

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: P309576

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP187-W2A-U-4500K**

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: P309576  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-50-UNV-L82765-HRP-CP187-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (168) 4500K 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**

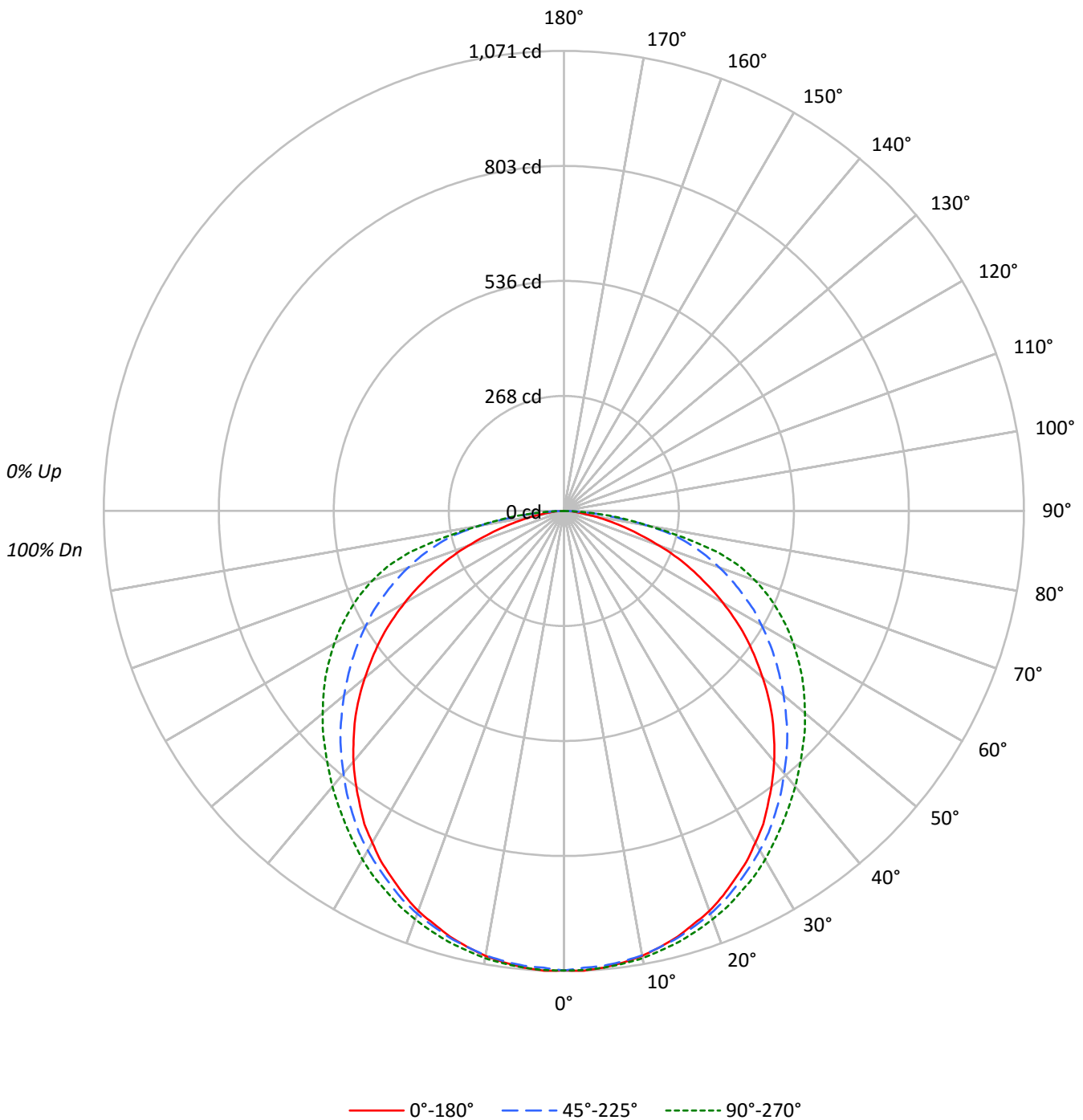
Lumens per Lamp: N/A  
Luminaire Lumens: 3297.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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

