

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: P308948

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP187-W2A-U-5500K**

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: P308948  
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-5500K  
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**

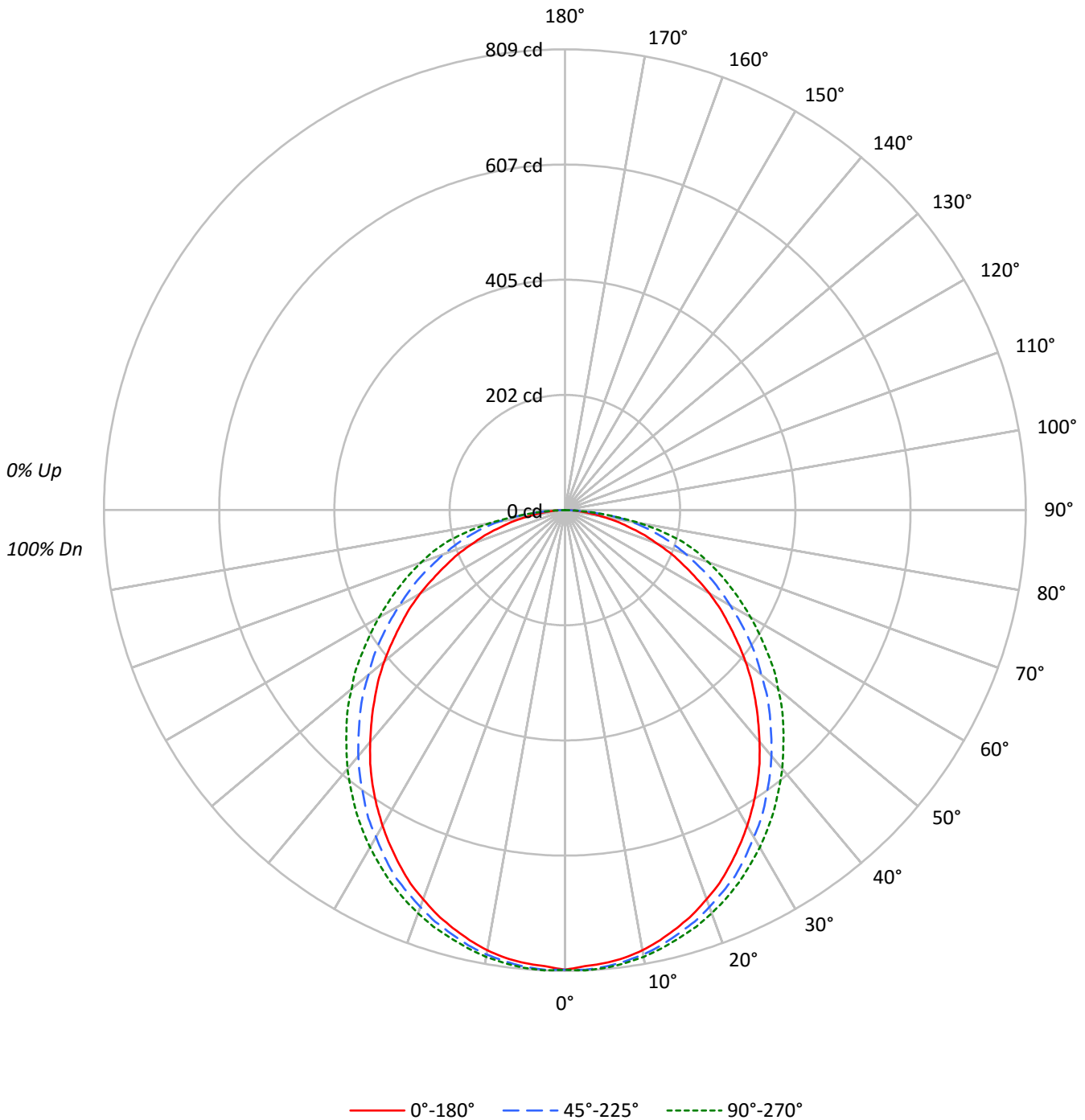
Lumens per Lamp: N/A  
Luminaire Lumens: 2252.0 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2172	2172	2172
5°	2157	2174	2180
10°	2145	2165	2176
15°	2116	2146	2166
20°	2082	2124	2157
25°	2040	2103	2143
30°	1988	2060	2125
35°	1933	2023	2105
40°	1868	1982	2086
45°	1799	1936	2063
50°	1733	1883	2045
55°	1651	1848	2031
60°	1578	1804	2025
65°	1472	1793	2047
70°	1356	1777	2108
75°	1224	1803	2218
80°	1058	1857	2084
85°	877	1556	1556



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.3	3.4
10°-20°	217.2	9.6
20°-30°	324.9	14.4
30°-40°	384.8	17.1
40°-50°	392.2	17.4
50°-60°	351.5	15.6
60°-70°	275.2	12.2
70°-80°	177.5	7.9
80°-90°	52.4	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°	618.4	27.5
0°-40°	1003.3	44.5
0°-60°	1746.9	77.6
0°-90°	2252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2252.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	807	807	807	807	807	
5°	799	801	805	806	807	76
15°	760	764	770	776	778	214
25°	687	694	708	718	722	316
35°	588	596	616	635	641	368
45°	473	483	509	535	542	365
55°	352	364	394	421	433	316
65°	231	245	282	309	322	230
75°	118	136	173	203	213	126
85°	28	39	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°	807.0	807.0	807.0	807.0	807.0
2.5°	801.7	803.8	808.0	809.1	809.1
5°	798.6	800.7	804.9	805.9	807.0
7.5°	793.3	794.4	799.6	801.7	802.8
10°	784.9	787.0	792.3	795.4	796.5
12.5°	773.3	776.5	782.8	787.0	788.0
15°	759.7	763.9	770.2	776.5	777.5
17.5°	745.0	749.2	757.6	764.9	767.0
20°	727.1	732.4	741.8	750.2	753.4
22.5°	709.2	713.4	725.0	735.5	738.7
25°	687.2	693.5	708.2	717.6	721.9
27.5°	664.1	671.4	686.1	698.7	702.9
30°	639.9	647.3	663.0	678.8	684.0
32.5°	614.7	623.1	642.0	657.8	663.0
35°	588.4	595.8	615.7	634.6	640.9
37.5°	561.1	567.4	590.5	610.5	616.8
40°	531.7	540.1	564.2	587.4	593.7
42.5°	502.2	511.7	535.9	561.1	567.4
45°	472.8	483.3	508.6	534.8	542.2
47.5°	444.5	452.9	481.2	506.5	517.0
50°	414.0	422.4	449.7	478.1	488.6
52.5°	382.5	394.0	423.4	450.8	463.4
55°	352.0	363.6	394.0	421.3	432.9
57.5°	323.6	333.1	364.6	393.0	404.5
60°	293.2	301.6	335.2	365.7	376.2
62.5°	260.6	273.2	307.9	336.2	348.8
65°	231.2	244.8	281.6	308.9	321.5
67.5°	203.8	216.5	252.2	281.6	295.3
70°	172.3	189.1	225.9	255.3	267.9
72.5°	147.1	161.8	199.6	229.1	242.7
75°	117.7	135.5	173.4	202.8	213.3
77.5°	93.5	111.4	147.1	170.2	175.5
80°	68.3	86.2	119.8	131.3	134.5
82.5°	46.2	63.0	86.2	89.3	90.4
85°	28.4	38.9	50.4	50.4	50.4
87.5°	13.7	15.8	17.9	16.8	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)