

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: P313635

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-CP250-W2A-U-3000K**

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: P313635  
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-L83050-RDP-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (336) 3000K 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: 2710.0 lumens  
Efficiency: N/A  
Efficacy: 70.8 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

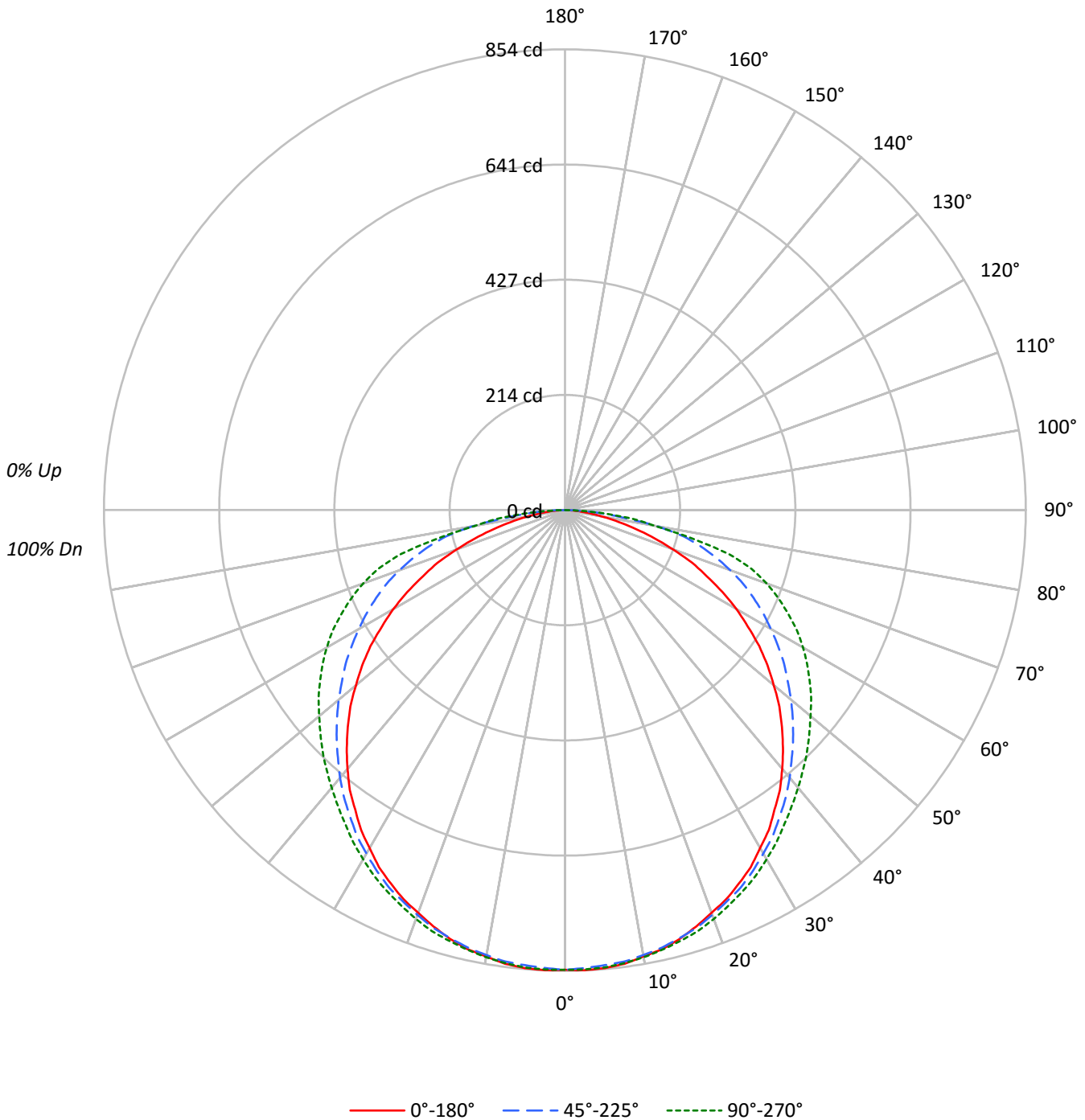
Input Watts (W): 38.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1147	1147	1147
5°	1151	1144	1149
10°	1148	1144	1150
15°	1146	1144	1152
20°	1137	1143	1155
25°	1133	1146	1157
30°	1124	1142	1161
35°	1113	1139	1166
40°	1100	1138	1180
45°	1082	1138	1207
50°	1058	1145	1244
55°	1031	1164	1299
60°	988	1186	1371
65°	924	1228	1455
70°	841	1285	1565
75°	713	1356	1635
80°	563	1364	1323
85°	415	1037	1162



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.8	3.0
10°-20°	232.7	8.6
20°-30°	355.8	13.1
30°-40°	434.9	16.0
40°-50°	463.6	17.1
50°-60°	443.2	16.4
60°-70°	375.5	13.9
70°-80°	252.3	9.3
80°-90°	71.2	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°	669.3	24.7
0°-40°	1104.2	40.7
0°-60°	2011.0	74.2
0°-90°	2710.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2710.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	852	852	852	852	852	
5°	852	851	847	851	851	81
15°	823	823	821	828	827	232
25°	764	766	772	778	780	352
35°	678	683	694	707	710	424
45°	569	578	598	624	634	439
55°	440	456	496	535	554	392
65°	290	320	386	437	457	288
75°	137	187	261	305	314	147
85°	27	55	67	73	75	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	852.2	852.2	852.2	852.2	852.2
2.5°	853.6	853.6	849.5	852.2	852.2
5°	852.2	850.9	846.8	850.9	850.9
7.5°	848.2	846.8	844.2	848.2	846.8
10°	840.1	840.1	837.4	841.5	841.5
12.5°	833.4	832.1	830.7	836.1	834.7
15°	822.6	822.6	821.3	828.0	826.7
17.5°	809.2	810.5	811.9	817.3	818.6
20°	794.4	797.1	798.4	806.5	806.5
22.5°	781.0	782.3	785.0	793.1	793.1
25°	763.5	766.2	771.6	778.3	779.6
27.5°	746.0	747.4	754.1	763.5	764.8
30°	723.2	727.2	735.3	746.0	747.4
32.5°	703.0	707.0	716.5	727.2	729.9
35°	677.5	682.8	693.6	707.0	709.7
37.5°	654.6	658.7	672.1	686.9	690.9
40°	626.4	634.5	647.9	665.4	672.1
42.5°	598.2	606.2	622.4	645.2	653.3
45°	568.6	578.0	598.2	623.7	634.5
47.5°	539.0	549.8	572.6	602.2	614.3
50°	505.4	518.9	547.1	580.7	594.1
52.5°	473.2	489.3	520.2	557.8	575.3
55°	439.6	455.7	496.0	535.0	553.8
57.5°	401.9	423.4	467.8	512.1	532.3
60°	367.0	387.1	440.9	489.3	509.4
62.5°	329.3	356.2	414.0	465.1	485.3
65°	290.3	319.9	385.8	436.9	457.0
67.5°	255.4	287.7	357.6	408.6	428.8
70°	213.7	254.1	326.6	377.7	397.9
72.5°	174.7	219.1	294.4	344.1	362.9
75°	137.1	186.8	260.8	305.1	314.5
77.5°	102.2	154.6	225.8	244.6	237.9
80°	72.6	123.7	176.1	166.7	170.7
82.5°	47.0	94.1	108.9	123.7	127.7
85°	26.9	55.1	67.2	72.6	75.3
87.5°	12.1	20.2	26.9	26.9	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)