

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: P310215

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP250-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: P310215  
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-CP250-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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**

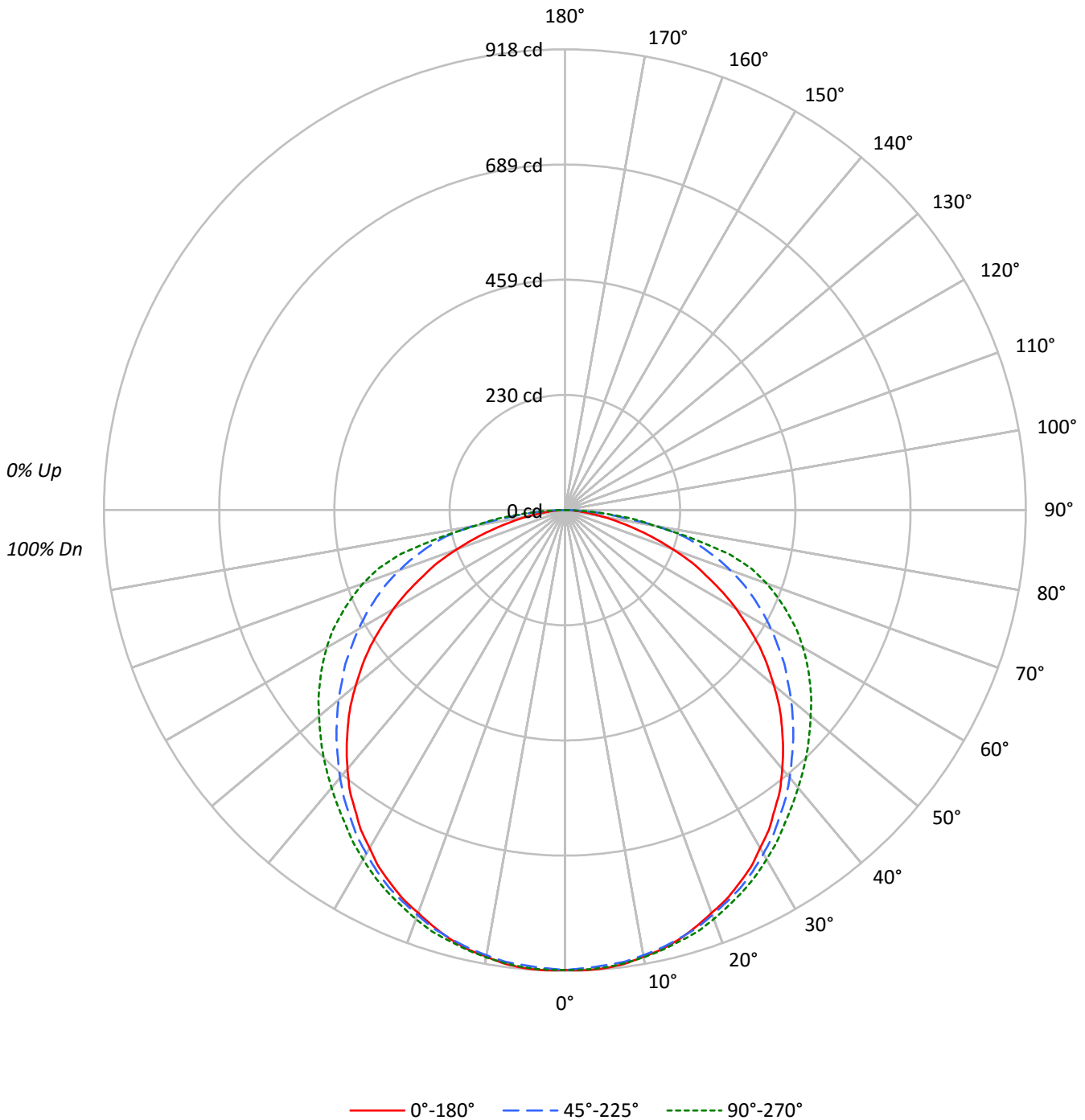
Lumens per Lamp: N/A  
Luminaire Lumens: 2914.0 lumens  
Efficiency: N/A  
Efficacy: 74.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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°	1233	1233	1233
5°	1238	1230	1236
10°	1234	1230	1236
15°	1232	1230	1238
20°	1223	1229	1242
25°	1219	1232	1245
30°	1208	1228	1249
35°	1197	1225	1254
40°	1183	1224	1269
45°	1163	1224	1298
50°	1138	1231	1337
55°	1109	1251	1397
60°	1062	1276	1474
65°	994	1321	1564
70°	904	1382	1683
75°	766	1458	1758
80°	605	1467	1423
85°	446	1116	1249



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.9	3.0
10°-20°	250.2	8.6
20°-30°	382.6	13.1
30°-40°	467.7	16.0
40°-50°	498.5	17.1
50°-60°	476.6	16.4
60°-70°	403.7	13.9
70°-80°	271.3	9.3
80°-90°	76.6	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°	719.7	24.7
0°-40°	1187.4	40.7
0°-60°	2162.4	74.2
0°-90°	2914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2914.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	916	915	911	915	915	87
15°	885	885	883	890	889	249
25°	821	824	830	837	838	378
35°	728	734	746	760	763	456
45°	611	622	643	671	682	472
55°	473	490	533	575	596	421
65°	312	344	415	470	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°	916.4	916.4	916.4	916.4	916.4
2.5°	917.8	917.8	913.5	916.4	916.4
5°	916.4	914.9	910.6	914.9	914.9
7.5°	912.0	910.6	907.7	912.0	910.6
10°	903.4	903.4	900.5	904.8	904.8
12.5°	896.1	894.7	893.2	899.0	897.6
15°	884.6	884.6	883.1	890.4	888.9
17.5°	870.1	871.6	873.0	878.8	880.2
20°	854.2	857.1	858.6	867.2	867.2
22.5°	839.8	841.2	844.1	852.8	852.8
25°	821.0	823.9	829.6	836.9	838.3
27.5°	802.2	803.6	810.9	821.0	822.4
30°	777.6	781.9	790.6	802.2	803.6
32.5°	755.9	760.3	770.4	781.9	784.8
35°	728.5	734.3	745.8	760.3	763.2
37.5°	703.9	708.2	722.7	738.6	742.9
40°	673.5	682.2	696.7	715.5	722.7
42.5°	643.2	651.9	669.2	693.8	702.5
45°	611.4	621.5	643.2	670.7	682.2
47.5°	579.6	591.2	615.7	647.5	660.5
50°	543.5	557.9	588.3	624.4	638.9
52.5°	508.8	526.1	559.4	599.8	618.6
55°	472.6	490.0	533.3	575.3	595.5
57.5°	432.2	455.3	503.0	550.7	572.4
60°	394.6	416.3	474.1	526.1	547.8
62.5°	354.1	383.0	445.2	500.1	521.8
65°	312.2	344.0	414.8	469.7	491.4
67.5°	274.6	309.3	384.5	439.4	461.1
70°	229.8	273.2	351.2	406.2	427.8
72.5°	187.9	235.6	316.5	370.0	390.3
75°	147.4	200.9	280.4	328.1	338.2
77.5°	109.8	166.2	242.8	263.1	255.8
80°	78.1	133.0	189.3	179.2	183.6
82.5°	50.6	101.2	117.1	133.0	137.3
85°	28.9	59.3	72.3	78.1	80.9
87.5°	13.0	21.7	28.9	28.9	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)