

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: P308674

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CP187-W2A-U-3500K**

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: P308674  
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: 22FCZ2-24HE-UNV-L82765-CP187-W2A-U-3500K  
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: 2006.0 lumens  
Efficiency: N/A  
Efficacy: 105.6 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

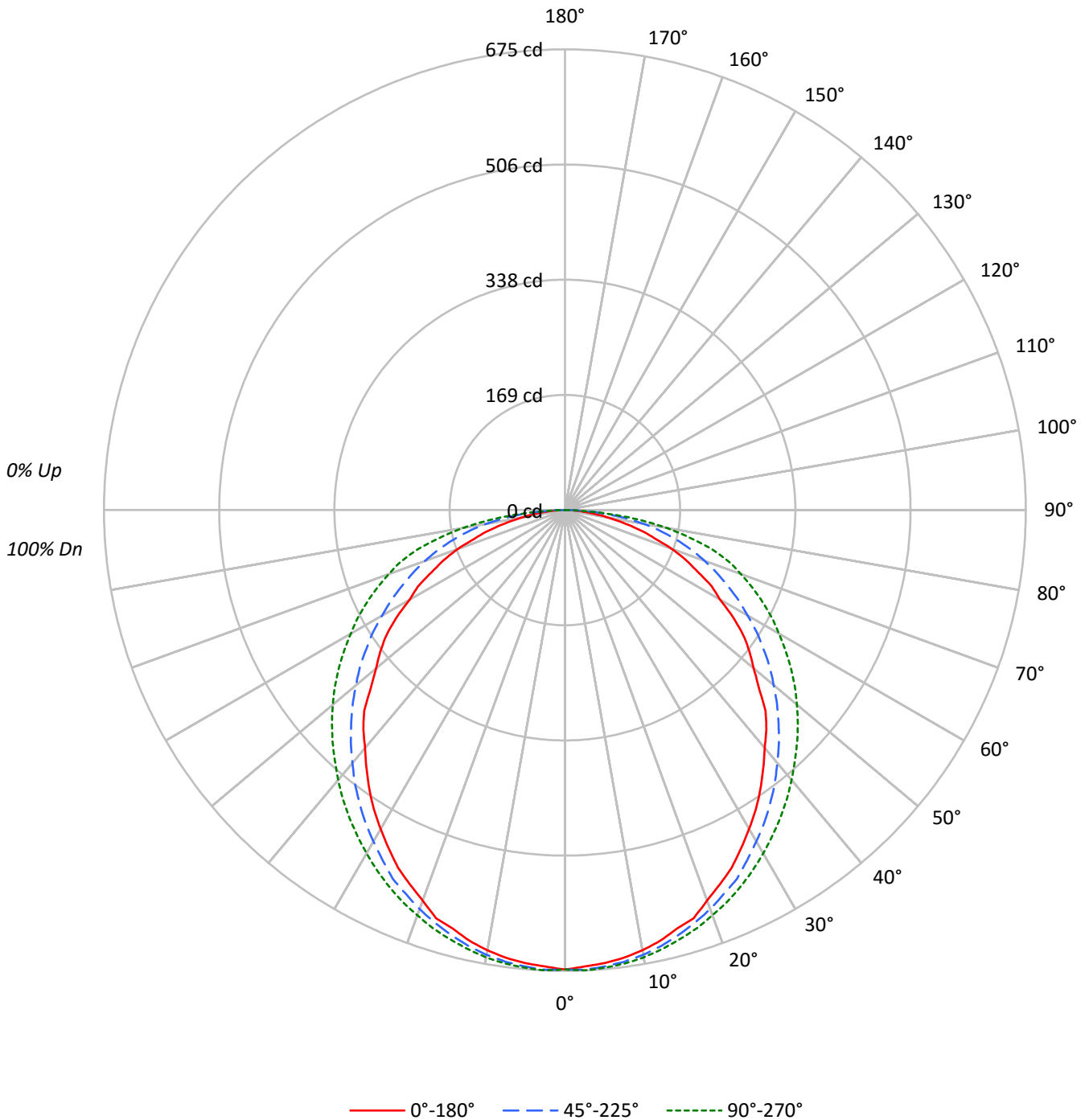
Input Watts (W): 19  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1811	1811	1811
5°	1800	1813	1818
10°	1789	1808	1818
15°	1768	1795	1813
20°	1743	1781	1809
25°	1716	1770	1807
30°	1677	1742	1805
35°	1640	1722	1807
40°	1599	1700	1814
45°	1582	1684	1831
50°	1511	1672	1857
55°	1496	1666	1896
60°	1411	1664	1948
65°	1370	1675	2036
70°	1315	1714	2161
75°	1198	1766	2326
80°	1026	1830	2351
85°	831	1748	2016



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.7	3.2
10°-20°	181.7	9.1
20°-30°	273.4	13.6
30°-40°	328.2	16.4
40°-50°	343.0	17.1
50°-60°	319.7	15.9
60°-70°	262.2	13.1
70°-80°	176.7	8.8
80°-90°	57.5	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°	518.8	25.9
0°-40°	847.0	42.2
0°-60°	1509.6	75.3
0°-90°	2006.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2006.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	666	668	671	672	673	63
15°	635	638	644	650	651	179
25°	578	582	596	605	609	266
35°	499	506	524	542	550	312
45°	416	419	443	470	481	318
55°	319	324	355	389	404	282
65°	215	225	263	302	320	214
75°	115	128	170	208	224	121
85°	27	38	57	66	65	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	673.0	673.0	673.0	673.0	673.0
2.5°	669.2	671.1	674.0	675.0	675.0
5°	666.3	668.2	671.1	672.1	673.0
7.5°	661.5	663.4	667.3	669.2	670.1
10°	654.8	656.7	661.5	664.4	665.3
12.5°	646.1	648.1	653.8	657.7	658.6
15°	634.6	638.5	644.2	650.0	650.9
17.5°	626.9	626.0	633.7	640.4	642.3
20°	608.7	613.5	622.1	629.8	631.7
22.5°	593.3	597.2	608.7	617.3	621.2
25°	578.0	581.8	596.2	604.9	608.7
27.5°	558.8	564.5	578.0	590.5	595.3
30°	539.6	545.3	560.7	575.1	580.9
32.5°	520.4	527.1	543.4	558.8	565.5
35°	499.3	506.0	524.2	542.5	550.1
37.5°	477.2	485.8	505.0	525.2	533.8
40°	455.1	463.7	483.9	506.9	516.5
42.5°	436.8	440.7	463.7	488.7	498.3
45°	415.7	418.6	442.6	469.5	481.0
47.5°	385.0	395.6	421.5	451.2	462.8
50°	361.0	372.5	399.4	431.1	443.6
52.5°	340.8	348.5	378.3	410.0	424.4
55°	318.8	324.5	355.2	388.8	404.2
57.5°	291.9	302.4	333.2	367.7	383.1
60°	262.1	275.5	309.2	346.6	362.0
62.5°	242.9	250.6	287.1	324.5	341.8
65°	215.1	224.7	263.1	301.5	319.7
67.5°	192.0	201.6	241.0	279.4	297.6
70°	167.1	176.7	217.9	256.3	274.6
72.5°	138.3	151.7	194.9	233.3	252.5
75°	115.2	127.7	169.9	208.3	223.7
77.5°	89.3	105.6	145.0	176.7	188.2
80°	66.2	82.6	118.1	141.1	151.7
82.5°	45.1	61.4	88.3	105.6	111.4
85°	26.9	38.4	56.6	66.2	65.3
87.5°	12.5	16.3	23.0	23.0	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)