

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: P310031

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P310031  
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: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (336) 2700K 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**

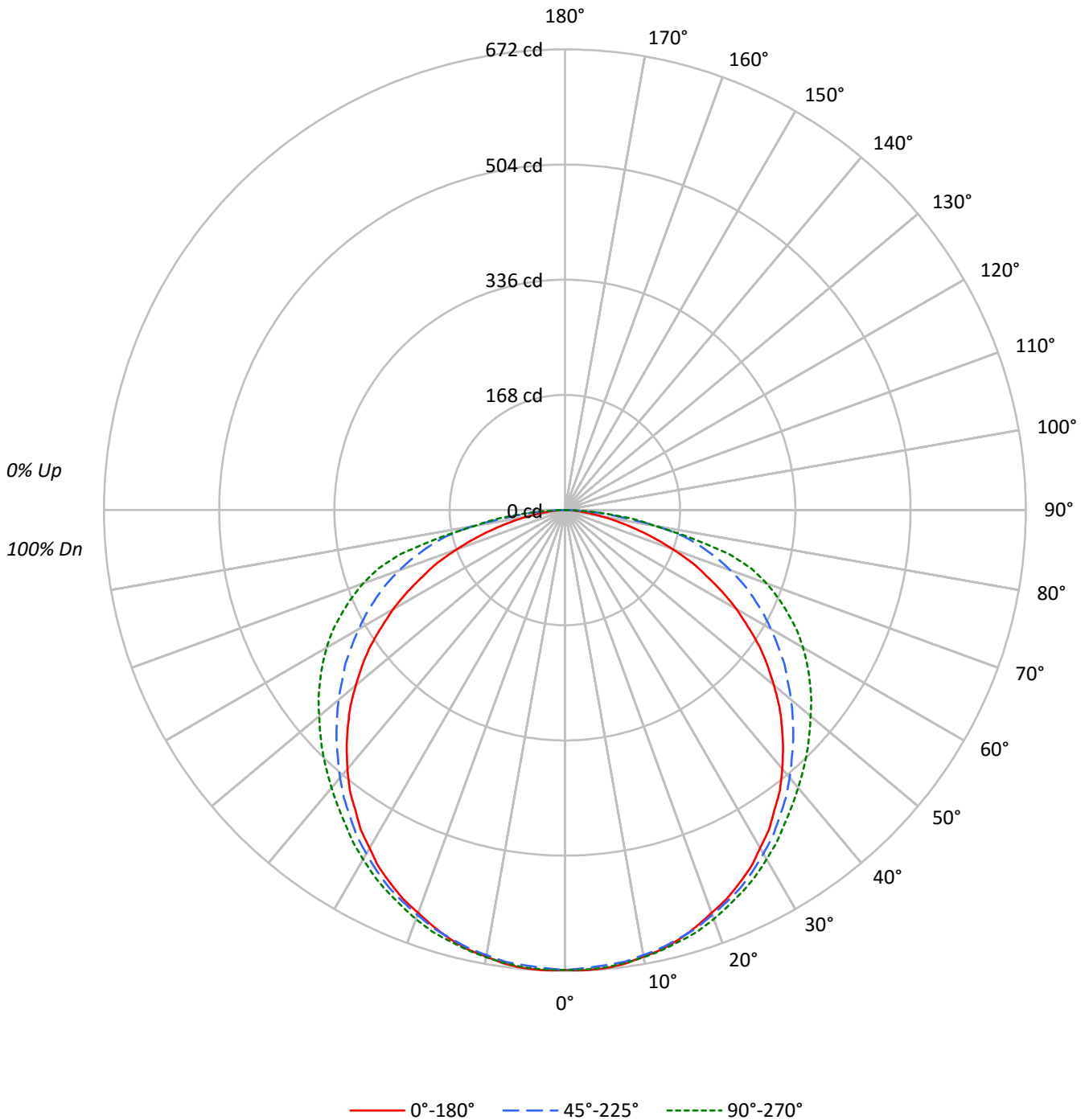
Lumens per Lamp: N/A  
Luminaire Lumens: 2133.0 lumens  
Efficiency: N/A  
Efficacy: 70.2 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	903	903	903
5°	906	900	905
10°	903	900	905
15°	902	900	906
20°	895	900	909
25°	892	902	911
30°	884	899	914
35°	876	897	918
40°	866	896	929
45°	852	896	950
50°	833	901	979
55°	812	916	1023
60°	777	934	1079
65°	727	967	1145
70°	662	1011	1232
75°	561	1067	1287
80°	442	1074	1041
85°	327	817	914



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.6	3.0
10°-20°	183.1	8.6
20°-30°	280.0	13.1
30°-40°	342.3	16.0
40°-50°	364.9	17.1
50°-60°	348.9	16.4
60°-70°	295.5	13.9
70°-80°	198.6	9.3
80°-90°	56.0	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°	526.8	24.7
0°-40°	869.1	40.7
0°-60°	1582.8	74.2
0°-90°	2133.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2133.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	671	671	671	671	671	
5°	671	670	666	670	670	64
15°	648	648	646	652	651	183
25°	601	603	607	613	614	277
35°	533	538	546	556	559	334
45°	448	455	471	491	499	345
55°	346	359	390	421	436	308
65°	228	252	304	344	360	227
75°	108	147	205	240	248	116
85°	21	43	53	57	59	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	670.8	670.8	670.8	670.8	670.8
2.5°	671.8	671.8	668.7	670.8	670.8
5°	670.8	669.7	666.5	669.7	669.7
7.5°	667.6	666.5	664.4	667.6	666.5
10°	661.2	661.2	659.1	662.3	662.3
12.5°	656.0	654.9	653.8	658.1	657.0
15°	647.5	647.5	646.4	651.7	650.7
17.5°	636.9	638.0	639.0	643.3	644.3
20°	625.3	627.4	628.4	634.8	634.8
22.5°	614.7	615.8	617.9	624.2	624.2
25°	600.9	603.1	607.3	612.6	613.6
27.5°	587.2	588.2	593.5	600.9	602.0
30°	569.2	572.4	578.7	587.2	588.2
32.5°	553.3	556.5	563.9	572.4	574.5
35°	533.2	537.5	545.9	556.5	558.6
37.5°	515.2	518.4	529.0	540.6	543.8
40°	493.0	499.4	510.0	523.7	529.0
42.5°	470.8	477.2	489.9	507.8	514.2
45°	447.5	454.9	470.8	490.9	499.4
47.5°	424.3	432.7	450.7	474.0	483.5
50°	397.8	408.4	430.6	457.1	467.6
52.5°	372.4	385.1	409.4	439.1	452.8
55°	346.0	358.7	390.4	421.1	435.9
57.5°	316.3	333.3	368.2	403.1	419.0
60°	288.8	304.7	347.0	385.1	401.0
62.5°	259.2	280.4	325.9	366.1	381.9
65°	228.5	251.8	303.6	343.8	359.7
67.5°	201.0	226.4	281.4	321.6	337.5
70°	168.2	200.0	257.1	297.3	313.2
72.5°	137.5	172.5	231.7	270.8	285.7
75°	107.9	147.1	205.3	240.2	247.6
77.5°	80.4	121.7	177.7	192.6	187.3
80°	57.1	97.3	138.6	131.2	134.4
82.5°	37.0	74.1	85.7	97.3	100.5
85°	21.2	43.4	52.9	57.1	59.2
87.5°	9.5	15.9	21.2	21.2	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)