

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: P312358

Luminaire Tested: **14FCZ2-29-UNV-L83050-S-CP187-W2A-U-4500K**

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: P312358
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-4500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 2808.0 lumens
Efficiency: N/A
Efficacy: 112.3 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

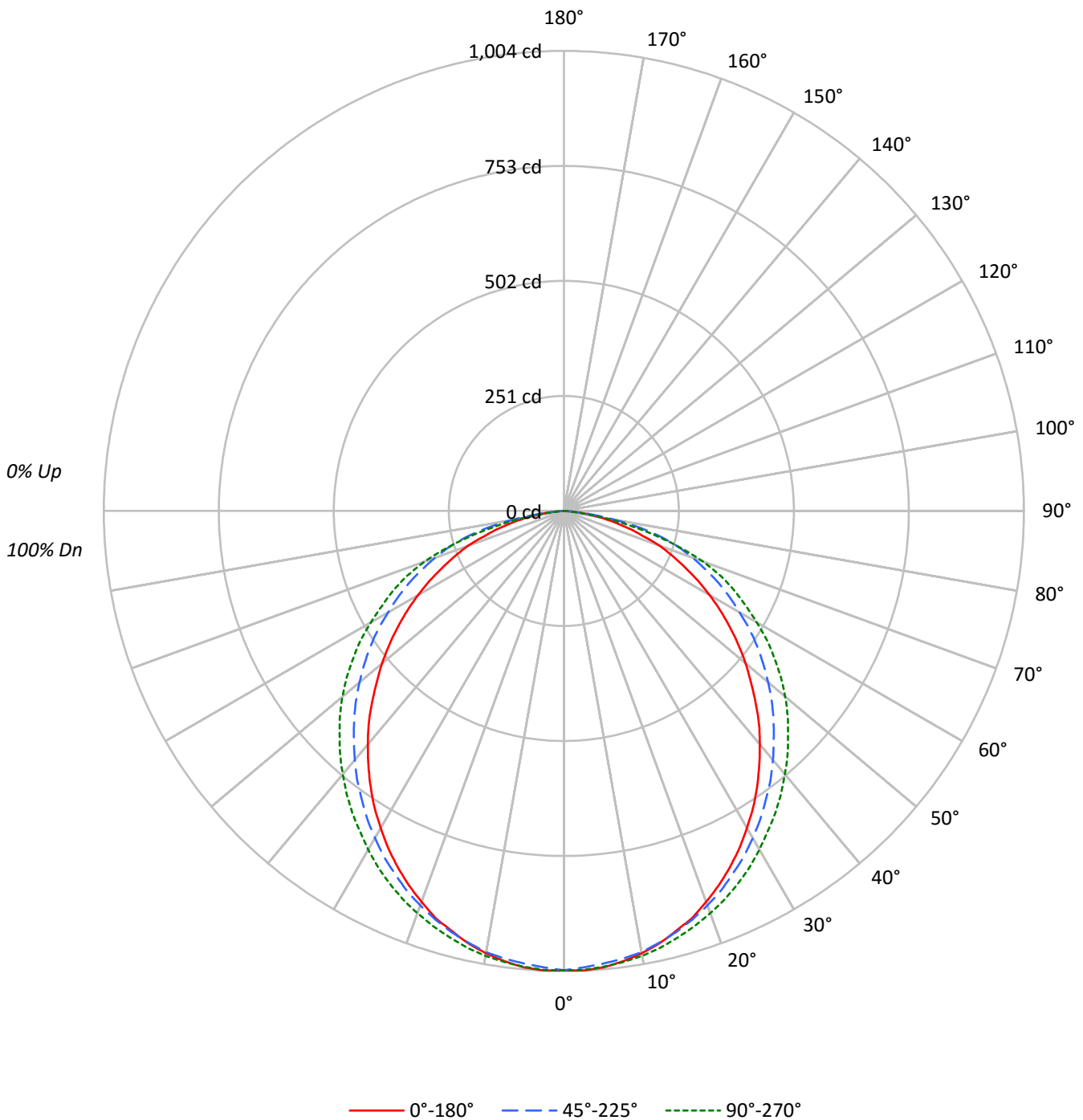
Input Watts (W): 25
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2697	2697	2697
5°	2700	2678	2696
10°	2678	2670	2693
15°	2641	2649	2684
20°	2599	2623	2675
25°	2546	2592	2666
30°	2483	2561	2652
35°	2415	2525	2644
40°	2338	2494	2636
45°	2252	2464	2633
50°	2168	2436	2640
55°	2077	2417	2632
60°	1978	2383	2615
65°	1862	2376	2615
70°	1753	2355	2541
75°	1520	2302	2171
80°	1230	1855	1446
85°	818	645	429



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	3.4
10°-20°	269.3	9.6
20°-30°	404.0	14.4
30°-40°	482.0	17.2
40°-50°	498.3	17.7
50°-60°	454.9	16.2
60°-70°	358.0	12.7
70°-80°	208.4	7.4
80°-90°	38.4	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°	768.0	27.4
0°-40°	1250.0	44.5
0°-60°	2203.2	78.5
0°-90°	2808.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2808.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1002	1002	1002	1002	1002	
5°	1000	997	991	1000	998	95
15°	948	950	951	963	963	268
25°	858	862	873	894	898	395
35°	735	745	768	798	805	459
45°	592	611	647	684	692	457
55°	443	466	515	553	561	396
65°	292	323	373	402	411	290
75°	146	181	221	217	209	155
85°	26	38	21	17	14	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1002.4	1002.4	1002.4	1002.4	1002.4
2.5°	1003.8	1001.0	996.8	1003.8	1002.4
5°	999.6	996.8	991.3	999.6	998.2
7.5°	991.3	988.5	985.7	994.1	992.7
10°	980.1	978.7	977.3	987.1	985.7
12.5°	966.2	966.2	964.8	976.0	976.0
15°	948.1	949.5	950.9	963.4	963.4
17.5°	931.4	930.0	934.2	948.1	949.5
20°	907.7	910.5	916.1	932.8	934.2
22.5°	884.1	886.9	896.6	913.3	917.5
25°	857.6	861.8	872.9	893.8	898.0
27.5°	829.8	835.3	850.7	872.9	877.1
30°	799.1	807.5	824.2	849.3	853.4
32.5°	768.5	776.9	797.8	822.8	828.4
35°	735.1	744.8	768.5	797.8	804.7
37.5°	700.3	712.8	740.7	769.9	778.3
40°	665.5	679.4	710.0	740.7	750.4
42.5°	630.7	644.6	678.0	712.8	722.6
45°	591.7	611.2	647.4	683.6	691.9
47.5°	554.1	575.0	615.4	651.6	662.7
50°	517.9	538.8	582.0	619.5	630.7
52.5°	480.3	502.6	548.5	587.5	597.3
55°	442.7	466.4	515.1	552.7	561.1
57.5°	405.1	430.2	480.3	516.5	526.3
60°	367.6	394.0	442.7	478.9	485.9
62.5°	330.0	357.8	407.9	439.9	446.9
65°	292.4	323.0	373.1	402.4	410.7
67.5°	256.2	286.8	335.5	363.4	370.3
70°	222.8	250.6	299.3	320.2	323.0
72.5°	181.0	215.8	263.1	274.3	267.3
75°	146.2	181.0	221.4	217.2	208.8
77.5°	111.4	146.2	172.6	158.7	147.6
80°	79.4	114.2	119.7	98.8	93.3
82.5°	51.5	79.4	66.8	51.5	41.8
85°	26.5	37.6	20.9	16.7	13.9
87.5°	8.4	5.6	2.8	2.8	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)