	0°	45°	90°
0°	1439	1439	1439
5°	1441	1435	1441
10°	1437	1435	1445
15°	1428	1432	1446
20°	1419	1429	1449
25°	1402	1422	1451
30°	1385	1418	1456
35°	1362	1410	1458
40°	1338	1401	1472
45°	1308	1400	1494
50°	1266	1398	1534
55°	1221	1408	1590
60°	1151	1430	1660
65°	1063	1463	1753
70°	928	1515	1868
75°	753	1593	1930
80°	556	1561	1561
85°	426	1150	1300



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.3	3.1
10°-20°	291.0	8.8
20°-30°	443.0	13.4
30°-40°	537.9	16.3
40°-50°	568.3	17.2
50°-60°	536.2	16.3
60°-70°	445.9	13.5
70°-80°	293.3	8.9
80°-90°	80.0	2.4
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°	835.3	25.3
0°-40°	1373.3	41.7
0°-60°	2477.8	75.2
0°-90°	3297.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3297.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1067	1067	1063	1067	1067	101
15°	1026	1027	1028	1038	1038	289
25°	944	950	958	974	977	436
35°	830	839	858	881	888	519
45°	687	701	736	772	785	529
55°	520	542	600	657	678	464
65°	334	373	460	527	551	330
75°	145	211	306	363	371	156
85°	28	61	74	83	84	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1069.7	1069.7	1069.7	1069.7	1069.7
2.5°	1071.1	1069.7	1064.2	1069.7	1069.7
5°	1067.0	1067.0	1062.8	1067.0	1067.0
7.5°	1060.1	1060.1	1057.3	1062.8	1062.8
10°	1051.8	1051.8	1050.4	1057.3	1057.3
12.5°	1039.3	1040.7	1039.3	1047.6	1047.6
15°	1025.5	1026.9	1028.3	1038.0	1038.0
17.5°	1007.6	1010.4	1013.1	1024.2	1025.5
20°	991.0	992.4	997.9	1010.4	1011.7
22.5°	969.0	973.1	980.0	992.4	996.6
25°	944.1	949.6	957.9	974.5	977.2
27.5°	920.6	924.8	935.8	953.8	959.3
30°	891.7	898.6	912.4	930.3	937.2
32.5°	864.1	871.0	887.5	906.8	912.4
35°	829.5	839.2	858.5	880.6	887.5
37.5°	796.4	806.1	829.5	854.4	862.7
40°	761.9	773.0	797.8	826.8	837.8
42.5°	724.6	739.8	767.4	799.2	811.6
45°	687.4	701.2	735.7	771.6	785.4
47.5°	647.3	663.9	701.2	744.0	760.5
50°	604.6	625.3	668.1	715.0	732.9
52.5°	561.8	585.2	633.5	686.0	705.3
55°	520.4	542.4	600.4	657.0	677.7
57.5°	474.8	502.4	565.9	626.6	647.3
60°	427.9	458.3	531.4	594.9	617.0
62.5°	381.0	415.5	498.3	561.8	585.2
65°	334.0	372.7	459.6	527.3	550.7
67.5°	288.5	331.3	423.7	491.4	514.8
70°	236.0	289.9	385.1	451.4	474.8
72.5°	187.7	249.8	347.8	409.9	430.6
75°	144.9	211.2	306.4	363.0	371.3
77.5°	106.3	172.5	263.6	283.0	284.3
80°	71.8	138.0	201.5	198.8	201.5
82.5°	46.9	103.5	127.0	142.2	143.5
85°	27.6	60.7	74.5	82.8	84.2
87.5°	13.8	20.7	26.2	27.6	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)