

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: P308916

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA08-W2A-U-3000K**

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: P308916  
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-CA08-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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**

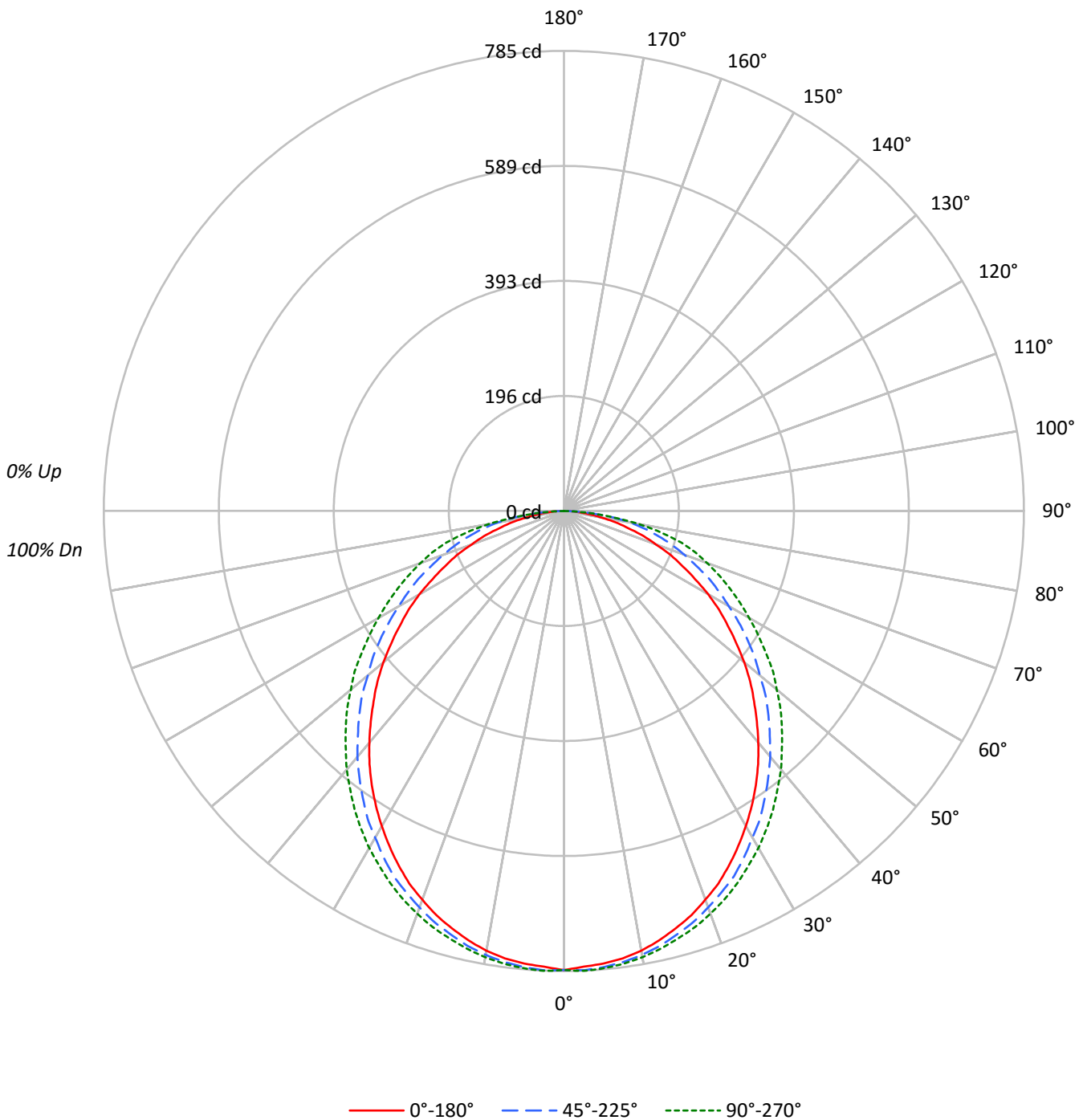
Lumens per Lamp: N/A  
Luminaire Lumens: 2186.0 lumens  
Efficiency: N/A  
Efficacy: 116.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2108	2108	2108
5°	2094	2110	2116
10°	2082	2101	2112
15°	2054	2083	2103
20°	2021	2062	2094
25°	1980	2041	2080
30°	1930	2000	2063
35°	1876	1963	2044
40°	1813	1924	2024
45°	1747	1878	2003
50°	1683	1827	1986
55°	1603	1795	1971
60°	1532	1751	1965
65°	1429	1740	1987
70°	1316	1725	2046
75°	1187	1750	2152
80°	1027	1802	2024
85°	849	1513	1513



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.1	3.4
10°-20°	210.8	9.6
20°-30°	315.4	14.4
30°-40°	373.5	17.1
40°-50°	380.7	17.4
50°-60°	341.2	15.6
60°-70°	267.1	12.2
70°-80°	172.2	7.9
80°-90°	50.9	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°	600.3	27.5
0°-40°	973.9	44.5
0°-60°	1695.7	77.6
0°-90°	2186.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2186.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	783	783	783	783	783	
5°	775	777	781	782	783	74
15°	737	742	748	754	755	208
25°	667	673	687	697	701	307
35°	571	578	598	616	622	357
45°	459	469	494	519	526	354
55°	342	353	382	409	420	306
65°	224	238	273	300	312	223
75°	114	132	168	197	207	122
85°	28	38	49	49	49	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	783.3	783.3	783.3	783.3	783.3
2.5°	778.2	780.3	784.3	785.4	785.4
5°	775.2	777.2	781.3	782.3	783.3
7.5°	770.1	771.1	776.2	778.2	779.2
10°	761.9	763.9	769.0	772.1	773.1
12.5°	750.7	753.7	759.9	763.9	765.0
15°	737.4	741.5	747.6	753.7	754.8
17.5°	723.1	727.2	735.4	742.5	744.6
20°	705.8	710.9	720.1	728.2	731.3
22.5°	688.5	692.5	703.8	714.0	717.0
25°	667.0	673.2	687.4	696.6	700.7
27.5°	644.6	651.7	666.0	678.3	682.3
30°	621.1	628.3	643.6	658.9	664.0
32.5°	596.7	604.8	623.2	638.5	643.6
35°	571.2	578.3	597.7	616.0	622.2
37.5°	544.6	550.8	573.2	592.6	598.7
40°	516.1	524.2	547.7	570.1	576.3
42.5°	487.5	496.7	520.2	544.6	550.8
45°	459.0	469.2	493.6	519.1	526.3
47.5°	431.4	439.6	467.1	491.6	501.8
50°	401.9	410.0	436.5	464.1	474.3
52.5°	371.3	382.5	411.0	437.6	449.8
55°	341.7	352.9	382.5	409.0	420.2
57.5°	314.1	323.3	353.9	381.5	392.7
60°	284.6	292.7	325.4	354.9	365.1
62.5°	252.9	265.2	298.8	326.4	338.6
65°	224.4	237.6	273.3	299.9	312.1
67.5°	197.9	210.1	244.8	273.3	286.6
70°	167.3	183.6	219.3	247.8	260.1
72.5°	142.8	157.1	193.8	222.3	235.6
75°	114.2	131.6	168.3	196.8	207.0
77.5°	90.8	108.1	142.8	165.2	170.3
80°	66.3	83.6	116.3	127.5	130.6
82.5°	44.9	61.2	83.6	86.7	87.7
85°	27.5	37.7	49.0	49.0	49.0
87.5°	13.3	15.3	17.3	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)