

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: P313538

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-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: P313538  
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-L83050-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**

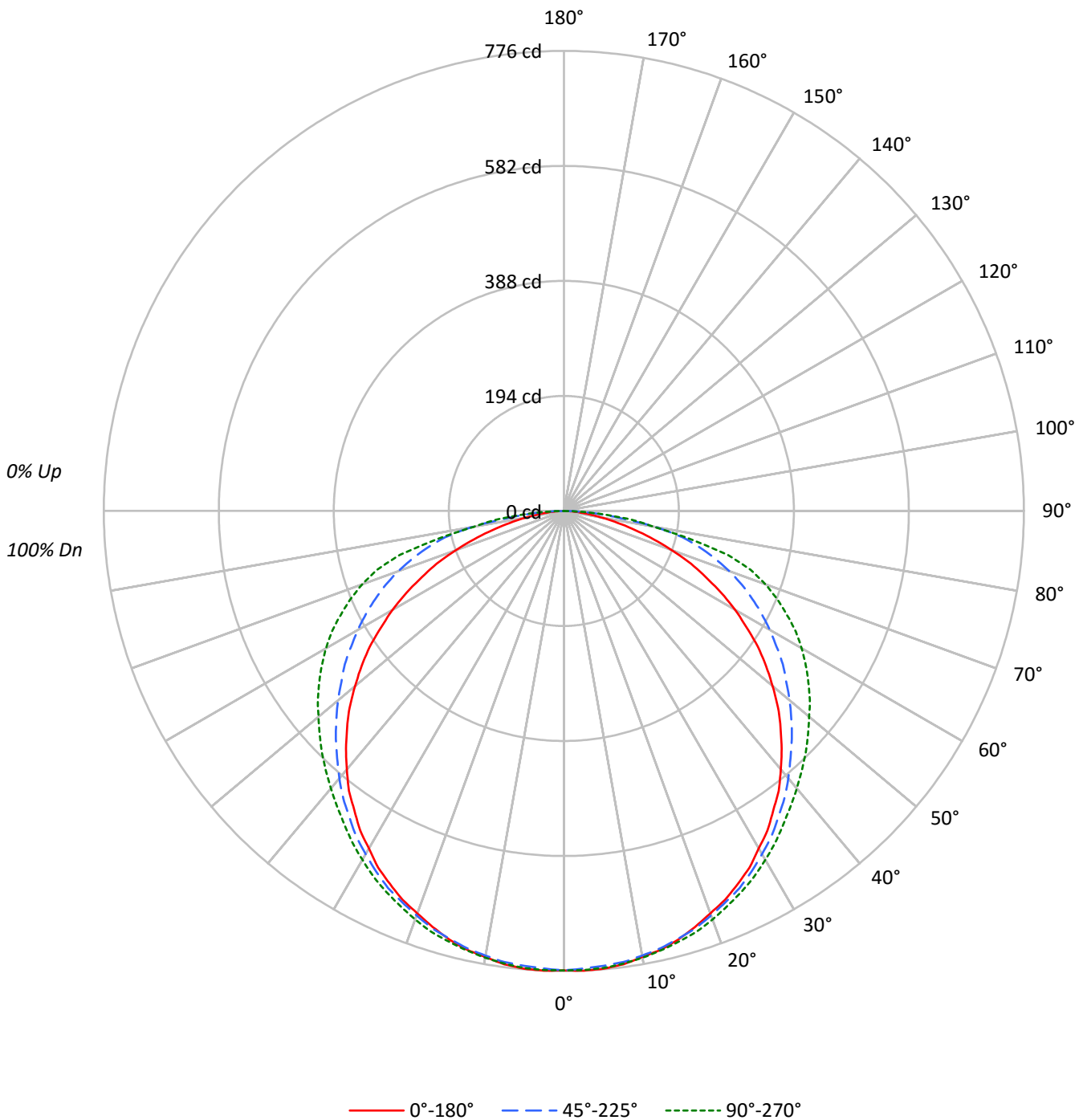
Lumens per Lamp: N/A  
Luminaire Lumens: 2464.0 lumens  
Efficiency: N/A  
Efficacy: 77.2 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
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



