

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: P311961

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-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: P311961
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-HRP-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2617.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

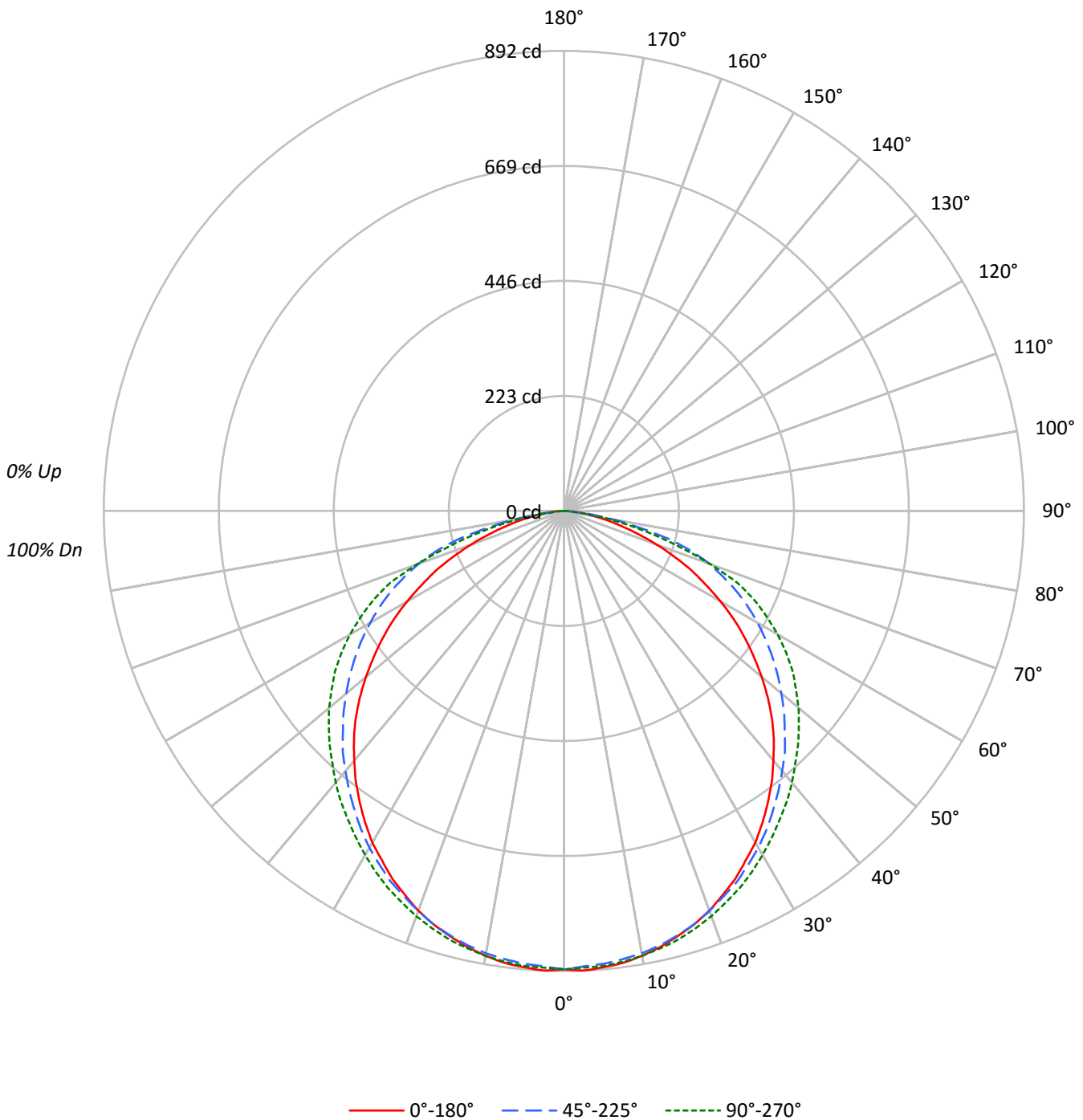
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	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	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2391	2391	2391
5°	2398	2381	2392
10°	2393	2379	2393
15°	2377	2373	2396
20°	2361	2364	2394
25°	2336	2355	2395
30°	2307	2342	2393
35°	2265	2325	2398
40°	2220	2312	2417
45°	2173	2305	2443
50°	2098	2305	2487
55°	2008	2316	2540
60°	1887	2334	2573
65°	1740	2358	2588
70°	1515	2364	2382
75°	1249	2199	1926
80°	982	1581	1288
85°	763	608	306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	3.2
10°-20°	241.4	9.2
20°-30°	366.6	14.0
30°-40°	444.3	17.0
40°-50°	468.1	17.9
50°-60°	437.0	16.7
60°-70°	349.3	13.3
70°-80°	192.2	7.3
80°-90°	33.9	1.3
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°	692.2	26.5
0°-40°	1136.5	43.4
0°-60°	2041.6	78.0
0°-90°	2617.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2617.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	889	889	889	889	889	
5°	888	886	881	887	886	84
15°	853	853	852	860	860	241
25°	787	788	793	805	806	362
35°	690	696	708	726	730	431
45°	571	582	606	633	642	439
55°	428	449	494	528	542	382
65°	273	308	370	401	406	269
75°	120	172	212	190	185	129
85°	25	31	20	12	10	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	888.7	888.7	888.7	888.7	888.7
2.5°	892.0	889.6	883.8	888.7	886.3
5°	887.9	885.5	881.3	887.1	885.5
7.5°	883.8	880.5	876.4	883.0	881.3
10°	875.6	873.1	870.6	876.4	875.6
12.5°	865.7	864.9	862.4	869.0	868.2
15°	853.4	853.4	851.7	859.9	859.9
17.5°	840.2	839.4	840.2	849.2	848.4
20°	824.6	824.6	825.4	836.1	836.1
22.5°	805.6	806.5	808.9	822.1	821.3
25°	786.7	788.4	793.3	804.8	806.5
27.5°	763.7	767.8	773.5	787.5	789.2
30°	742.3	744.7	753.8	767.0	770.2
32.5°	716.8	721.7	731.6	746.4	750.5
35°	689.6	696.2	707.7	725.8	729.9
37.5°	662.4	668.2	683.8	702.8	710.2
40°	632.0	641.9	658.3	679.7	688.0
42.5°	602.4	612.2	634.5	656.7	664.1
45°	571.1	581.8	605.7	632.8	641.9
47.5°	536.5	548.9	579.3	608.1	618.0
50°	501.2	516.8	550.5	582.6	594.1
52.5°	464.1	483.9	522.6	556.3	567.0
55°	427.9	449.3	493.7	528.3	541.5
57.5°	390.9	413.9	464.1	503.6	511.0
60°	350.6	378.5	433.7	468.2	478.1
62.5°	311.1	343.2	402.4	435.3	443.6
65°	273.2	307.8	370.3	400.8	406.5
67.5°	232.1	273.2	334.9	362.9	364.6
70°	192.6	240.3	300.4	313.5	302.8
72.5°	153.9	204.9	260.0	249.3	240.3
75°	120.1	172.0	211.5	190.1	185.2
77.5°	88.9	140.7	151.4	139.9	130.8
80°	63.4	111.1	102.0	87.2	83.1
82.5°	43.6	69.9	56.0	43.6	37.9
85°	24.7	31.3	19.7	12.3	9.9
87.5°	10.7	7.4	4.1	3.3	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)