

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: P312355

Luminaire Tested: **14FCZ2-29-UNV-L83050-S-CP187-W2A-U-3000K**

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: P312355
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-S-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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: 2503.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

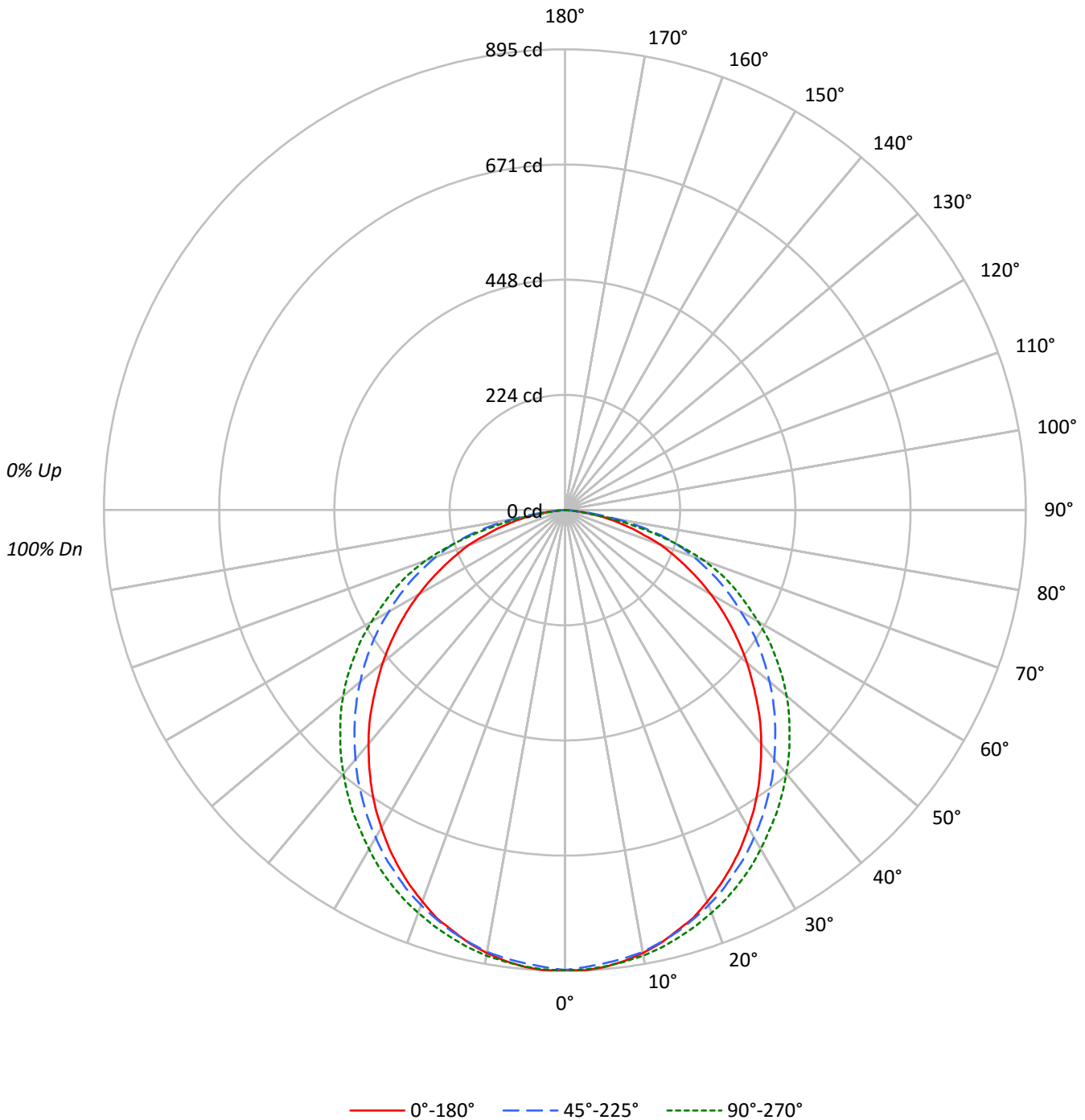
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2404	2404	2404
5°	2407	2387	2404
10°	2387	2381	2401
15°	2354	2361	2393
20°	2317	2338	2385
25°	2270	2310	2377
30°	2213	2283	2364
35°	2153	2250	2356
40°	2084	2223	2350
45°	2007	2196	2347
50°	1933	2171	2354
55°	1851	2154	2346
60°	1763	2124	2331
65°	1659	2118	2331
70°	1563	2099	2265
75°	1355	2051	1936
80°	1096	1654	1288
85°	729	574	383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	3.4
10°-20°	240.1	9.6
20°-30°	360.1	14.4
30°-40°	429.6	17.2
40°-50°	444.1	17.7
50°-60°	405.5	16.2
60°-70°	319.1	12.7
70°-80°	185.8	7.4
80°-90°	34.2	1.4
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°	684.6	27.4
0°-40°	1114.2	44.5
0°-60°	1963.9	78.5
0°-90°	2503.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2503.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	891	889	884	891	890	84
15°	845	846	848	859	859	238
25°	764	768	778	797	800	352
35°	655	664	685	711	717	410
45°	527	545	577	609	617	407
55°	395	416	459	493	500	353
65°	261	288	333	359	366	259
75°	130	161	197	194	186	139
85°	24	34	19	15	12	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	893.5	893.5	893.5	893.5	893.5
2.5°	894.8	892.3	888.6	894.8	893.5
5°	891.0	888.6	883.6	891.0	889.8
7.5°	883.6	881.1	878.6	886.1	884.8
10°	873.7	872.4	871.2	879.9	878.6
12.5°	861.3	861.3	860.0	870.0	870.0
15°	845.1	846.4	847.6	858.8	858.8
17.5°	830.2	829.0	832.7	845.1	846.4
20°	809.1	811.6	816.6	831.5	832.7
22.5°	788.0	790.5	799.2	814.1	817.8
25°	764.5	768.2	778.1	796.7	800.5
27.5°	739.6	744.6	758.3	778.1	781.8
30°	712.3	719.8	734.7	757.0	760.7
32.5°	685.0	692.5	711.1	733.4	738.4
35°	655.3	663.9	685.0	711.1	717.3
37.5°	624.2	635.4	660.2	686.3	693.7
40°	593.2	605.6	632.9	660.2	668.9
42.5°	562.2	574.6	604.4	635.4	644.1
45°	527.4	544.8	577.1	609.3	616.8
47.5°	493.9	512.5	548.5	580.8	590.7
50°	461.7	480.3	518.7	552.3	562.2
52.5°	428.1	448.0	489.0	523.7	532.4
55°	394.6	415.7	459.2	492.7	500.1
57.5°	361.1	383.5	428.1	460.4	469.1
60°	327.6	351.2	394.6	426.9	433.1
62.5°	294.1	318.9	363.6	392.2	398.4
65°	260.6	287.9	332.6	358.7	366.1
67.5°	228.3	255.6	299.1	323.9	330.1
70°	198.6	223.4	266.8	285.4	287.9
72.5°	161.3	192.4	234.6	244.5	238.3
75°	130.3	161.3	197.3	193.6	186.2
77.5°	99.3	130.3	153.9	141.5	131.5
80°	70.7	101.8	106.7	88.1	83.1
82.5°	45.9	70.7	59.6	45.9	37.2
85°	23.6	33.5	18.6	14.9	12.4
87.5°	7.4	5.0	2.5	2.5	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)