

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: P308497

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P308497
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP187-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1996.0 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

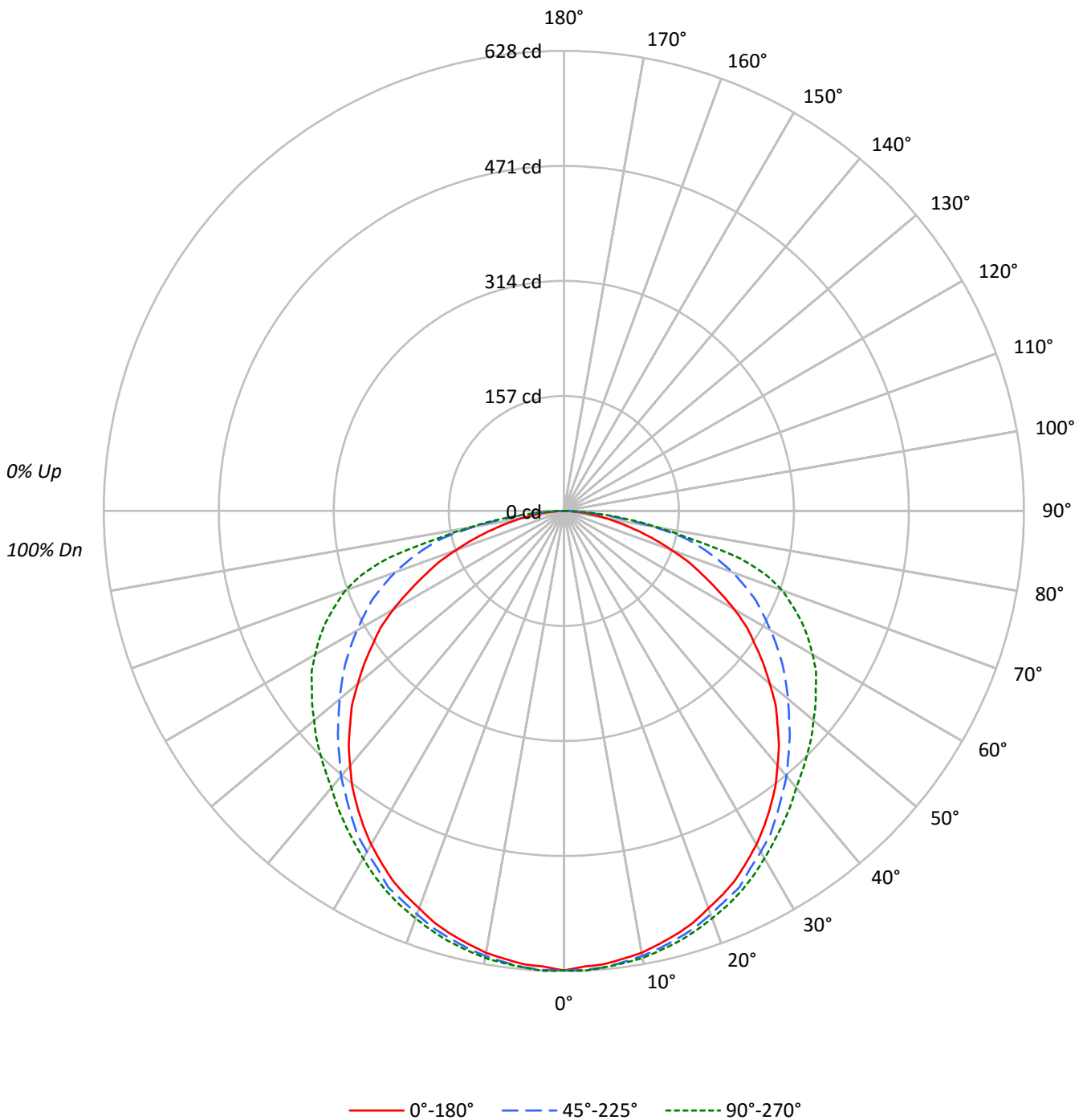
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1687	1687	1687
5°	1678	1690	1690
10°	1673	1685	1693
15°	1665	1681	1694
20°	1653	1678	1694
25°	1648	1683	1700
30°	1633	1670	1702
35°	1616	1664	1713
40°	1594	1661	1733
45°	1570	1660	1788
50°	1537	1672	1863
55°	1495	1708	1970
60°	1446	1755	2110
65°	1346	1842	2281
70°	1236	1929	2496
75°	1084	2031	2580
80°	933	1934	2025
85°	815	1405	1541



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	3.0
10°-20°	170.3	8.5
20°-30°	259.8	13.0
30°-40°	317.2	15.9
40°-50°	339.2	17.0
50°-60°	327.4	16.4
60°-70°	281.8	14.1
70°-80°	190.7	9.6
80°-90°	50.3	2.5
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°	489.4	24.5
0°-40°	806.6	40.4
0°-60°	1473.2	73.8
0°-90°	1996.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1996.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	621	623	626	626	626	59
15°	598	599	604	606	608	169
25°	555	558	567	570	573	255
35°	492	496	507	517	521	308
45°	413	420	436	458	470	318
55°	319	329	364	401	420	286
65°	211	232	289	335	358	210
75°	104	138	195	235	248	112
85°	26	37	46	47	50	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	627.0	627.0	627.0	627.0	627.0
2.5°	622.6	624.0	627.0	627.0	628.4
5°	621.1	622.6	625.5	625.5	625.5
7.5°	616.7	618.2	621.1	622.6	622.6
10°	612.3	613.8	616.7	618.2	619.6
12.5°	605.0	606.4	610.8	613.8	613.8
15°	597.6	599.1	603.5	606.4	607.9
17.5°	588.8	591.7	596.1	599.1	600.5
20°	577.1	580.0	585.9	590.3	591.7
22.5°	566.8	569.7	575.6	580.0	582.9
25°	555.0	558.0	566.8	569.7	572.7
27.5°	540.3	543.3	550.6	556.5	560.9
30°	525.7	528.6	537.4	544.8	547.7
32.5°	509.5	513.9	524.2	530.1	534.5
35°	491.9	496.3	506.6	516.9	521.3
37.5°	474.3	478.7	489.0	502.2	508.0
40°	453.7	459.6	472.8	490.4	493.4
42.5°	434.6	442.0	453.7	474.3	481.6
45°	412.6	419.9	436.1	458.1	469.9
47.5°	392.0	399.4	417.0	443.4	458.1
50°	367.1	377.4	399.4	430.2	444.9
52.5°	343.6	352.4	381.8	415.5	433.2
55°	318.6	328.9	364.1	400.9	419.9
57.5°	296.6	305.4	345.1	386.2	408.2
60°	268.7	280.5	326.0	370.0	392.0
62.5°	239.3	257.0	306.9	352.4	375.9
65°	211.4	232.0	289.3	334.8	358.3
67.5°	186.5	208.5	267.2	315.7	337.7
70°	157.1	185.0	245.2	292.2	317.2
72.5°	130.7	161.5	220.3	267.2	289.3
75°	104.3	138.0	195.3	234.9	248.1
77.5°	80.8	113.1	167.4	179.1	180.6
80°	60.2	89.6	124.8	126.3	130.7
82.5°	41.1	63.1	80.8	88.1	89.6
85°	26.4	36.7	45.5	47.0	49.9
87.5°	11.7	13.2	16.2	14.7	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)