TEST NUMBER: P313538

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-RDP-CP250-W2A-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P313538

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-RDP-CP250-W2A-U-4500K

**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	68	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°	1043	1043	1043
5°	1047	1040	1045
10°	1044	1040	1045
15°	1042	1040	1047
20°	1034	1040	1050
25°	1031	1041	1052
30°	1022	1039	1056
35°	1012	1036	1060
40°	1000	1035	1073
45°	984	1035	1098
50°	962	1041	1131
55°	938	1058	1181
60°	898	1079	1246
65°	840	1117	1323
70°	764	1168	1423
75°	648	1233	1487
80°	511	1241	1203
85°	377	943	1056



TEST NUMBER: P313538

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-RDP-CP250-W2A-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.5	3.0
10°-20°	211.5	8.6
20°-30°	323.5	13.1
30°-40°	395.5	16.0
40°-50°	421.5	17.1
50°-60°	403.0	16.4
60°-70°	341.4	13.9
70°-80°	229.4	9.3
80°-90°	64.7	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°	608.5	24.7
0°-40°	1004.0	40.7
0°-60°	1828.5	74.2
0°-90°	2464.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2464.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	775	775	775	775	775	
5°	775	774	770	774	774	74
15°	748	748	747	753	752	211
25°	694	697	702	708	709	320
35°	616	621	631	643	645	386
45°	517	526	544	567	577	399
55°	400	414	451	486	504	356
65°	264	291	351	397	416	262
75°	125	170	237	277	286	133
85°	24	50	61	66	68	30
90°	0	0	0	0	0	



TEST NUMBER: P313538

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-RDP-CP250-W2A-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	774.9	774.9	774.9	774.9	774.9
2.5°	776.1	776.1	772.4	774.9	774.9
5°	774.9	773.6	770.0	773.6	773.6
7.5°	771.2	770.0	767.5	771.2	770.0
10°	763.9	763.9	761.4	765.1	765.1
12.5°	757.7	756.5	755.3	760.2	759.0
15°	748.0	748.0	746.7	752.9	751.6
17.5°	735.7	737.0	738.2	743.1	744.3
20°	722.3	724.7	726.0	733.3	733.3
22.5°	710.1	711.3	713.7	721.1	721.1
25°	694.2	696.6	701.5	707.6	708.9
27.5°	678.3	679.5	685.6	694.2	695.4
30°	657.5	661.2	668.5	678.3	679.5
32.5°	639.2	642.9	651.4	661.2	663.6
35°	616.0	620.9	630.6	642.9	645.3
37.5°	595.2	598.9	611.1	624.5	628.2
40°	569.5	576.9	589.1	605.0	611.1
42.5°	543.9	551.2	565.9	586.6	594.0
45°	517.0	525.5	543.9	567.1	576.9
47.5°	490.1	499.9	520.6	547.5	558.5
50°	459.5	471.8	497.4	528.0	540.2
52.5°	430.2	444.9	473.0	507.2	523.1
55°	399.7	414.3	451.0	486.4	503.5
57.5°	365.4	385.0	425.3	465.6	484.0
60°	333.7	352.0	400.9	444.9	463.2
62.5°	299.4	323.9	376.4	422.9	441.2
65°	264.0	290.9	350.8	397.2	415.5
67.5°	232.2	261.5	325.1	371.5	389.9
70°	194.3	231.0	297.0	343.4	361.8
72.5°	158.9	199.2	267.7	312.9	330.0
75°	124.7	169.9	237.1	277.4	286.0
77.5°	92.9	140.5	205.3	222.4	216.3
80°	66.0	112.4	160.1	151.5	155.2
82.5°	42.8	85.6	99.0	112.4	116.1
85°	24.4	50.1	61.1	66.0	68.4
87.5°	11.0	18.3	24.4	24.4	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)