

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: P313524

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-RDP-CA125-W2A-U-5000K**

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: P313524  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-40HE-UNV-L83050-RDP-CA125-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET  
Light Source: (336) 5000K 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: 2645.0 lumens  
Efficiency: N/A  
Efficacy: 82.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

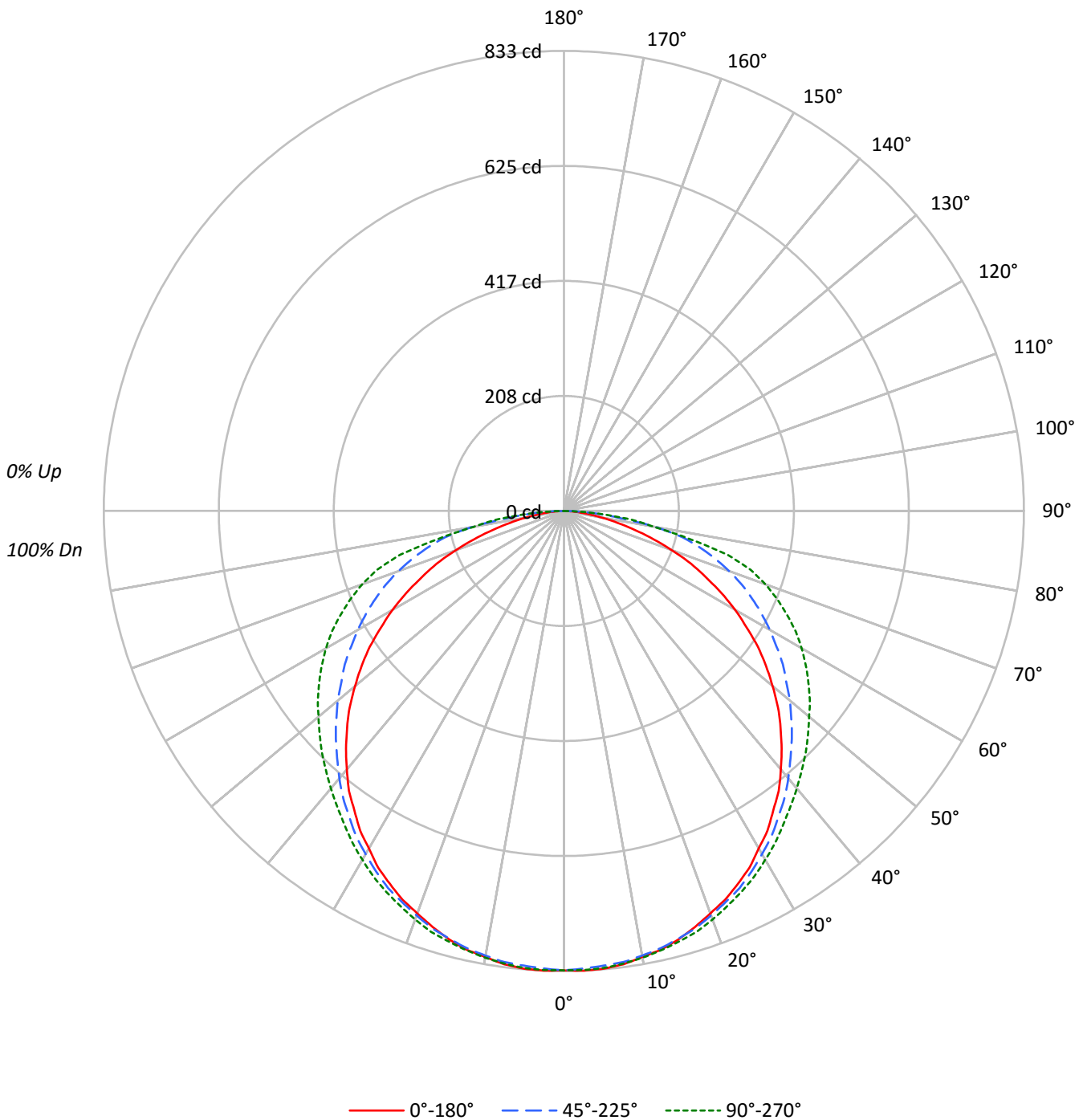
Input Watts (W): 31.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1119	1119	1119
5°	1123	1116	1122
10°	1120	1117	1122
15°	1118	1117	1124
20°	1110	1116	1127
25°	1106	1118	1130
30°	1097	1115	1133
35°	1086	1112	1138
40°	1074	1111	1152
45°	1056	1111	1178
50°	1033	1118	1214
55°	1006	1136	1268
60°	964	1158	1338
65°	902	1199	1420
70°	821	1254	1528
75°	696	1323	1596
80°	549	1332	1291
85°	404	1013	1135



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.9	3.0
10°-20°	227.1	8.6
20°-30°	347.3	13.1
30°-40°	424.5	16.0
40°-50°	452.4	17.1
50°-60°	432.6	16.4
60°-70°	366.5	13.9
70°-80°	246.3	9.3
80°-90°	69.5	2.6
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°	653.2	24.7
0°-40°	1077.7	40.7
0°-60°	1962.8	74.2
0°-90°	2645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2645.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	832	832	832	832	832	
5°	832	830	826	830	830	79
15°	803	803	802	808	807	226
25°	745	748	753	760	761	343
35°	661	666	677	690	693	414
45°	555	564	584	609	619	428
55°	429	445	484	522	540	382
65°	283	312	376	426	446	281
75°	134	182	254	298	307	143
85°	26	54	66	71	74	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	831.8	831.8	831.8	831.8	831.8
2.5°	833.1	833.1	829.2	831.8	831.8
5°	831.8	830.5	826.5	830.5	830.5
7.5°	827.8	826.5	823.9	827.8	826.5
10°	820.0	820.0	817.3	821.3	821.3
12.5°	813.4	812.1	810.8	816.0	814.7
15°	802.9	802.9	801.6	808.2	806.8
17.5°	789.8	791.1	792.4	797.7	799.0
20°	775.4	778.0	779.3	787.2	787.2
22.5°	762.2	763.6	766.2	774.1	774.1
25°	745.2	747.8	753.1	759.6	760.9
27.5°	728.1	729.4	736.0	745.2	746.5
30°	705.8	709.8	717.6	728.1	729.4
32.5°	686.2	690.1	699.3	709.8	712.4
35°	661.2	666.5	677.0	690.1	692.7
37.5°	638.9	642.9	656.0	670.4	674.3
40°	611.4	619.2	632.4	649.4	656.0
42.5°	583.8	591.7	607.4	629.7	637.6
45°	555.0	564.1	583.8	608.7	619.2
47.5°	526.1	536.6	558.9	587.8	599.6
50°	493.3	506.4	534.0	566.8	579.9
52.5°	461.8	477.6	507.7	544.5	561.5
55°	429.0	444.8	484.1	522.2	540.5
57.5°	392.3	413.3	456.6	499.9	519.5
60°	358.2	377.8	430.3	477.6	497.2
62.5°	321.4	347.7	404.1	453.9	473.6
65°	283.4	312.2	376.5	426.4	446.1
67.5°	249.3	280.8	349.0	398.8	418.5
70°	208.6	248.0	318.8	368.7	388.3
72.5°	170.6	213.8	287.3	335.9	354.2
75°	133.8	182.4	254.5	297.8	307.0
77.5°	99.7	150.9	220.4	238.8	232.2
80°	70.8	120.7	171.9	162.7	166.6
82.5°	45.9	91.8	106.3	120.7	124.6
85°	26.2	53.8	65.6	70.8	73.5
87.5°	11.8	19.7	26.2	26.2	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)