

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: P308947

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-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: P308947  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
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-S-CP187-W2A-U-5000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

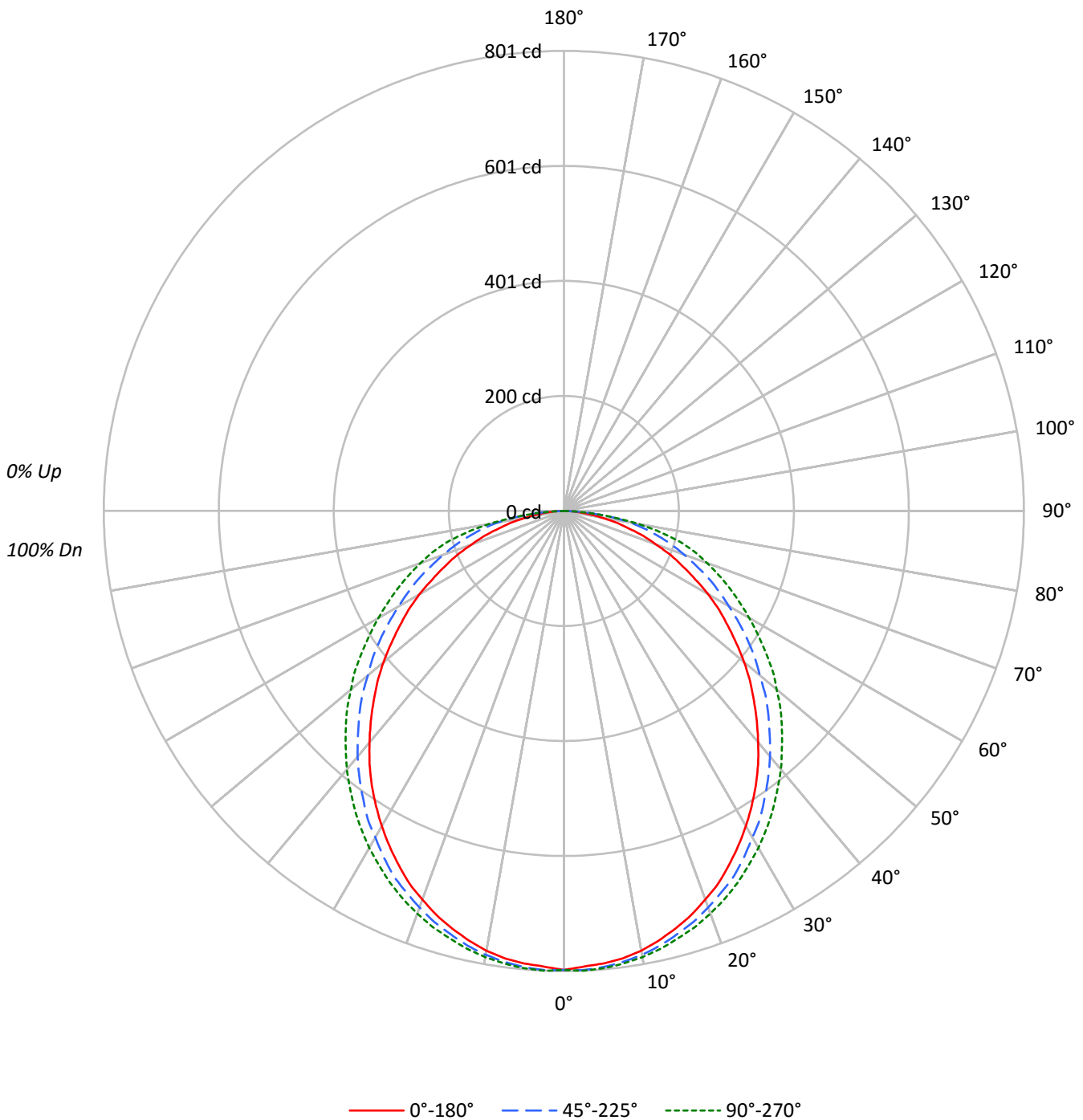
Lumens per Lamp: N/A  
Luminaire Lumens: 2230.0 lumens  
Efficiency: N/A  
Efficacy: 115.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2150	2150	2150
5°	2136	2153	2159
10°	2124	2144	2155
15°	2096	2125	2145
20°	2062	2104	2136
25°	2021	2082	2122
30°	1969	2040	2105
35°	1914	2003	2085
40°	1850	1963	2065
45°	1782	1917	2043
50°	1716	1864	2025
55°	1635	1831	2011
60°	1562	1786	2005
65°	1457	1775	2027
70°	1342	1760	2087
75°	1211	1785	2196
80°	1048	1838	2064
85°	868	1541	1541



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	3.4
10°-20°	215.1	9.6
20°-30°	321.8	14.4
30°-40°	381.1	17.1
40°-50°	388.3	17.4
50°-60°	348.1	15.6
60°-70°	272.5	12.2
70°-80°	175.7	7.9
80°-90°	51.9	2.3
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°	612.4	27.5
0°-40°	993.4	44.5
0°-60°	1729.8	77.6
0°-90°	2230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2230.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	799	799	799	799	799	
5°	791	793	797	798	799	75
15°	752	756	763	769	770	212
25°	680	687	701	711	715	313
35°	583	590	610	628	635	364
45°	468	479	504	530	537	362
55°	349	360	390	417	429	313
65°	229	242	279	306	318	227
75°	116	134	172	201	211	125
85°	28	38	50	50	50	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	799.1	799.1	799.1	799.1	799.1
2.5°	793.9	796.0	800.1	801.2	801.2
5°	790.8	792.8	797.0	798.0	799.1
7.5°	785.6	786.6	791.8	793.9	794.9
10°	777.2	779.3	784.5	787.6	788.7
12.5°	765.8	768.9	775.1	779.3	780.4
15°	752.3	756.4	762.7	768.9	769.9
17.5°	737.7	741.9	750.2	757.5	759.5
20°	720.0	725.2	734.6	742.9	746.0
22.5°	702.3	706.5	717.9	728.3	731.4
25°	680.5	686.7	701.3	710.6	714.8
27.5°	657.6	664.9	679.4	691.9	696.1
30°	633.6	640.9	656.5	672.1	677.3
32.5°	608.7	617.0	635.7	651.3	656.5
35°	582.7	589.9	609.7	628.4	634.7
37.5°	555.6	561.9	584.7	604.5	610.8
40°	526.5	534.8	558.7	581.6	587.9
42.5°	497.3	506.7	530.6	555.6	561.9
45°	468.2	478.6	503.6	529.6	536.9
47.5°	440.1	448.4	476.5	501.5	511.9
50°	409.9	418.3	445.3	473.4	483.8
52.5°	378.7	390.2	419.3	446.4	458.8
55°	348.6	360.0	390.2	417.2	428.7
57.5°	320.5	329.8	361.0	389.1	400.6
60°	290.3	298.6	331.9	362.1	372.5
62.5°	258.0	270.5	304.9	332.9	345.4
65°	228.9	242.4	278.8	305.9	318.4
67.5°	201.9	214.3	249.7	278.8	292.4
70°	170.6	187.3	223.7	252.8	265.3
72.5°	145.7	160.2	197.7	226.8	240.3
75°	116.5	134.2	171.7	200.8	211.2
77.5°	92.6	110.3	145.7	168.6	173.8
80°	67.6	85.3	118.6	130.1	133.2
82.5°	45.8	62.4	85.3	88.4	89.5
85°	28.1	38.5	49.9	49.9	49.9
87.5°	13.5	15.6	17.7	16.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)