

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: P312920

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CA125-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: P312920  
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-L83050-S-CA125-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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**

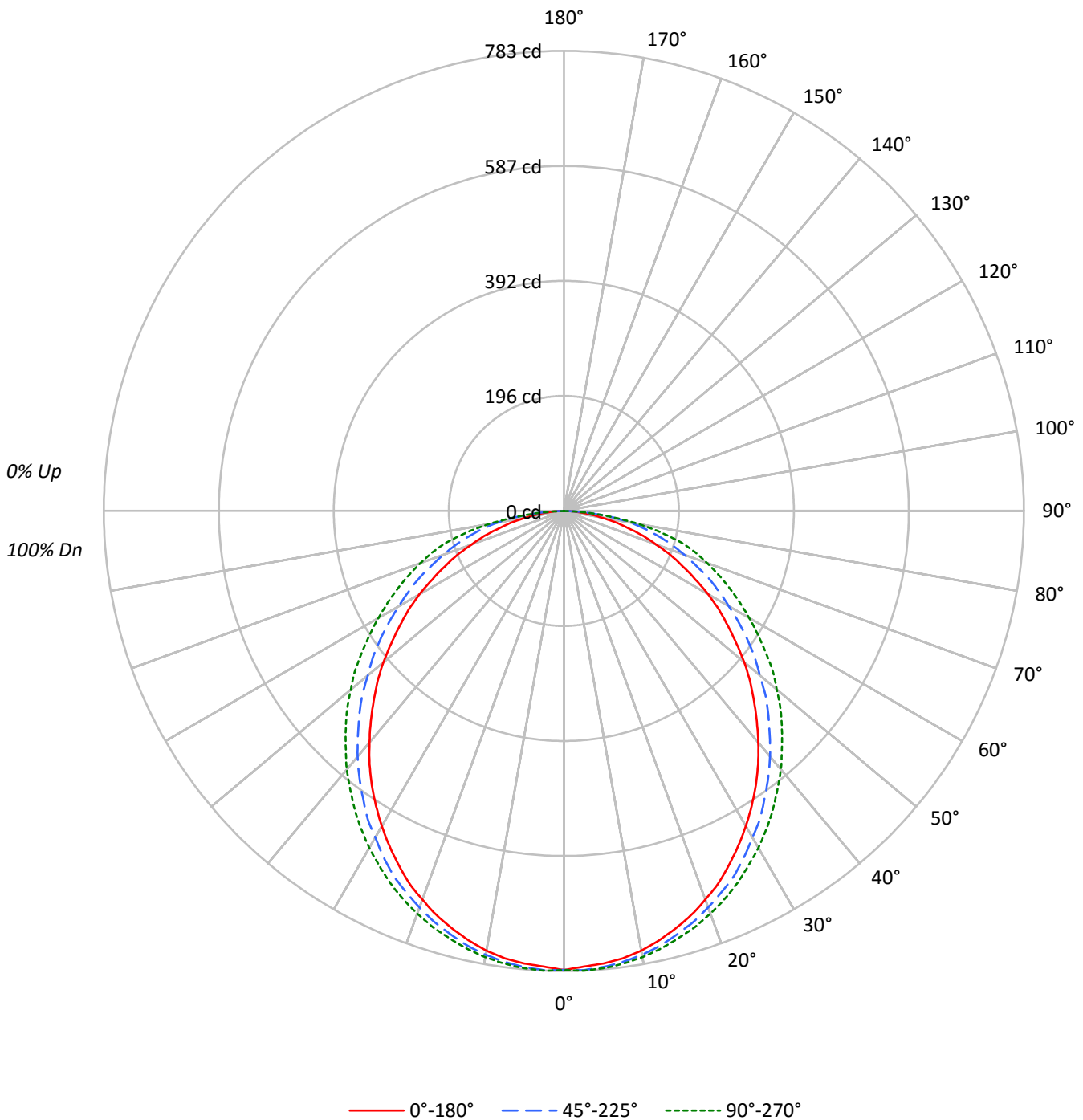
Lumens per Lamp: N/A  
Luminaire Lumens: 2180.0 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2102	2102	2102
5°	2088	2105	2110
10°	2076	2096	2107
15°	2049	2077	2097
20°	2016	2056	2088
25°	1975	2036	2075
30°	1925	1994	2058
35°	1871	1958	2038
40°	1808	1919	2019
45°	1742	1874	1997
50°	1678	1822	1980
55°	1598	1789	1966
60°	1527	1746	1960
65°	1425	1736	1982
70°	1312	1721	2041
75°	1184	1745	2147
80°	1024	1798	2018
85°	849	1507	1507



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.9	3.4
10°-20°	210.2	9.6
20°-30°	314.6	14.4
30°-40°	372.5	17.1
40°-50°	379.6	17.4
50°-60°	340.3	15.6
60°-70°	266.4	12.2
70°-80°	171.8	7.9
80°-90°	50.8	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°	598.7	27.5
0°-40°	971.2	44.5
0°-60°	1691.1	77.6
0°-90°	2180.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2180.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	781	781	781	781	781	
5°	773	775	779	780	781	73
15°	735	740	746	752	753	207
25°	665	671	686	695	699	306
35°	570	577	596	614	620	356
45°	458	468	492	518	525	353
55°	341	352	381	408	419	306
65°	224	237	273	299	311	222
75°	114	131	168	196	206	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°	781.2	781.2	781.2	781.2	781.2
2.5°	776.1	778.1	782.2	783.2	783.2
5°	773.0	775.1	779.1	780.1	781.2
7.5°	767.9	769.0	774.0	776.1	777.1
10°	759.8	761.8	766.9	770.0	771.0
12.5°	748.6	751.7	757.8	761.8	762.9
15°	735.4	739.5	745.6	751.7	752.7
17.5°	721.2	725.2	733.4	740.5	742.5
20°	703.9	708.9	718.1	726.2	729.3
22.5°	686.6	690.6	701.8	712.0	715.0
25°	665.2	671.3	685.6	694.7	698.8
27.5°	642.8	650.0	664.2	676.4	680.5
30°	619.4	626.6	641.8	657.1	662.2
32.5°	595.0	603.2	621.5	636.7	641.8
35°	569.6	576.7	596.0	614.4	620.5
37.5°	543.2	549.3	571.6	591.0	597.1
40°	514.7	522.8	546.2	568.6	574.7
42.5°	486.2	495.3	518.7	543.2	549.3
45°	457.7	467.9	492.3	517.7	524.8
47.5°	430.2	438.4	465.8	490.3	500.4
50°	400.8	408.9	435.3	462.8	473.0
52.5°	370.2	381.4	409.9	436.4	448.6
55°	340.7	351.9	381.4	407.9	419.1
57.5°	313.3	322.4	352.9	380.4	391.6
60°	283.8	291.9	324.5	354.0	364.1
62.5°	252.3	264.5	298.0	325.5	337.7
65°	223.8	237.0	272.6	299.0	311.2
67.5°	197.3	209.5	244.1	272.6	285.8
70°	166.8	183.1	218.7	247.2	259.4
72.5°	142.4	156.6	193.3	221.7	235.0
75°	113.9	131.2	167.8	196.3	206.5
77.5°	90.5	107.8	142.4	164.8	169.9
80°	66.1	83.4	116.0	127.1	130.2
82.5°	44.8	61.0	83.4	86.5	87.5
85°	27.5	37.6	48.8	48.8	48.8
87.5°	13.2	15.3	17.3	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)