

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: P313085

Luminaire Tested: **24FCZ2-30-UNV-L83050-HRP-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: P313085
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 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: 1889.0 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

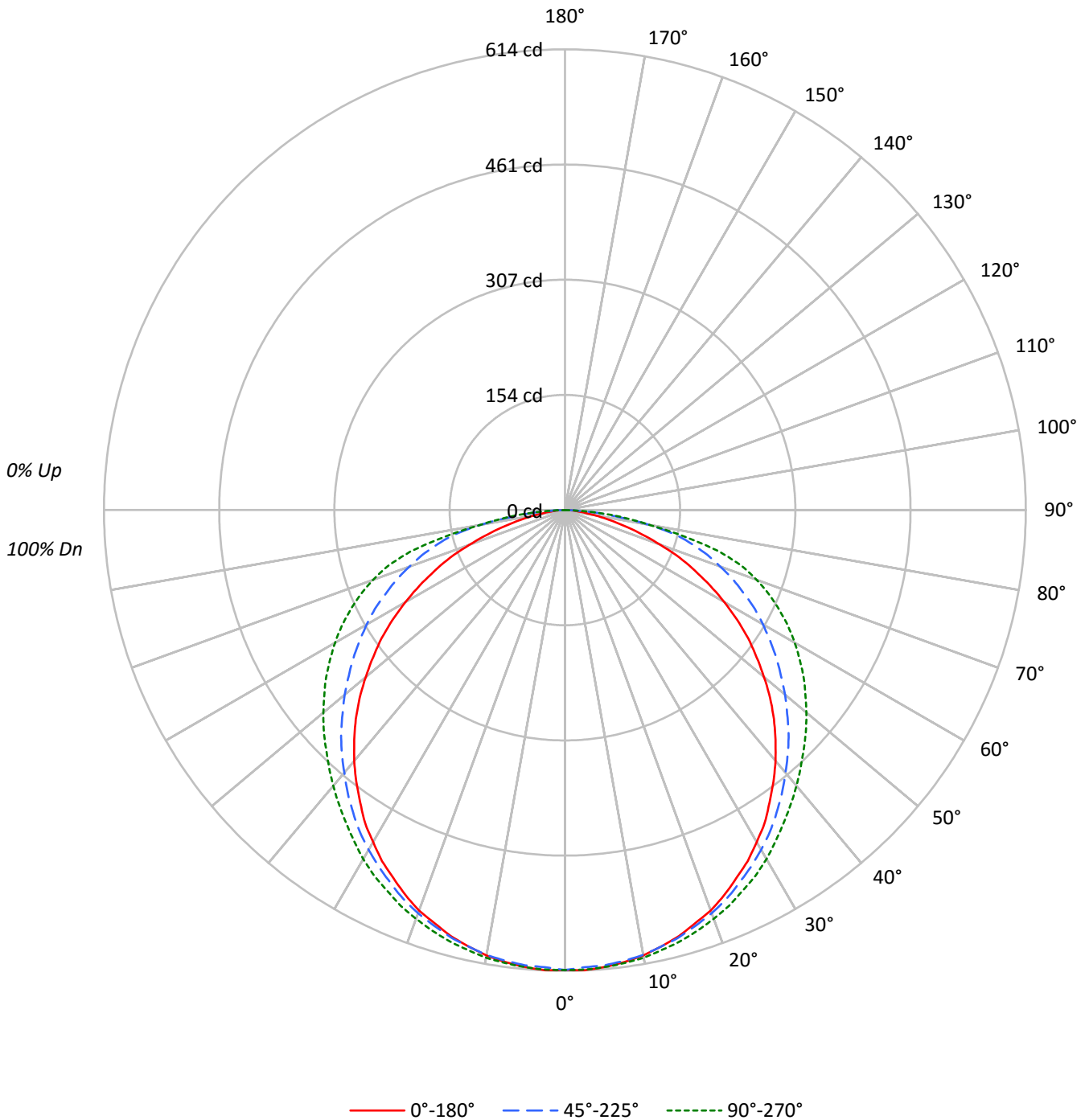
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	825	825	825
5°	826	822	826
10°	823	822	828
15°	818	821	828
20°	813	819	830
25°	803	815	831
30°	794	812	834
35°	781	808	835
40°	767	803	843
45°	749	802	856
50°	725	801	879
55°	699	807	911
60°	660	819	951
65°	609	838	1004
70°	532	868	1070
75°	431	913	1106
80°	318	895	895
85°	244	659	744



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.1	3.1
10°-20°	166.7	8.8
20°-30°	253.8	13.4
30°-40°	308.2	16.3
40°-50°	325.6	17.2
50°-60°	307.2	16.3
60°-70°	255.5	13.5
70°-80°	168.1	8.9
80°-90°	45.8	2.4
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°	478.6	25.3
0°-40°	786.8	41.7
0°-60°	1419.7	75.2
0°-90°	1889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1889.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	613	613	613	613	613	
5°	611	611	609	611	611	58
15°	588	588	589	595	595	166
25°	541	544	549	558	560	250
35°	475	481	492	504	508	298
45°	394	402	422	442	450	303
55°	298	311	344	376	388	266
65°	191	214	263	302	316	189
75°	83	121	176	208	213	89
85°	16	35	43	47	48	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	612.9	612.9	612.9	612.9	612.9
2.5°	613.7	612.9	609.7	612.9	612.9
5°	611.3	611.3	608.9	611.3	611.3
7.5°	607.4	607.4	605.8	608.9	608.9
10°	602.6	602.6	601.8	605.8	605.8
12.5°	595.5	596.3	595.5	600.2	600.2
15°	587.6	588.4	589.2	594.7	594.7
17.5°	577.3	578.9	580.5	586.8	587.6
20°	567.8	568.6	571.8	578.9	579.7
22.5°	555.2	557.5	561.5	568.6	571.0
25°	540.9	544.1	548.8	558.3	559.9
27.5°	527.5	529.9	536.2	546.5	549.6
30°	510.9	514.8	522.7	533.0	537.0
32.5°	495.1	499.0	508.5	519.6	522.7
35°	475.3	480.8	491.9	504.5	508.5
37.5°	456.3	461.8	475.3	489.5	494.3
40°	436.5	442.9	457.1	473.7	480.0
42.5°	415.2	423.9	439.7	457.9	465.0
45°	393.8	401.7	421.5	442.1	450.0
47.5°	370.9	380.4	401.7	426.3	435.7
50°	346.4	358.2	382.8	409.6	419.9
52.5°	321.9	335.3	363.0	393.0	404.1
55°	298.1	310.8	344.0	376.4	388.3
57.5°	272.0	287.9	324.2	359.0	370.9
60°	245.2	262.6	304.5	340.8	353.5
62.5°	218.3	238.0	285.5	321.9	335.3
65°	191.4	213.5	263.3	302.1	315.5
67.5°	165.3	189.8	242.8	281.5	295.0
70°	135.2	166.1	220.6	258.6	272.0
72.5°	107.6	143.1	199.3	234.9	246.7
75°	83.0	121.0	175.6	208.0	212.7
77.5°	60.9	98.9	151.0	162.1	162.9
80°	41.1	79.1	115.5	113.9	115.5
82.5°	26.9	59.3	72.8	81.5	82.2
85°	15.8	34.8	42.7	47.4	48.2
87.5°	7.9	11.9	15.0	15.8	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)