

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: P308766

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-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: P308766
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-4500K
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: 2942.0 lumens
Efficiency: N/A
Efficacy: 104.7 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

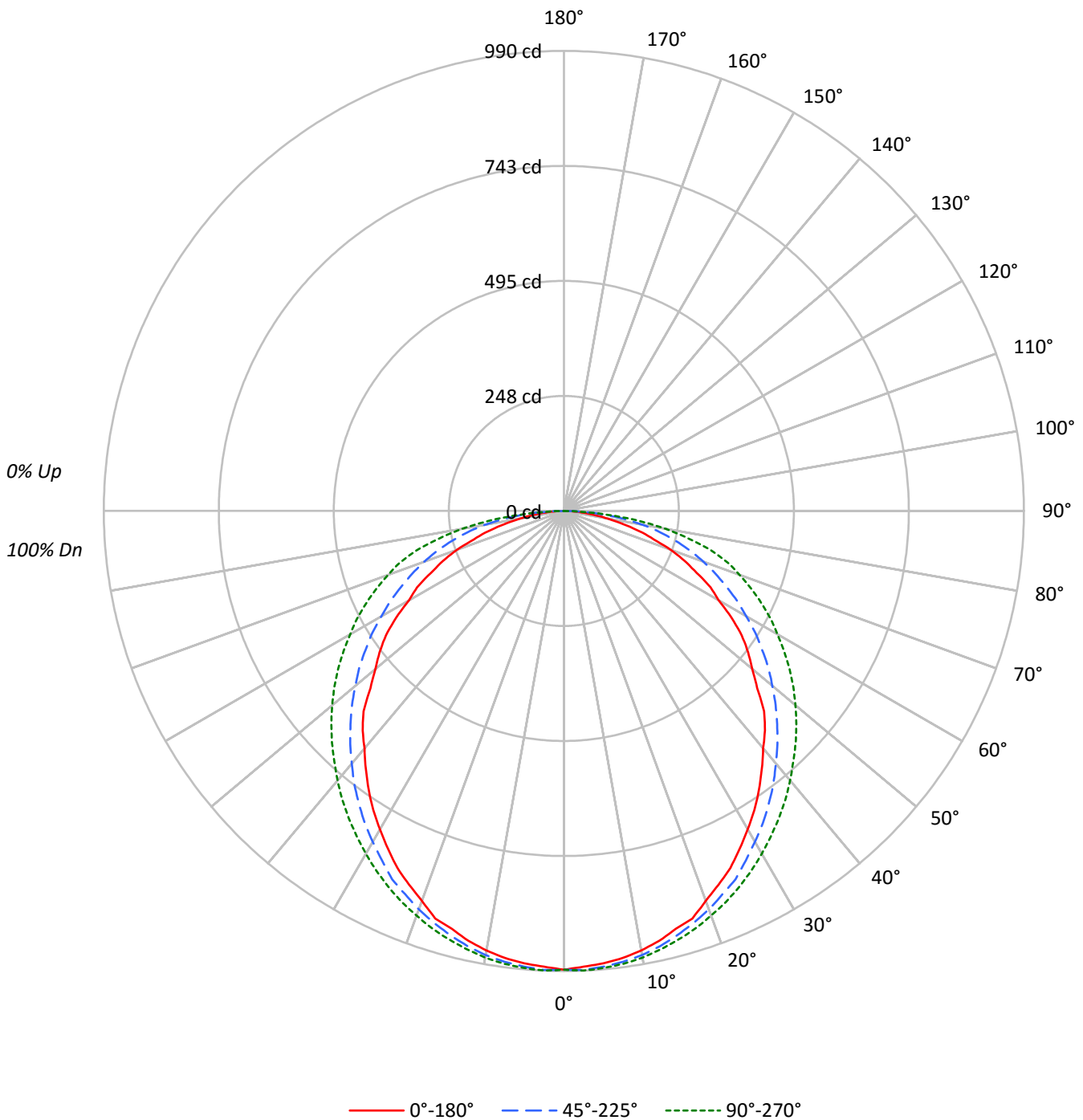
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2656	2656	2656
5°	2640	2659	2666
10°	2624	2651	2666
15°	2593	2632	2660
20°	2556	2613	2653
25°	2517	2596	2651
30°	2459	2555	2647
35°	2405	2526	2650
40°	2344	2493	2661
45°	2320	2470	2684
50°	2216	2452	2723
55°	2193	2444	2781
60°	2069	2440	2857
65°	2008	2457	2986
70°	1928	2515	3168
75°	1757	2591	3411
80°	1506	2684	3448
85°	1216	2566	2955



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.4	3.2
10°-20°	266.4	9.1
20°-30°	401.0	13.6
30°-40°	481.3	16.4
40°-50°	503.0	17.1
50°-60°	468.8	15.9
60°-70°	384.5	13.1
70°-80°	259.1	8.8
80°-90°	84.4	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°	760.9	25.9
0°-40°	1242.2	42.2
0°-60°	2214.0	75.3
0°-90°	2942.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2942.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	987	987	987	987	987	
5°	977	980	984	986	987	93
15°	931	936	945	953	955	263
25°	848	853	874	887	893	390
35°	732	742	769	796	807	458
45°	610	614	649	689	705	466
55°	468	476	521	570	593	414
65°	315	330	386	442	469	314
75°	169	187	249	306	328	178
85°	39	56	83	97	96	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	987.1	987.1	987.1	987.1	987.1
2.5°	981.4	984.2	988.5	989.9	989.9
5°	977.2	980.0	984.2	985.7	987.1
7.5°	970.2	973.0	978.6	981.4	982.8
10°	960.3	963.1	970.2	974.4	975.8
12.5°	947.6	950.5	958.9	964.5	965.9
15°	930.7	936.4	944.8	953.3	954.7
17.5°	919.5	918.1	929.3	939.2	942.0
20°	892.7	899.8	912.4	923.7	926.5
22.5°	870.2	875.8	892.7	905.4	911.0
25°	847.7	853.3	874.4	887.1	892.7
27.5°	819.5	828.0	847.7	866.0	873.0
30°	791.3	799.8	822.3	843.4	851.9
32.5°	763.2	773.0	797.0	819.5	829.4
35°	732.2	742.1	768.8	795.6	806.8
37.5°	699.8	712.5	740.7	770.2	782.9
40°	667.4	680.1	709.7	743.5	757.5
42.5°	640.7	646.3	680.1	716.7	730.8
45°	609.7	613.9	649.1	688.6	705.4
47.5°	564.6	580.1	618.1	661.8	678.7
50°	529.4	546.3	585.8	632.2	650.5
52.5°	499.9	511.1	554.8	601.3	622.4
55°	467.5	475.9	521.0	570.3	592.8
57.5°	428.1	443.5	488.6	539.3	561.8
60°	384.4	404.1	453.4	508.3	530.8
62.5°	356.2	367.5	421.0	475.9	501.3
65°	315.4	329.5	385.8	442.1	468.9
67.5°	281.6	295.7	353.4	409.8	436.5
70°	245.0	259.1	319.6	376.0	402.7
72.5°	202.8	222.5	285.8	342.2	370.3
75°	169.0	187.3	249.2	305.6	328.1
77.5°	131.0	154.9	212.6	259.1	276.0
80°	97.2	121.1	173.2	207.0	222.5
82.5°	66.2	90.1	129.5	154.9	163.3
85°	39.4	56.3	83.1	97.2	95.7
87.5°	18.3	23.9	33.8	33.8	32.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)