

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: P310179

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CA08-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: P310179  
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-L82765-RDP-CA08-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 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: 3140.0 lumens  
Efficiency: N/A  
Efficacy: 80.3 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

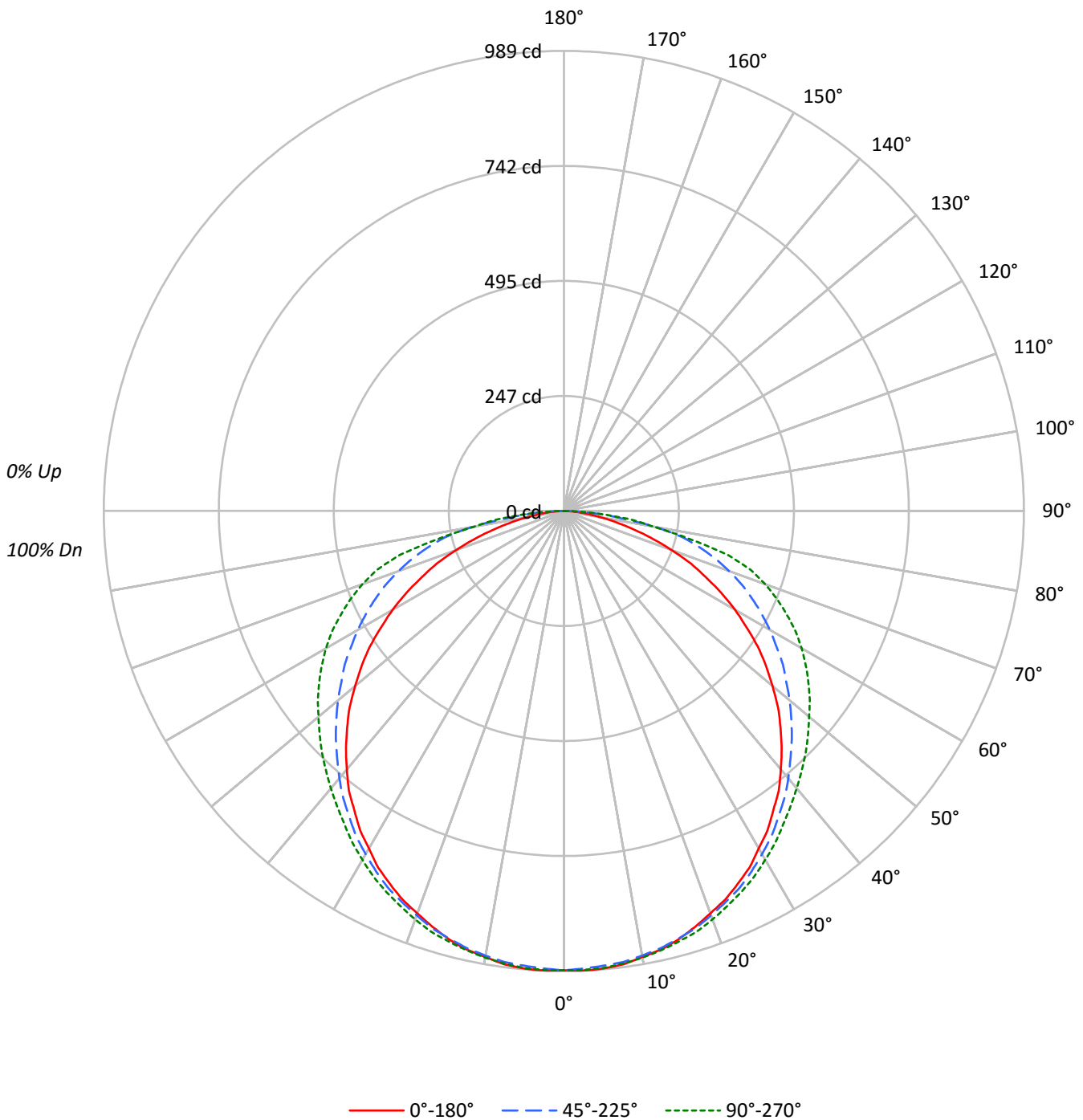
Input Watts (W): 39.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1329	1329	1329
5°	1334	1325	1332
10°	1330	1326	1332
15°	1328	1326	1334
20°	1318	1325	1338
25°	1313	1327	1341
30°	1302	1324	1345
35°	1289	1320	1351
40°	1275	1319	1368
45°	1254	1319	1399
50°	1226	1327	1441
55°	1195	1348	1505
60°	1144	1375	1588
65°	1071	1423	1686
70°	974	1489	1814
75°	826	1571	1894
80°	652	1581	1533
85°	480	1203	1346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	3.0
10°-20°	269.6	8.6
20°-30°	412.2	13.1
30°-40°	504.0	16.0
40°-50°	537.1	17.1
50°-60°	513.6	16.4
60°-70°	435.0	13.9
70°-80°	292.4	9.3
80°-90°	82.5	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°	775.5	24.7
0°-40°	1279.4	40.7
0°-60°	2330.1	74.2
0°-90°	3140.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3140.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	987	987	987	987	987	
5°	987	986	981	986	986	94
15°	953	953	952	959	958	269
25°	885	888	894	902	903	408
35°	785	791	804	819	822	492
45°	659	670	693	723	735	508
55°	509	528	575	620	642	454
65°	336	371	447	506	530	334
75°	159	216	302	354	364	170
85°	31	64	78	84	87	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	987.4	987.4	987.4	987.4	987.4
2.5°	989.0	989.0	984.3	987.4	987.4
5°	987.4	985.9	981.2	985.9	985.9
7.5°	982.8	981.2	978.1	982.8	981.2
10°	973.4	973.4	970.3	975.0	975.0
12.5°	965.6	964.1	962.5	968.8	967.2
15°	953.2	953.2	951.6	959.4	957.8
17.5°	937.6	939.2	940.7	946.9	948.5
20°	920.5	923.6	925.1	934.5	934.5
22.5°	904.9	906.5	909.6	918.9	918.9
25°	884.6	887.8	894.0	901.8	903.3
27.5°	864.4	866.0	873.7	884.6	886.2
30°	837.9	842.6	851.9	864.4	866.0
32.5°	814.6	819.2	830.1	842.6	845.7
35°	785.0	791.2	803.7	819.2	822.3
37.5°	758.5	763.2	778.7	795.9	800.5
40°	725.8	735.1	750.7	771.0	778.7
42.5°	693.1	702.4	721.1	747.6	756.9
45°	658.8	669.7	693.1	722.7	735.1
47.5°	624.5	637.0	663.5	697.7	711.8
50°	585.6	601.2	633.9	672.8	688.4
52.5°	548.2	566.9	602.7	646.4	666.6
55°	509.3	528.0	574.7	619.9	641.7
57.5°	465.7	490.6	542.0	593.4	616.8
60°	425.2	448.6	510.9	566.9	590.3
62.5°	381.6	412.7	479.7	538.9	562.2
65°	336.4	370.7	447.0	506.2	529.5
67.5°	295.9	333.3	414.3	473.5	496.8
70°	247.6	294.4	378.5	437.7	461.0
72.5°	202.5	253.9	341.1	398.7	420.5
75°	158.9	216.5	302.2	353.5	364.4
77.5°	118.4	179.1	261.7	283.5	275.7
80°	84.1	143.3	204.0	193.1	197.8
82.5°	54.5	109.0	126.2	143.3	148.0
85°	31.1	63.9	77.9	84.1	87.2
87.5°	14.0	23.4	31.1	31.1	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)