

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: P308225

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CP187-W2A-U-4000K**

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: P308225
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
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-HRP-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2246.0 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

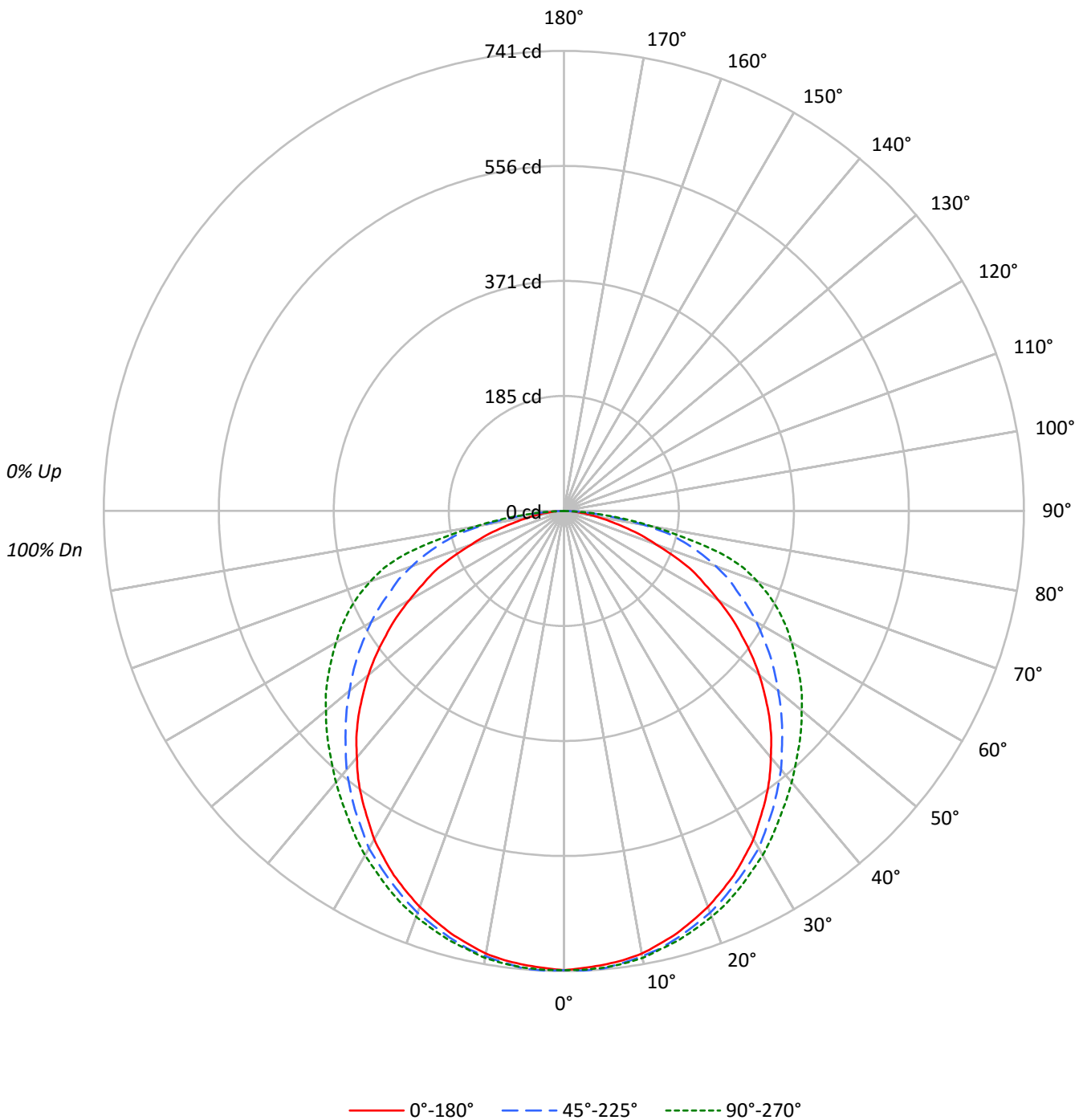
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1990	1990	1990
5°	1982	1998	1994
10°	1978	1990	1998
15°	1962	1981	1993
20°	1944	1972	1992
25°	1923	1956	1990
30°	1898	1950	1990
35°	1862	1927	1987
40°	1822	1911	2006
45°	1780	1893	2038
50°	1720	1886	2094
55°	1642	1901	2174
60°	1548	1929	2280
65°	1461	1967	2436
70°	1249	2051	2608
75°	1046	2136	2711
80°	857	2064	2261
85°	744	1531	1661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.1	3.1
10°-20°	200.5	8.9
20°-30°	303.9	13.5
30°-40°	366.9	16.3
40°-50°	385.6	17.2
50°-60°	362.8	16.2
60°-70°	302.5	13.5
70°-80°	200.4	8.9
80°-90°	53.4	2.4
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°	574.5	25.6
0°-40°	941.4	41.9
0°-60°	1689.7	75.2
0°-90°	2246.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2246.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	734	735	740	740	738	70
15°	704	707	711	714	716	199
25°	648	652	659	667	670	298
35°	567	572	587	599	605	354
45°	468	475	497	523	536	360
55°	350	366	405	446	463	313
65°	230	249	309	360	382	223
75°	101	140	205	248	261	109
85°	24	37	50	54	54	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	739.6	739.6	739.6	739.6	739.6
2.5°	736.7	738.2	741.0	741.0	739.6
5°	733.9	735.3	739.6	739.6	738.2
7.5°	729.7	731.1	733.9	736.7	735.3
10°	724.0	725.4	728.2	731.1	731.1
12.5°	714.1	715.5	721.2	722.6	722.6
15°	704.2	707.0	711.2	714.1	715.5
17.5°	691.4	694.2	699.9	705.6	705.6
20°	678.7	681.5	688.6	694.2	695.7
22.5°	663.1	667.3	674.4	681.5	684.3
25°	647.5	651.7	658.8	667.3	670.2
27.5°	629.1	633.3	643.2	653.2	654.6
30°	610.7	614.9	627.7	636.2	640.4
32.5°	588.0	593.6	606.4	619.2	623.4
35°	566.7	572.4	586.6	599.3	605.0
37.5°	544.1	549.7	565.3	580.9	588.0
40°	518.6	525.6	544.1	561.1	571.0
42.5°	494.5	501.6	520.0	542.6	552.6
45°	467.6	474.6	497.3	522.8	535.6
47.5°	439.2	447.7	474.6	505.8	518.6
50°	410.9	420.8	450.6	486.0	500.1
52.5°	381.1	393.9	427.9	466.1	483.1
55°	350.0	365.5	405.2	446.3	463.3
57.5°	320.2	334.4	381.1	425.0	443.5
60°	287.6	306.0	358.5	403.8	423.6
62.5°	256.4	276.3	334.4	382.5	403.8
65°	229.5	249.4	308.9	359.9	382.5
67.5°	194.1	221.0	287.6	335.8	358.5
70°	158.7	195.5	260.7	310.3	331.5
72.5°	131.8	167.2	233.8	283.4	303.2
75°	100.6	140.3	205.4	247.9	260.7
77.5°	75.1	116.2	175.7	196.9	198.4
80°	55.3	89.3	133.2	140.3	145.9
82.5°	38.3	62.3	86.4	94.9	97.8
85°	24.1	36.8	49.6	53.8	53.8
87.5°	12.8	14.2	17.0	17.0	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)