

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: P310259

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-4000K**

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: P310259
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: 24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 2849.0 lumens
Efficiency: N/A
Efficacy: 65.9 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

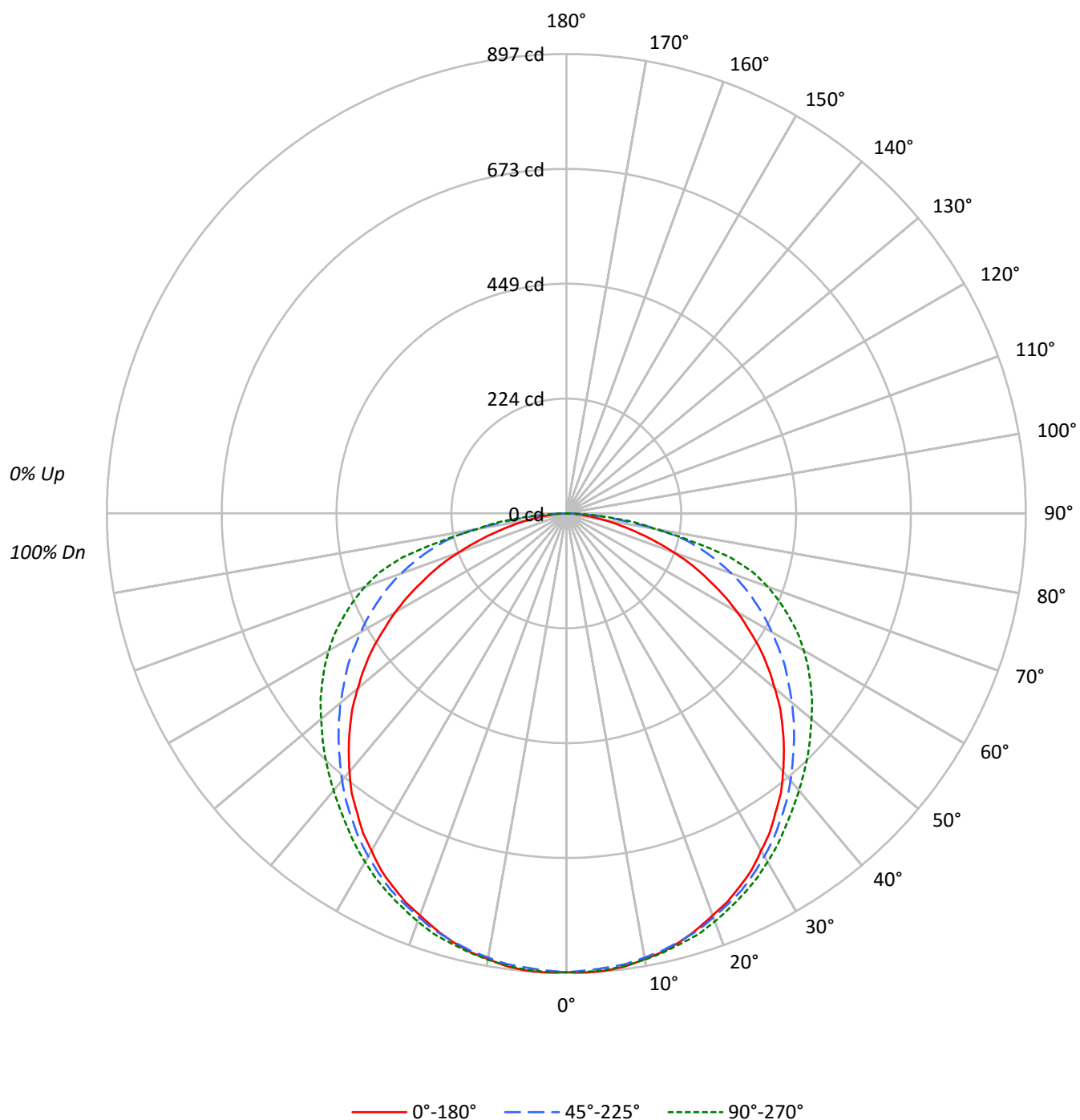
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1205	1205	1205
5°	1210	1202	1208
10°	1207	1203	1209
15°	1205	1203	1211
20°	1196	1202	1214
25°	1192	1204	1217
30°	1181	1201	1221
35°	1170	1198	1225
40°	1157	1196	1241
45°	1137	1196	1269
50°	1112	1204	1307
55°	1084	1223	1366
60°	1038	1247	1441
65°	972	1291	1530
70°	884	1351	1646
75°	749	1425	1719
80°	591	1434	1391
85°	437	1091	1221



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	3.0
10°-20°	244.6	8.6
20°-30°	374.0	13.1
30°-40°	457.3	16.0
40°-50°	487.3	17.1
50°-60°	466.0	16.4
60°-70°	394.7	13.9
70°-80°	265.3	9.3
80°-90°	74.8	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°	703.6	24.7
0°-40°	1160.9	40.7
0°-60°	2114.2	74.2
0°-90°	2849.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2849.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	896	894	890	894	894	85
15°	865	865	863	870	869	244
25°	803	806	811	818	820	370
35°	712	718	729	743	746	446
45°	598	608	629	656	667	461
55°	462	479	521	562	582	412
65°	305	336	406	459	480	303
75°	144	196	274	321	331	154
85°	28	58	71	76	79	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	895.9	895.9	895.9	895.9	895.9
2.5°	897.3	897.3	893.1	895.9	895.9
5°	895.9	894.5	890.3	894.5	894.5
7.5°	891.7	890.3	887.5	891.7	890.3
10°	883.2	883.2	880.4	884.6	884.6
12.5°	876.1	874.7	873.3	879.0	877.6
15°	864.8	864.8	863.4	870.5	869.1
17.5°	850.7	852.1	853.5	859.2	860.6
20°	835.2	838.0	839.4	847.9	847.9
22.5°	821.0	822.4	825.3	833.8	833.8
25°	802.7	805.5	811.1	818.2	819.6
27.5°	784.3	785.7	792.8	802.7	804.1
30°	760.3	764.5	773.0	784.3	785.7
32.5°	739.1	743.3	753.2	764.5	767.3
35°	712.2	717.9	729.2	743.3	746.1
37.5°	688.2	692.4	706.6	722.1	726.4
40°	658.5	667.0	681.1	699.5	706.6
42.5°	628.8	637.3	654.3	678.3	686.8
45°	597.8	607.6	628.8	655.7	667.0
47.5°	566.7	578.0	602.0	633.1	645.8
50°	531.3	545.5	575.1	610.5	624.6
52.5°	497.4	514.4	546.9	586.5	604.8
55°	462.1	479.1	521.4	562.4	582.2
57.5°	422.5	445.1	491.8	538.4	559.6
60°	385.8	407.0	463.5	514.4	535.6
62.5°	346.2	374.5	435.2	488.9	510.1
65°	305.2	336.3	405.6	459.3	480.5
67.5°	268.5	302.4	375.9	429.6	450.8
70°	224.7	267.1	343.4	397.1	418.3
72.5°	183.7	230.3	309.5	361.8	381.5
75°	144.1	196.4	274.1	320.8	330.7
77.5°	107.4	162.5	237.4	257.2	250.1
80°	76.3	130.0	185.1	175.2	179.5
82.5°	49.5	98.9	114.5	130.0	134.2
85°	28.3	57.9	70.7	76.3	79.1
87.5°	12.7	21.2	28.3	28.3	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)