

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: P308768

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CP187-W2A-U-5500K**

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: P308768
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L82765-CP187-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3011.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

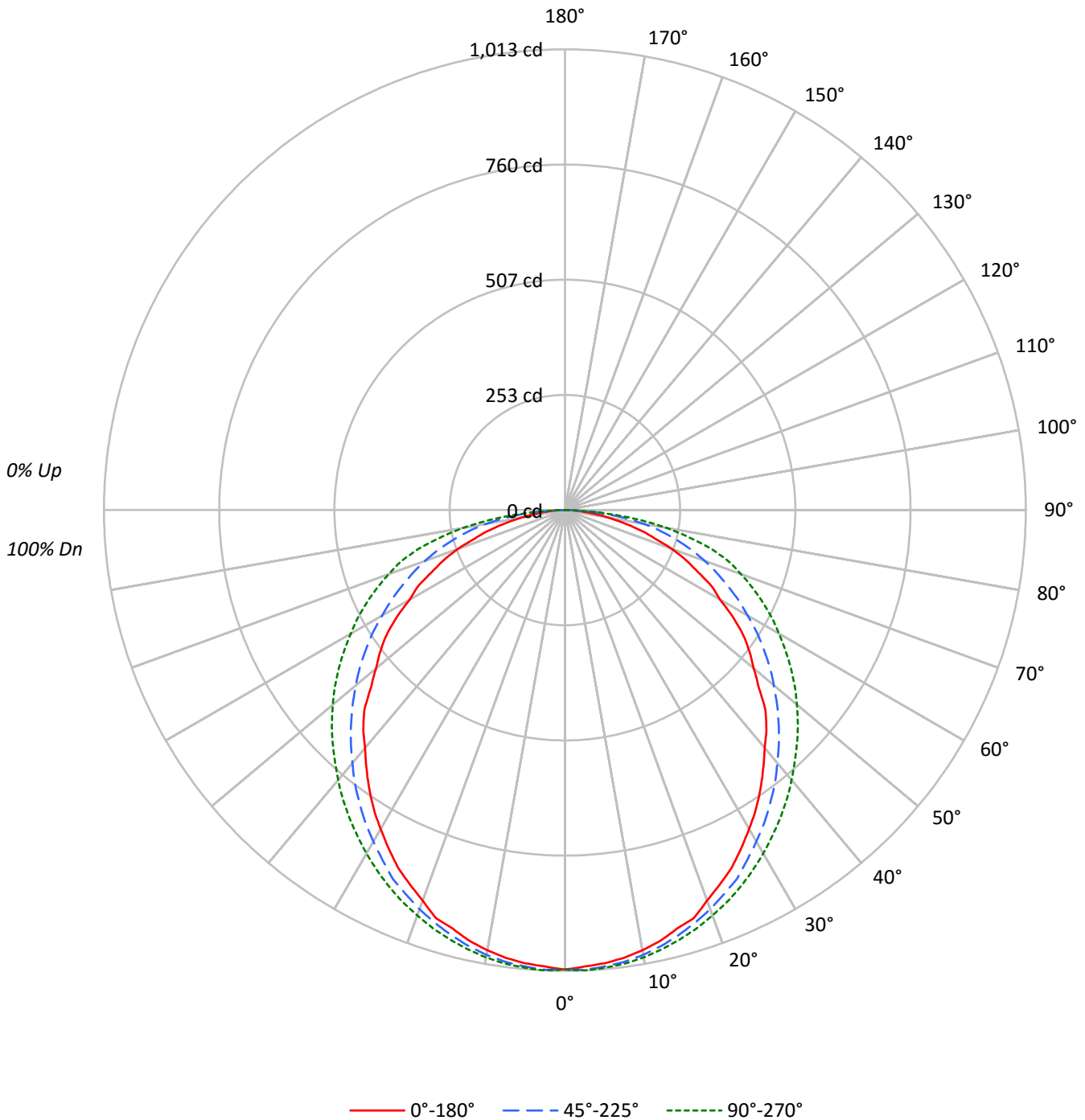
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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	90	92	89	87	89	86	84	82																												
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67																												
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56																												
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48																												
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41																												
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36																												
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32																												
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28																												
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25																												
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2718	2718	2718
5°	2702	2721	2729
10°	2685	2713	2729
15°	2654	2694	2722
20°	2617	2674	2715
25°	2576	2657	2713
30°	2517	2615	2709
35°	2462	2585	2713
40°	2400	2551	2723
45°	2375	2528	2748
50°	2269	2510	2787
55°	2244	2502	2846
60°	2117	2497	2924
65°	2055	2514	3056
70°	1973	2574	3243
75°	1798	2652	3491
80°	1540	2748	3529
85°	1247	2624	3026



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	3.2
10°-20°	272.7	9.1
20°-30°	410.4	13.6
30°-40°	492.6	16.4
40°-50°	514.8	17.1
50°-60°	479.8	15.9
60°-70°	393.5	13.1
70°-80°	265.2	8.8
80°-90°	86.4	2.9
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°	778.7	25.9
0°-40°	1271.3	42.2
0°-60°	2265.9	75.3
0°-90°	3011.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3011.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	1000	1003	1007	1009	1010	95
15°	953	958	967	976	977	269
25°	868	873	895	908	914	399
35°	749	760	787	814	826	469
45°	624	628	664	705	722	477
55°	478	487	533	584	607	424
65°	323	337	395	452	480	321
75°	173	192	255	313	336	182
85°	40	58	85	99	98	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.2	1010.2	1010.2	1010.2	1010.2
2.5°	1004.5	1007.3	1011.7	1013.1	1013.1
5°	1000.1	1003.0	1007.3	1008.8	1010.2
7.5°	992.9	995.8	1001.6	1004.5	1005.9
10°	982.8	985.7	992.9	997.2	998.7
12.5°	969.9	972.7	981.4	987.2	988.6
15°	952.6	958.3	967.0	975.6	977.1
17.5°	941.0	939.6	951.1	961.2	964.1
20°	913.7	920.9	933.8	945.4	948.2
22.5°	890.6	896.4	913.7	926.6	932.4
25°	867.5	873.3	894.9	907.9	913.7
27.5°	838.7	847.4	867.5	886.3	893.5
30°	809.9	818.5	841.6	863.2	871.9
32.5°	781.1	791.2	815.7	838.7	848.8
35°	749.4	759.5	786.8	814.2	825.8
37.5°	716.2	729.2	758.0	788.3	801.3
40°	683.1	696.1	726.3	760.9	775.3
42.5°	655.7	661.5	696.1	733.5	747.9
45°	624.0	628.3	664.4	704.7	722.0
47.5°	577.9	593.7	632.6	677.3	694.6
50°	541.9	559.1	599.5	647.1	665.8
52.5°	511.6	523.1	567.8	615.4	637.0
55°	478.4	487.1	533.2	583.6	606.7
57.5°	438.1	453.9	500.1	551.9	575.0
60°	393.4	413.6	464.0	520.2	543.3
62.5°	364.6	376.1	430.9	487.1	513.0
65°	322.8	337.2	394.9	452.5	479.9
67.5°	288.2	302.6	361.7	419.4	446.7
70°	250.8	265.2	327.1	384.8	412.2
72.5°	207.5	227.7	292.5	350.2	379.0
75°	172.9	191.7	255.1	312.7	335.8
77.5°	134.0	158.5	217.6	265.2	282.5
80°	99.4	123.9	177.3	211.8	227.7
82.5°	67.7	92.2	132.6	158.5	167.2
85°	40.4	57.6	85.0	99.4	98.0
87.5°	18.7	24.5	34.6	34.6	33.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)