

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: P313616

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-CA08-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: P313616  
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-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 3500K 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**

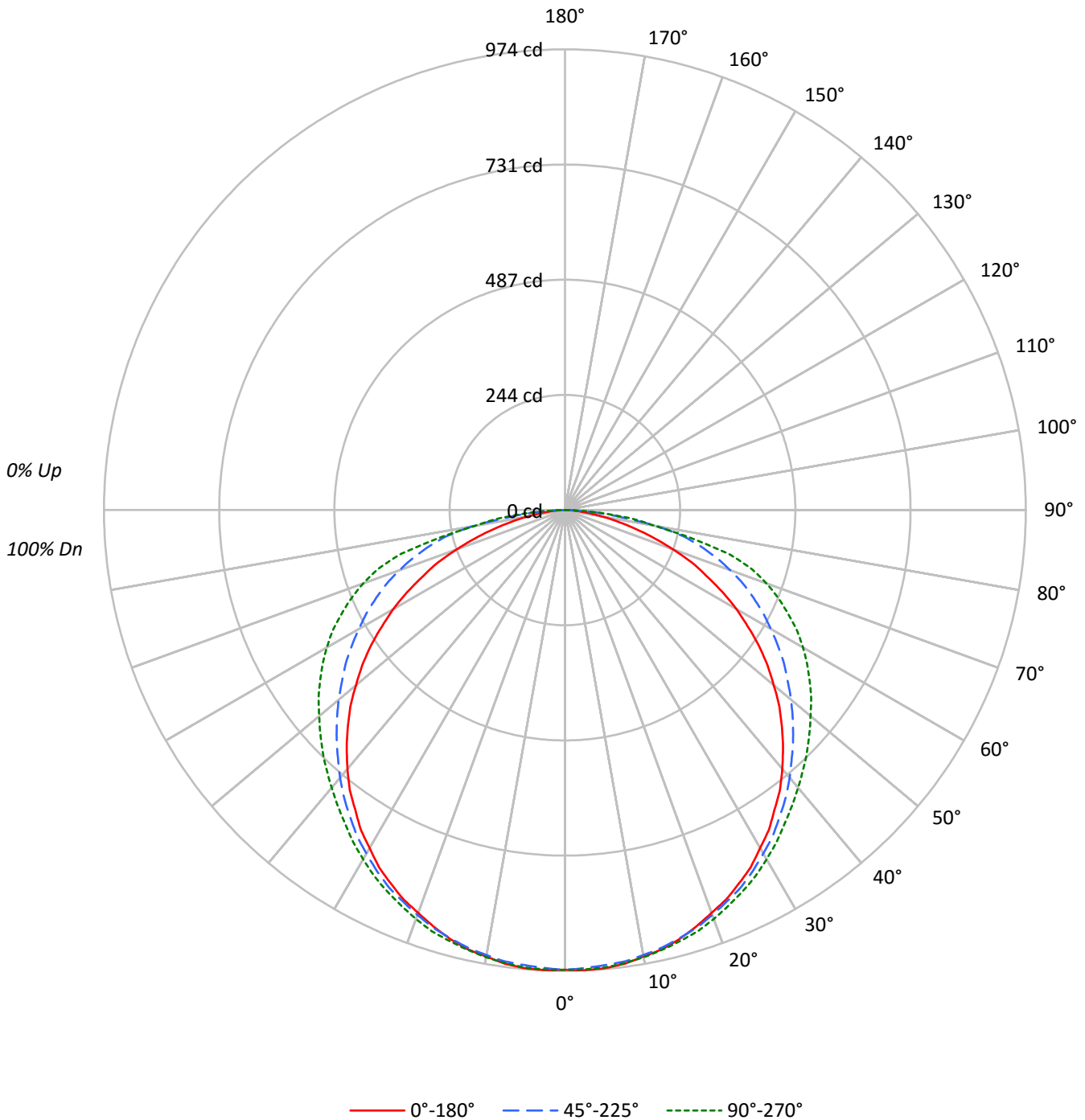
Lumens per Lamp: N/A  
Luminaire Lumens: 3091.0 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1308	1308	1308
5°	1313	1305	1311
10°	1309	1305	1311
15°	1307	1305	1313
20°	1297	1304	1317
25°	1293	1306	1320
30°	1281	1303	1324
35°	1269	1299	1330
40°	1255	1298	1346
45°	1234	1298	1377
50°	1207	1306	1419
55°	1176	1327	1482
60°	1126	1353	1564
65°	1054	1401	1660
70°	959	1466	1785
75°	813	1546	1865
80°	642	1556	1509
85°	474	1184	1326



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.2	3.0
10°-20°	265.4	8.6
20°-30°	405.8	13.1
30°-40°	496.1	16.0
40°-50°	528.7	17.1
50°-60°	505.5	16.4
60°-70°	428.3	13.9
70°-80°	287.8	9.3
80°-90°	81.2	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°	763.4	24.7
0°-40°	1259.5	40.7
0°-60°	2293.7	74.2
0°-90°	3091.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3091.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	972	972	972	972	972	
5°	972	970	966	970	970	92
15°	938	938	937	944	943	265
25°	871	874	880	888	889	401
35°	773	779	791	806	810	484
45°	648	659	682	711	724	500
55°	501	520	566	610	632	447
65°	331	365	440	498	521	329
75°	156	213	297	348	359	167
85°	31	63	77	83	86	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	972.0	972.0	972.0	972.0	972.0
2.5°	973.6	973.6	969.0	972.0	972.0
5°	972.0	970.5	965.9	970.5	970.5
7.5°	967.4	965.9	962.8	967.4	965.9
10°	958.2	958.2	955.2	959.8	959.8
12.5°	950.6	949.0	947.5	953.6	952.1
15°	938.3	938.3	936.8	944.4	942.9
17.5°	923.0	924.5	926.0	932.2	933.7
20°	906.1	909.2	910.7	919.9	919.9
22.5°	890.8	892.3	895.4	904.6	904.6
25°	870.8	873.9	880.0	887.7	889.2
27.5°	850.9	852.4	860.1	870.8	872.4
30°	824.8	829.4	838.6	850.9	852.4
32.5°	801.8	806.4	817.2	829.4	832.5
35°	772.7	778.9	791.1	806.4	809.5
37.5°	746.7	751.3	766.6	783.5	788.1
40°	714.5	723.7	739.0	758.9	766.6
42.5°	682.3	691.5	709.9	735.9	745.1
45°	648.5	659.3	682.3	711.4	723.7
47.5°	614.8	627.1	653.1	686.9	700.7
50°	576.5	591.8	624.0	662.3	677.7
52.5°	539.7	558.1	593.3	636.3	656.2
55°	501.3	519.7	565.7	610.2	631.7
57.5°	458.4	482.9	533.5	584.1	607.1
60°	418.6	441.6	502.9	558.1	581.1
62.5°	375.6	406.3	472.2	530.5	553.5
65°	331.2	364.9	440.0	498.3	521.3
67.5°	291.3	328.1	407.8	466.1	489.1
70°	243.8	289.8	372.6	430.8	453.8
72.5°	199.3	249.9	335.8	392.5	414.0
75°	156.4	213.1	297.4	348.0	358.8
77.5°	116.5	176.3	257.6	279.0	271.4
80°	82.8	141.1	200.8	190.1	194.7
82.5°	53.7	107.3	124.2	141.1	145.7
85°	30.7	62.9	76.7	82.8	85.9
87.5°	13.8	23.0	30.7	30.7	29.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)