

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: P308762

Luminaire Tested: **22FCZ2-34HE-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: P308762
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-2700K
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: 2657.0 lumens
Efficiency: N/A
Efficacy: 96.3 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

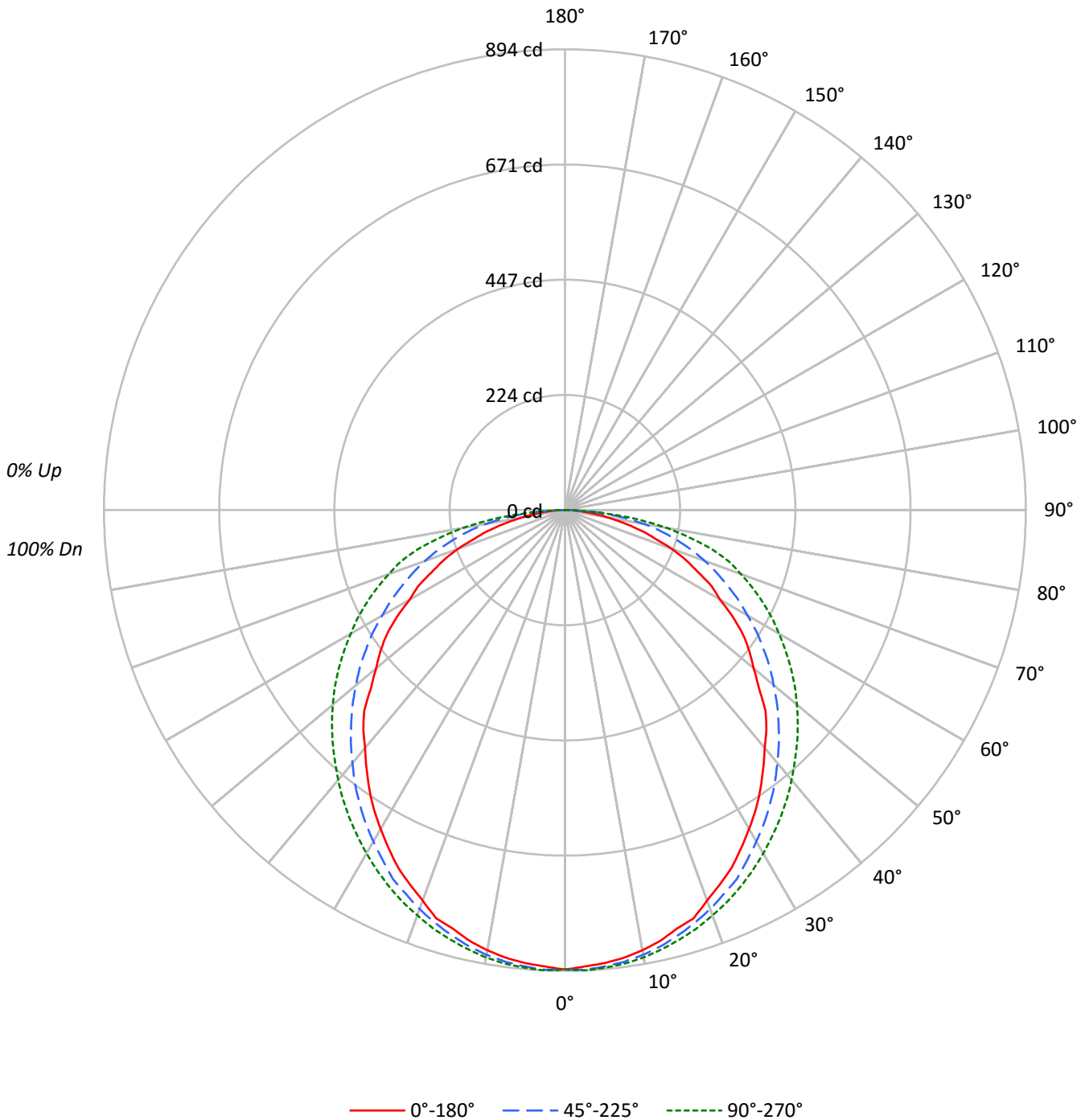
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2399	2399	2399
5°	2384	2401	2408
10°	2370	2394	2408
15°	2342	2377	2402
20°	2309	2360	2396
25°	2273	2345	2394
30°	2221	2308	2391
35°	2172	2281	2394
40°	2118	2251	2403
45°	2095	2231	2425
50°	2002	2215	2460
55°	1981	2207	2512
60°	1869	2204	2580
65°	1814	2218	2697
70°	1741	2271	2862
75°	1587	2340	3081
80°	1359	2424	3113
85°	1099	2316	2671



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	3.2
10°-20°	240.6	9.1
20°-30°	362.2	13.6
30°-40°	434.7	16.4
40°-50°	454.3	17.1
50°-60°	423.4	15.9
60°-70°	347.3	13.1
70°-80°	234.0	8.8
80°-90°	76.2	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°	687.1	25.9
0°-40°	1121.8	42.2
0°-60°	1999.5	75.3
0°-90°	2657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	882	885	889	890	891	84
15°	841	846	853	861	862	238
25°	766	771	790	801	806	352
35°	661	670	694	718	729	413
45°	551	554	586	622	637	421
55°	422	430	470	515	535	374
65°	285	298	348	399	424	283
75°	153	169	225	276	296	160
85°	36	51	75	88	86	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	891.4	891.4	891.4	891.4	891.4
2.5°	886.4	888.9	892.7	894.0	894.0
5°	882.5	885.1	888.9	890.2	891.4
7.5°	876.2	878.7	883.8	886.4	887.6
10°	867.3	869.8	876.2	880.0	881.3
12.5°	855.8	858.4	866.0	871.1	872.4
15°	840.6	845.7	853.3	860.9	862.2
17.5°	830.4	829.1	839.3	848.2	850.8
20°	806.2	812.6	824.0	834.2	836.8
22.5°	785.9	791.0	806.2	817.7	822.8
25°	765.5	770.6	789.7	801.2	806.2
27.5°	740.1	747.7	765.5	782.1	788.4
30°	714.7	722.3	742.7	761.7	769.4
32.5°	689.2	698.2	719.8	740.1	749.0
35°	661.3	670.2	694.3	718.5	728.7
37.5°	632.0	643.5	668.9	695.6	707.1
40°	602.8	614.2	640.9	671.4	684.2
42.5°	578.6	583.7	614.2	647.3	660.0
45°	550.6	554.5	586.2	621.9	637.1
47.5°	509.9	523.9	558.3	597.7	612.9
50°	478.2	493.4	529.0	571.0	587.5
52.5°	451.4	461.6	501.0	543.0	562.1
55°	422.2	429.8	470.5	515.0	535.4
57.5°	386.6	400.6	441.3	487.1	507.4
60°	347.2	365.0	409.5	459.1	479.4
62.5°	321.7	331.9	380.2	429.8	452.7
65°	284.9	297.6	348.4	399.3	423.5
67.5°	254.3	267.1	319.2	370.1	394.2
70°	221.3	234.0	288.7	339.5	363.7
72.5°	183.1	200.9	258.2	309.0	334.5
75°	152.6	169.1	225.1	276.0	296.3
77.5°	118.3	139.9	192.0	234.0	249.2
80°	87.7	109.4	156.4	186.9	200.9
82.5°	59.8	81.4	117.0	139.9	147.5
85°	35.6	50.9	75.0	87.7	86.5
87.5°	16.5	21.6	30.5	30.5	29.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)