

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: P313620

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-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: P313620  
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: 24FCZ2-50HE-UNV-L83050-RDP-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET  
Light Source: (336) 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: 2910.0 lumens  
Efficiency: N/A  
Efficacy: 76.0 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

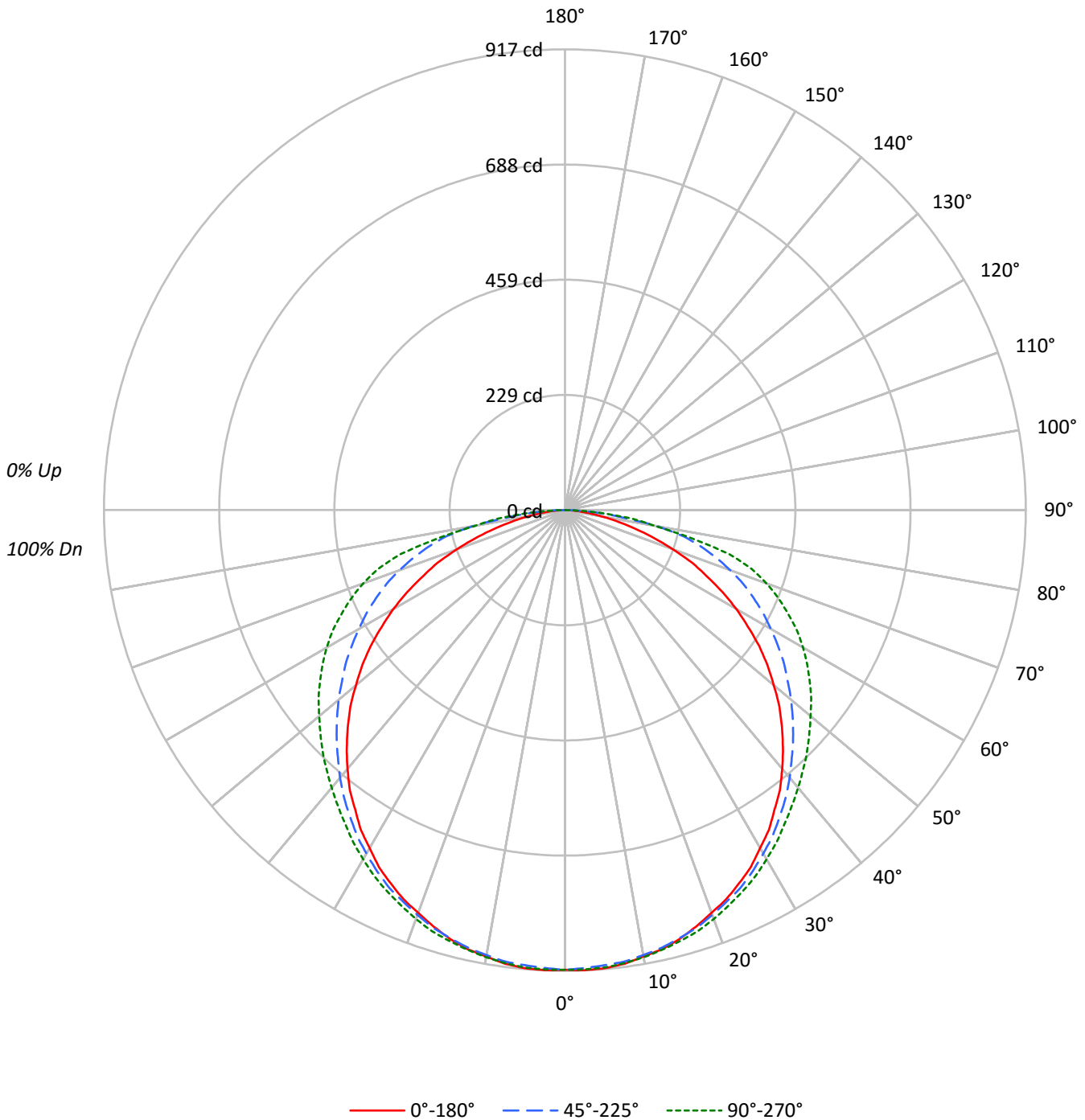
Input Watts (W): 38.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1231	1231	1231
5°	1236	1228	1234
10°	1232	1229	1235
15°	1231	1228	1237
20°	1221	1228	1240
25°	1217	1230	1243
30°	1206	1227	1247
35°	1195	1223	1252
40°	1181	1222	1268
45°	1162	1222	1296
50°	1136	1230	1335
55°	1107	1249	1395
60°	1060	1274	1472
65°	993	1319	1563
70°	903	1380	1681
75°	765	1456	1756
80°	604	1465	1420
85°	446	1115	1247



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.8	3.0
10°-20°	249.8	8.6
20°-30°	382.0	13.1
30°-40°	467.0	16.0
40°-50°	497.8	17.1
50°-60°	475.9	16.4
60°-70°	403.2	13.9
70°-80°	271.0	9.3
80°-90°	76.4	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°	718.7	24.7
0°-40°	1185.7	40.7
0°-60°	2159.4	74.2
0°-90°	2910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2910.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	915	914	909	914	914	87
15°	883	883	882	889	888	249
25°	820	823	828	836	837	378
35°	728	733	745	759	762	456
45°	611	621	642	670	681	471
55°	472	489	533	574	595	420
65°	312	344	414	469	491	310
75°	147	201	280	328	338	158
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	915.1	915.1	915.1	915.1	915.1
2.5°	916.6	916.6	912.2	915.1	915.1
5°	915.1	913.7	909.3	913.7	913.7
7.5°	910.8	909.3	906.5	910.8	909.3
10°	902.1	902.1	899.2	903.6	903.6
12.5°	894.9	893.5	892.0	897.8	896.3
15°	883.4	883.4	881.9	889.1	887.7
17.5°	868.9	870.4	871.8	877.6	879.0
20°	853.0	855.9	857.4	866.0	866.0
22.5°	838.6	840.1	842.9	851.6	851.6
25°	819.8	822.7	828.5	835.7	837.2
27.5°	801.1	802.5	809.7	819.8	821.3
30°	776.5	780.9	789.5	801.1	802.5
32.5°	754.9	759.2	769.3	780.9	783.8
35°	727.5	733.2	744.8	759.2	762.1
37.5°	702.9	707.3	721.7	737.6	741.9
40°	672.6	681.3	695.7	714.5	721.7
42.5°	642.3	651.0	668.3	692.8	701.5
45°	610.6	620.7	642.3	669.7	681.3
47.5°	578.8	590.3	614.9	646.6	659.6
50°	542.7	557.2	587.5	623.5	638.0
52.5°	508.1	525.4	558.6	599.0	617.8
55°	472.0	489.3	532.6	574.5	594.7
57.5°	431.6	454.7	502.3	549.9	571.6
60°	394.0	415.7	473.4	525.4	547.0
62.5°	353.6	382.5	444.6	499.4	521.1
65°	311.8	343.5	414.3	469.1	490.8
67.5°	274.2	308.9	383.9	438.8	460.4
70°	229.5	272.8	350.7	405.6	427.2
72.5°	187.6	235.3	316.1	369.5	389.7
75°	147.2	200.6	280.0	327.7	337.8
77.5°	109.7	166.0	242.5	262.7	255.5
80°	77.9	132.8	189.1	179.0	183.3
82.5°	50.5	101.0	116.9	132.8	137.1
85°	28.9	59.2	72.2	77.9	80.8
87.5°	13.0	21.7	28.9	28.9	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)