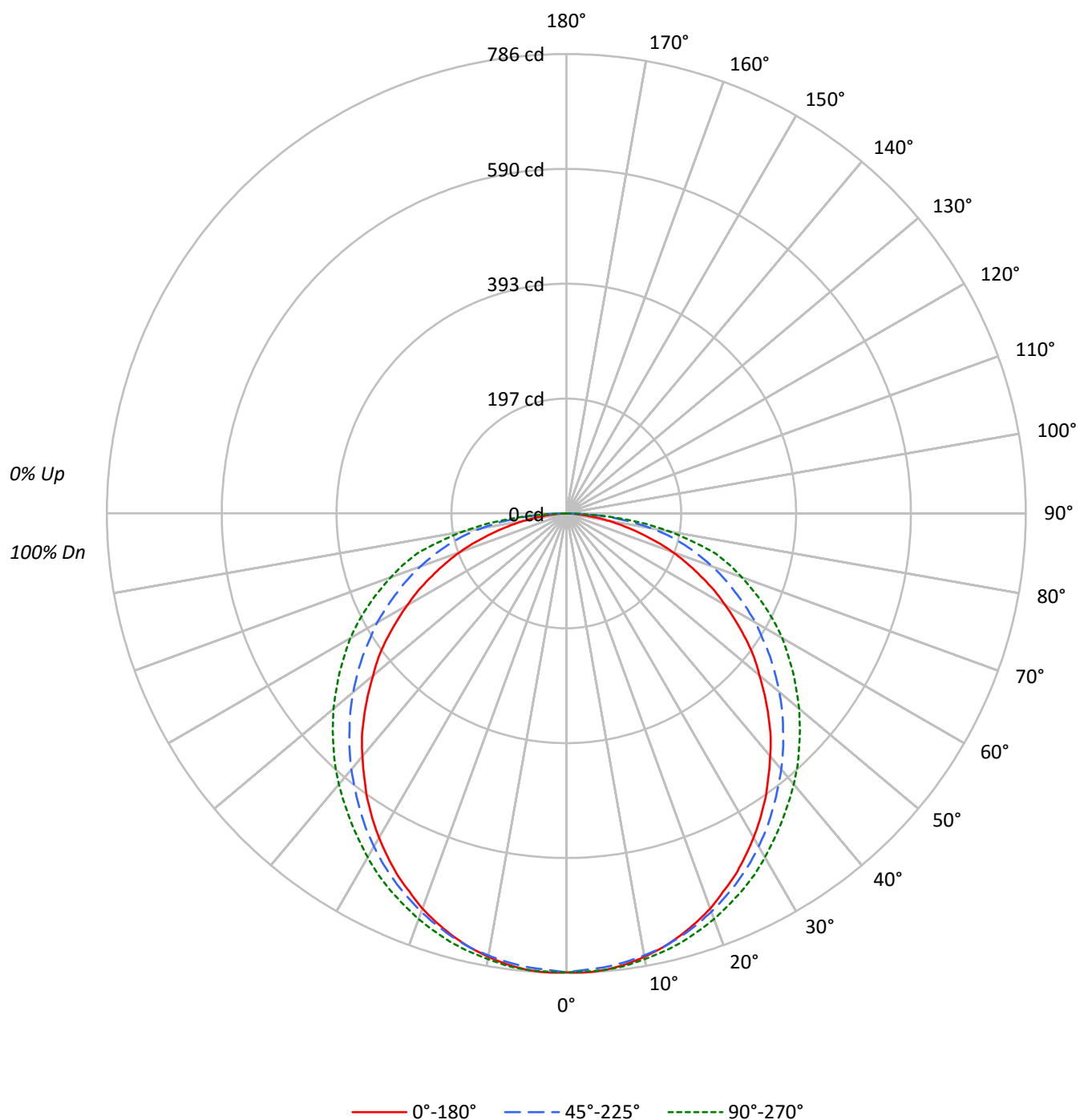
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1056	1056	1056
5°	1058	1052	1058
10°	1052	1049	1058
15°	1043	1045	1059
20°	1030	1038	1058
25°	1014	1031	1057
30°	995	1022	1056
35°	976	1012	1056
40°	953	1004	1063
45°	930	998	1072
50°	903	996	1088
55°	880	997	1110
60°	846	1006	1148
65°	807	1016	1190
70°	764	1047	1255
75°	682	1092	1372
80°	581	1157	1402
85°	415	1147	1342



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	3.1
10°-20°	212.5	8.9
20°-30°	320.9	13.5
30°-40°	386.8	16.2
40°-50°	406.1	17.1
50°-60°	379.9	16.0
60°-70°	313.7	13.2
70°-80°	213.8	9.0
80°-90°	72.9	3.1
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°	607.7	25.5
0°-40°	994.6	41.8
0°-60°	1780.6	74.8
0°-90°	2381.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2381.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	785	785	785	785	785	
5°	784	783	779	784	784	74
15°	749	750	750	758	760	211
25°	683	686	694	708	712	314
35°	594	600	616	637	643	371
45°	489	499	524	553	563	377
55°	375	390	425	460	473	335
65°	254	275	319	359	374	252
75°	131	161	210	250	264	140
85°	27	53	74	84	87	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	785.2	785.2	785.2	785.2	785.2
2.5°	786.0	785.2	781.3	785.2	784.4
5°	783.7	782.9	778.9	783.7	783.7
7.5°	778.1	778.1	774.2	779.7	780.5
10°	770.2	770.2	767.9	774.2	774.2
12.5°	760.7	760.7	760.7	767.1	767.9
15°	748.9	749.7	750.5	758.4	760.0
17.5°	734.7	736.3	738.6	748.1	749.7
20°	719.7	721.2	725.2	736.3	738.6
22.5°	700.7	704.7	710.2	722.8	725.2
25°	683.3	686.5	694.4	707.8	711.8
27.5°	662.0	666.7	677.0	691.2	696.8
30°	640.7	645.4	658.0	674.6	679.4
32.5°	617.8	624.9	638.3	655.7	661.2
35°	594.1	600.4	616.2	636.7	643.0
37.5°	568.0	576.7	594.1	616.2	624.1
40°	542.7	552.2	571.9	595.6	605.1
42.5°	517.4	526.9	549.0	575.9	585.4
45°	489.0	499.3	524.5	553.0	563.3
47.5°	460.6	473.2	500.8	530.9	541.9
50°	431.3	445.5	475.6	507.2	519.8
52.5°	405.3	418.7	450.3	484.3	496.1
55°	375.2	390.2	425.0	459.8	473.2
57.5°	344.4	361.0	398.1	436.1	449.5
60°	314.4	332.6	373.7	411.6	426.6
62.5°	285.2	303.3	346.0	385.5	400.5
65°	253.6	274.9	319.1	359.4	373.7
67.5°	223.6	246.5	293.1	332.6	346.8
70°	194.3	216.5	266.2	304.9	319.1
72.5°	162.7	188.0	237.8	278.1	293.1
75°	131.1	161.2	210.1	249.6	263.9
77.5°	101.9	132.7	181.7	214.1	221.2
80°	75.0	106.6	149.3	172.2	180.9
82.5°	48.2	79.8	113.8	130.3	137.5
85°	26.9	52.9	74.3	83.7	86.9
87.5°	11.1	22.9	30.0	34.0	34.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)