

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: P312922

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-CA125-W2A-U-4000K**

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: P312922  
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-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 4000K 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**

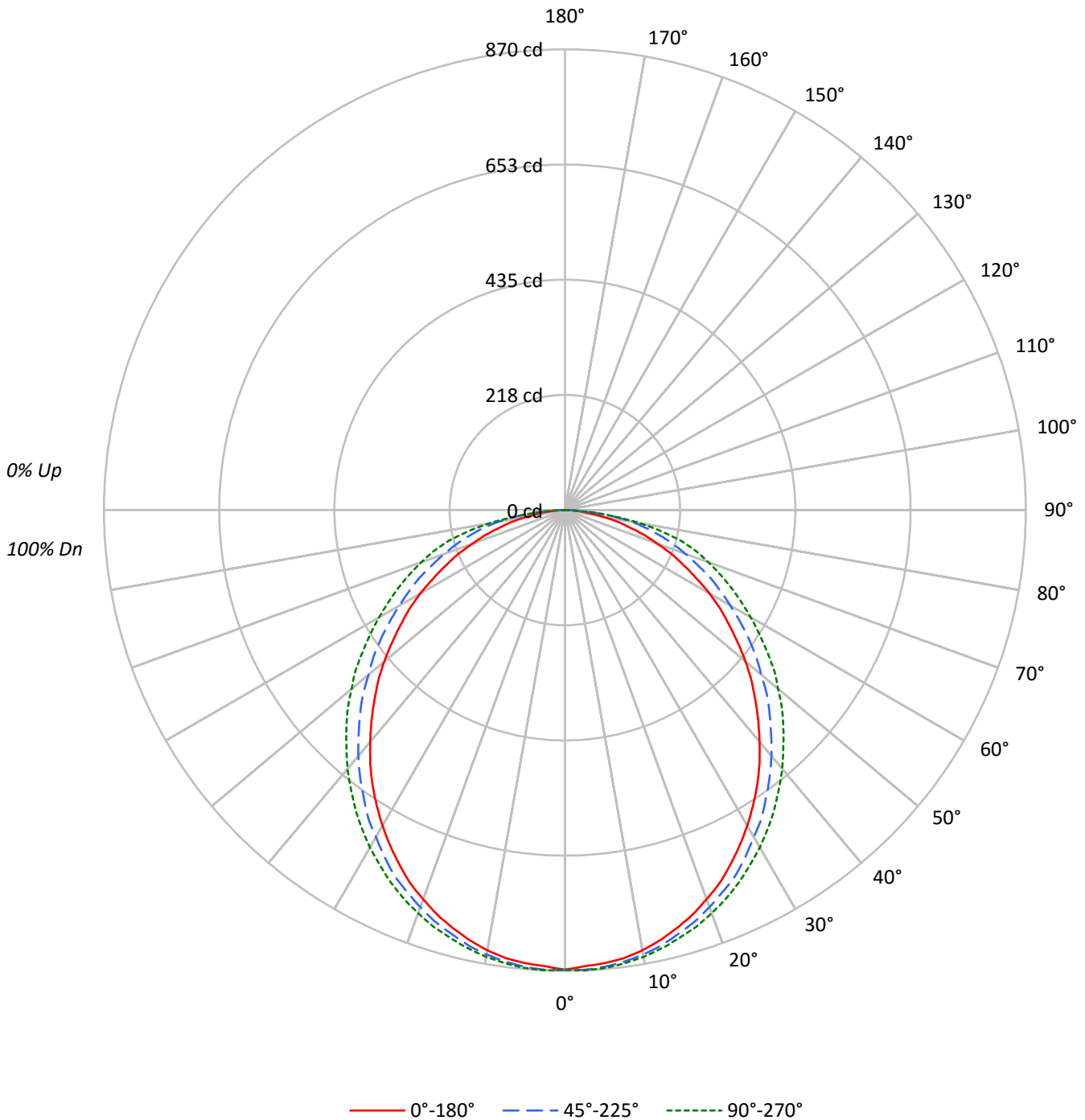
Lumens per Lamp: N/A  
Luminaire Lumens: 2422.0 lumens  
Efficiency: N/A  
Efficacy: 125.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2336	2336	2336
5°	2320	2338	2344
10°	2306	2328	2341
15°	2276	2308	2330
20°	2239	2285	2320
25°	2195	2262	2305
30°	2138	2216	2286
35°	2079	2175	2264
40°	2009	2132	2243
45°	1935	2081	2219
50°	1864	2025	2200
55°	1776	1988	2184
60°	1697	1940	2178
65°	1583	1929	2202
70°	1458	1912	2268
75°	1316	1939	2385
80°	1139	1996	2241
85°	942	1673	1673



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.1	3.4
10°-20°	233.6	9.6
20°-30°	349.5	14.4
30°-40°	413.9	17.1
40°-50°	421.8	17.4
50°-60°	378.0	15.6
60°-70°	296.0	12.2
70°-80°	190.9	7.9
80°-90°	56.4	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°	665.1	27.5
0°-40°	1079.0	44.5
0°-60°	1878.8	77.6
0°-90°	2422.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2422.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	868	868	868	868	868	
5°	859	861	866	867	868	82
15°	817	822	828	835	836	230
25°	739	746	762	772	776	340
35°	633	641	662	682	689	395
45°	508	520	547	575	583	393
55°	379	391	424	453	466	339
65°	249	263	303	332	346	247
75°	127	146	186	218	229	136
85°	30	42	54	54	54	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	867.9	867.9	867.9	867.9	867.9
2.5°	862.2	864.5	869.0	870.1	870.1
5°	858.8	861.1	865.6	866.7	867.9
7.5°	853.2	854.3	860.0	862.2	863.4
10°	844.1	846.4	852.1	855.4	856.6
12.5°	831.7	835.1	841.9	846.4	847.5
15°	817.0	821.5	828.3	835.1	836.2
17.5°	801.2	805.7	814.8	822.7	824.9
20°	782.0	787.6	797.8	806.9	810.2
22.5°	762.8	767.3	779.7	791.0	794.4
25°	739.1	745.8	761.7	771.8	776.3
27.5°	714.2	722.1	737.9	751.5	756.0
30°	688.2	696.1	713.1	730.0	735.7
32.5°	661.1	670.1	690.5	707.4	713.1
35°	632.8	640.7	662.2	682.5	689.3
37.5°	603.4	610.2	635.1	656.6	663.3
40°	571.8	580.8	606.8	631.7	638.5
42.5°	540.2	550.3	576.3	603.4	610.2
45°	508.5	519.8	546.9	575.2	583.1
47.5°	478.0	487.1	517.6	544.7	556.0
50°	445.2	454.3	483.7	514.2	525.5
52.5°	411.3	423.8	455.4	484.8	498.4
55°	378.6	391.0	423.8	453.1	465.6
57.5°	348.1	358.2	392.1	422.6	435.1
60°	315.3	324.3	360.5	393.3	404.6
62.5°	280.3	293.8	331.1	361.6	375.2
65°	248.6	263.3	302.9	332.2	345.8
67.5°	219.2	232.8	271.2	302.9	317.5
70°	185.3	203.4	243.0	274.6	288.2
72.5°	158.2	174.0	214.7	246.4	261.0
75°	126.6	145.8	186.5	218.1	229.4
77.5°	100.6	119.8	158.2	183.1	188.7
80°	73.5	92.7	128.8	141.3	144.6
82.5°	49.7	67.8	92.7	96.1	97.2
85°	30.5	41.8	54.2	54.2	54.2
87.5°	14.7	17.0	19.2	18.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)