

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: P312211

Luminaire Tested: **14FCZ2-29-UNV-L83050-CP250-W2A-U-3500K**

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: P312211
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 2600.0 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

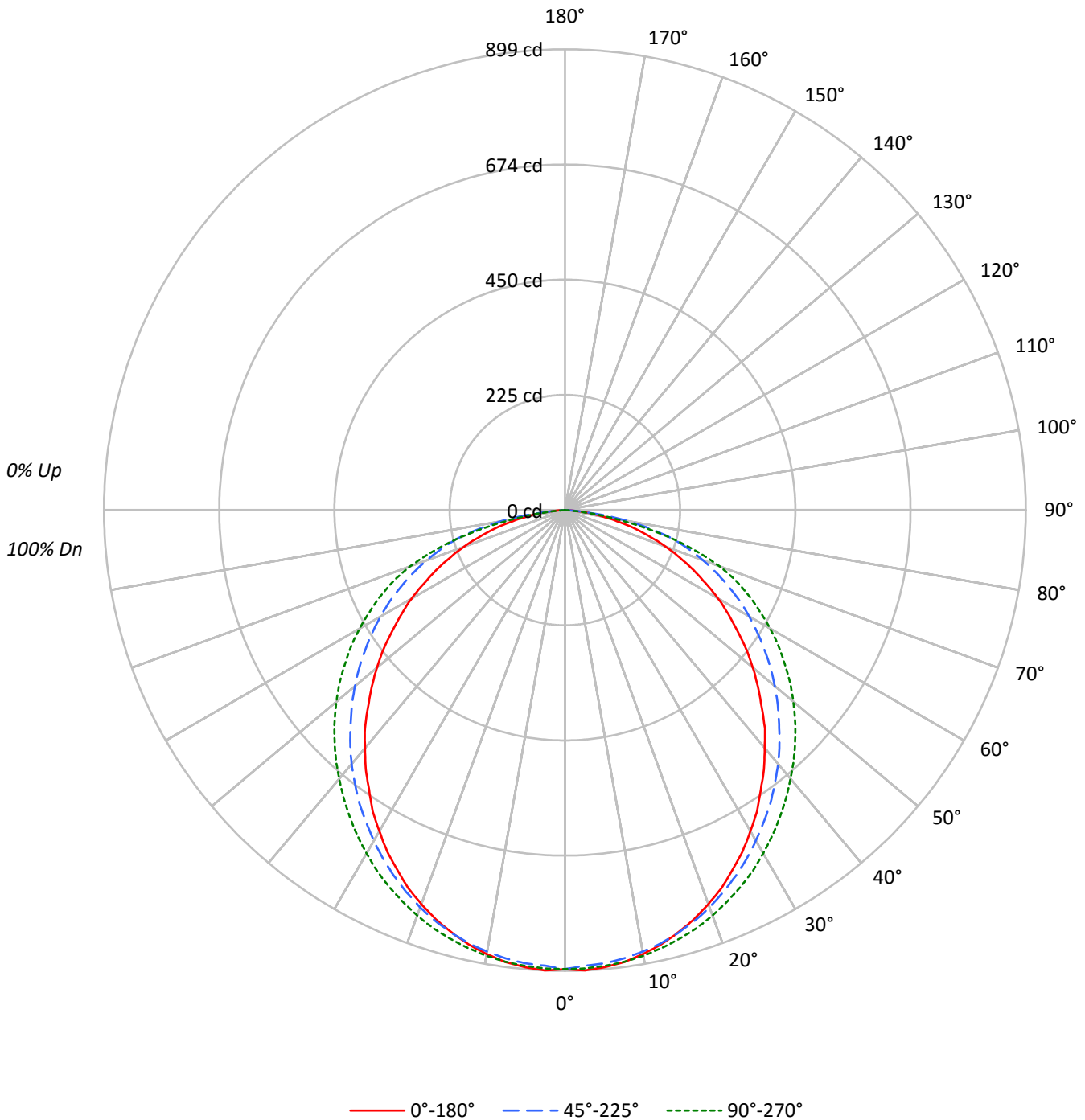
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2410	2410	2410
5°	2418	2398	2412
10°	2403	2390	2413
15°	2377	2379	2411
20°	2342	2363	2411
25°	2298	2339	2408
30°	2248	2315	2403
35°	2188	2295	2402
40°	2130	2273	2405
45°	2065	2248	2418
50°	2005	2238	2434
55°	1928	2230	2456
60°	1859	2234	2490
65°	1764	2241	2528
70°	1655	2258	2527
75°	1501	2278	2284
80°	1230	1968	1626
85°	914	929	377



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	3.3
10°-20°	242.1	9.3
20°-30°	364.7	14.0
30°-40°	437.7	16.8
40°-50°	456.2	17.5
50°-60°	422.3	16.2
60°-70°	341.2	13.1
70°-80°	208.0	8.0
80°-90°	43.0	1.7
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°	691.6	26.6
0°-40°	1129.3	43.4
0°-60°	2007.8	77.2
0°-90°	2600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2600.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	895	893	888	894	893	85
15°	853	854	854	866	866	241
25°	774	779	788	808	811	357
35°	666	677	699	724	731	417
45°	543	559	591	624	635	419
55°	411	432	475	512	524	368
65°	277	304	352	387	397	274
75°	144	176	219	223	220	152
85°	30	44	30	17	12	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	895.7	895.7	895.7	895.7	895.7
2.5°	899.2	896.3	889.9	896.3	895.1
5°	895.1	892.8	887.6	894.0	892.8
7.5°	889.3	887.0	882.4	889.9	888.8
10°	879.5	878.3	874.8	883.5	883.0
12.5°	867.9	867.3	865.6	875.4	874.8
15°	853.4	854.0	854.0	865.6	865.6
17.5°	837.2	838.3	840.6	853.4	855.1
20°	818.0	820.3	825.0	839.5	841.8
22.5°	798.3	800.1	807.0	824.4	826.7
25°	774.0	778.6	787.9	807.6	811.1
27.5°	750.8	754.8	767.6	787.9	793.7
30°	723.5	729.9	745.0	767.0	773.4
32.5°	697.4	704.4	721.8	747.3	753.1
35°	666.1	676.6	698.6	724.1	731.1
37.5°	637.7	647.6	672.5	700.3	708.5
40°	606.4	618.6	647.0	676.6	684.7
42.5°	577.4	589.0	619.7	649.9	660.9
45°	542.6	558.9	590.8	623.8	635.4
47.5°	510.8	527.0	563.5	598.9	609.3
50°	478.9	496.3	534.5	571.1	581.5
52.5°	445.8	464.4	505.5	542.1	554.2
55°	411.0	432.5	475.4	512.5	523.5
57.5°	378.0	400.0	445.8	483.5	494.5
60°	345.5	368.1	415.1	451.0	462.6
62.5°	309.6	336.3	385.0	420.3	429.0
65°	277.1	304.4	351.9	387.3	397.1
67.5°	242.9	272.5	320.0	352.5	361.8
70°	210.4	241.2	287.0	317.1	321.2
72.5°	175.7	207.0	253.3	272.5	272.5
75°	144.4	176.2	219.1	222.6	219.7
77.5°	110.2	145.5	173.3	166.4	159.4
80°	79.4	114.2	127.0	114.2	104.9
82.5°	53.3	82.9	76.5	60.9	53.9
85°	29.6	44.1	30.1	16.8	12.2
87.5°	11.0	9.9	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)