

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: P308953

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP250-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: P308953  
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-CP250-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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**

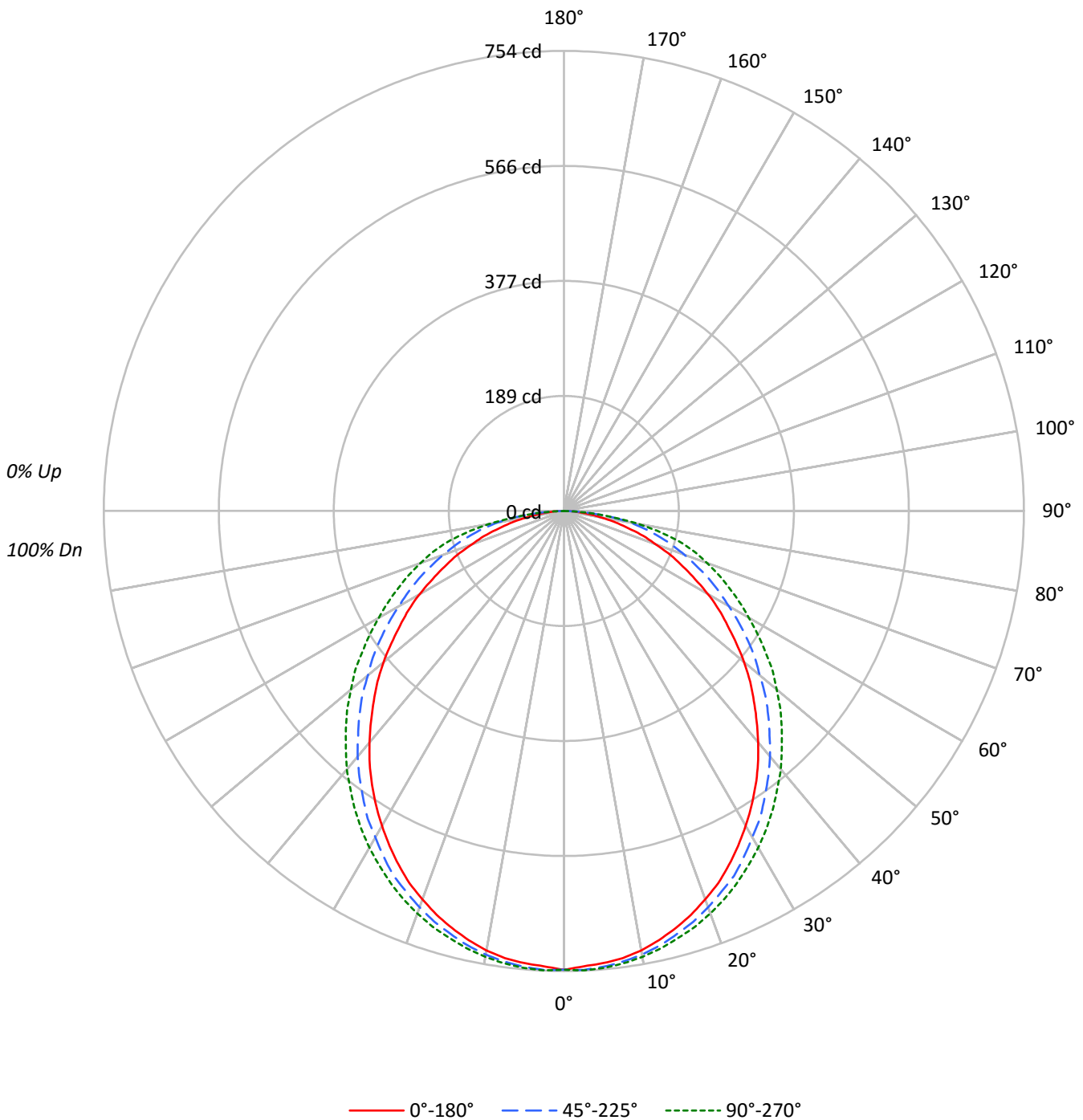
Lumens per Lamp: N/A  
Luminaire Lumens: 2098.0 lumens  
Efficiency: N/A  
Efficacy: 110.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2023	2023	2023
5°	2009	2025	2031
10°	1998	2017	2028
15°	1972	1999	2018
20°	1940	1979	2010
25°	1901	1959	1997
30°	1852	1919	1980
35°	1801	1884	1962
40°	1740	1847	1943
45°	1676	1803	1922
50°	1615	1754	1906
55°	1538	1722	1892
60°	1470	1681	1886
65°	1372	1670	1907
70°	1263	1656	1964
75°	1140	1679	2066
80°	986	1729	1942
85°	815	1451	1451



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.1	3.4
10°-20°	202.3	9.6
20°-30°	302.7	14.4
30°-40°	358.5	17.1
40°-50°	365.4	17.4
50°-60°	327.5	15.6
60°-70°	256.4	12.2
70°-80°	165.3	7.9
80°-90°	48.8	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°	576.1	27.5
0°-40°	934.7	44.5
0°-60°	1627.5	77.6
0°-90°	2098.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2098.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	744	746	750	751	752	71
15°	708	712	718	723	724	200
25°	640	646	660	669	672	295
35°	548	555	574	591	597	343
45°	440	450	474	498	505	340
55°	328	339	367	392	403	294
65°	215	228	262	288	300	214
75°	110	126	162	189	199	118
85°	26	36	47	47	47	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	751.8	751.8	751.8	751.8	751.8
2.5°	746.9	748.8	752.8	753.7	753.7
5°	743.9	745.9	749.8	750.8	751.8
7.5°	739.1	740.0	744.9	746.9	747.9
10°	731.2	733.2	738.1	741.0	742.0
12.5°	720.5	723.4	729.3	733.2	734.2
15°	707.7	711.6	717.5	723.4	724.4
17.5°	694.0	697.9	705.8	712.6	714.6
20°	677.4	682.3	691.1	698.9	701.9
22.5°	660.7	664.7	675.4	685.2	688.2
25°	640.2	646.1	659.8	668.6	672.5
27.5°	618.7	625.5	639.2	651.0	654.9
30°	596.1	603.0	617.7	632.4	637.3
32.5°	572.6	580.5	598.1	612.8	617.7
35°	548.2	555.0	573.6	591.2	597.1
37.5°	522.7	528.6	550.1	568.7	574.6
40°	495.3	503.1	525.7	547.2	553.1
42.5°	467.9	476.7	499.2	522.7	528.6
45°	440.5	450.3	473.8	498.2	505.1
47.5°	414.1	421.9	448.3	471.8	481.6
50°	385.7	393.5	419.0	445.4	455.2
52.5°	356.3	367.1	394.5	419.9	431.7
55°	327.9	338.7	367.1	392.5	403.3
57.5°	301.5	310.3	339.7	366.1	376.9
60°	273.1	280.9	312.3	340.6	350.4
62.5°	242.8	254.5	286.8	313.2	325.0
65°	215.4	228.1	262.3	287.8	299.5
67.5°	189.9	201.6	234.9	262.3	275.1
70°	160.5	176.2	210.5	237.9	249.6
72.5°	137.0	150.7	186.0	213.4	226.1
75°	109.6	126.3	161.5	188.9	198.7
77.5°	87.1	103.8	137.0	158.6	163.5
80°	63.6	80.3	111.6	122.4	125.3
82.5°	43.1	58.7	80.3	83.2	84.2
85°	26.4	36.2	47.0	47.0	47.0
87.5°	12.7	14.7	16.6	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)