

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: P313494

Luminaire Tested: **24FCZ2-35-UNV-L83050-RDP-CA08-W2A-U-5000K**

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: P313494
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: 24FCZ2-35-UNV-L83050-RDP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 5000K 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: 2318.0 lumens
Efficiency: N/A
Efficacy: 78.8 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

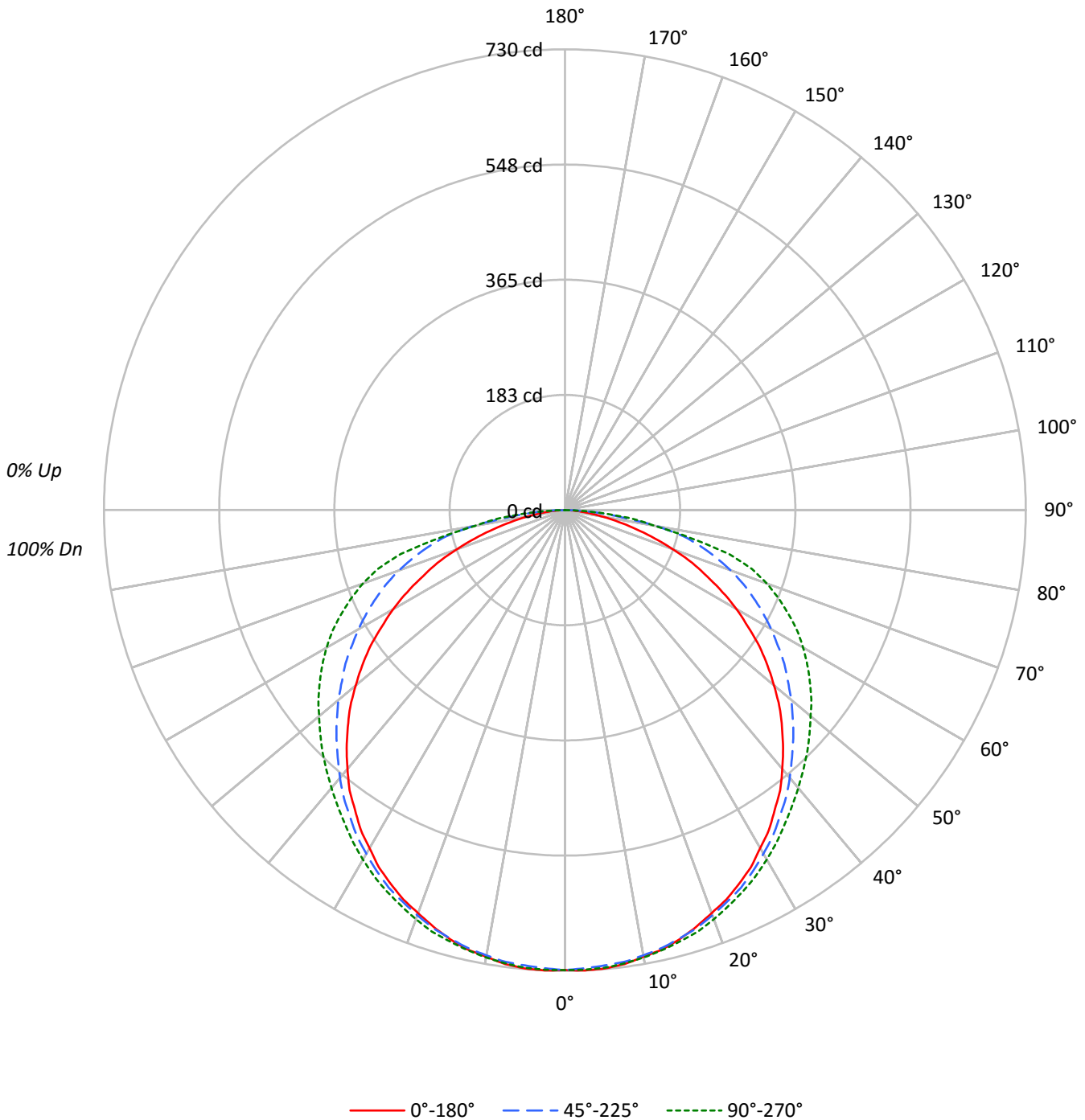
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	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°	981	981	981
5°	984	978	983
10°	982	979	983
15°	980	979	985
20°	973	978	988
25°	970	980	990
30°	961	977	993
35°	952	975	997
40°	941	973	1010
45°	925	973	1033
50°	905	980	1064
55°	882	995	1111
60°	845	1015	1173
65°	791	1051	1245
70°	719	1099	1339
75°	610	1160	1398
80°	481	1167	1131
85°	355	888	994



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.1	3.0
10°-20°	199.0	8.6
20°-30°	304.3	13.1
30°-40°	372.0	16.0
40°-50°	396.5	17.1
50°-60°	379.1	16.4
60°-70°	321.1	13.9
70°-80°	215.8	9.3
80°-90°	60.9	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°	572.5	24.7
0°-40°	944.5	40.7
0°-60°	1720.1	74.2
0°-90°	2318.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2318.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	729	729	729	729	729	
5°	729	728	724	728	728	69
15°	704	704	702	708	707	198
25°	653	655	660	666	667	301
35°	580	584	593	605	607	363
45°	486	494	512	534	543	375
55°	376	390	424	458	474	335
65°	248	274	330	374	391	247
75°	117	160	223	261	269	126
85°	23	47	58	62	64	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	728.9	728.9	728.9	728.9	728.9
2.5°	730.1	730.1	726.6	728.9	728.9
5°	728.9	727.8	724.3	727.8	727.8
7.5°	725.5	724.3	722.0	725.5	724.3
10°	718.6	718.6	716.3	719.7	719.7
12.5°	712.8	711.7	710.5	715.1	714.0
15°	703.7	703.7	702.5	708.2	707.1
17.5°	692.2	693.3	694.5	699.1	700.2
20°	679.5	681.8	683.0	689.9	689.9
22.5°	668.0	669.2	671.5	678.4	678.4
25°	653.1	655.4	660.0	665.7	666.9
27.5°	638.1	639.3	645.0	653.1	654.2
30°	618.6	622.0	628.9	638.1	639.3
32.5°	601.3	604.8	612.8	622.0	624.3
35°	579.5	584.1	593.3	604.8	607.1
37.5°	559.9	563.4	574.9	587.5	591.0
40°	535.8	542.7	554.2	569.1	574.9
42.5°	511.6	518.5	532.3	551.9	558.8
45°	486.3	494.4	511.6	533.5	542.7
47.5°	461.1	470.2	489.8	515.1	525.4
50°	432.3	443.8	468.0	496.7	508.2
52.5°	404.7	418.5	445.0	477.1	492.1
55°	376.0	389.8	424.3	457.6	473.7
57.5°	343.8	362.2	400.1	438.1	455.3
60°	313.9	331.1	377.1	418.5	435.8
62.5°	281.7	304.7	354.1	397.8	415.1
65°	248.3	273.6	330.0	373.7	390.9
67.5°	218.5	246.0	305.8	349.5	366.8
70°	182.8	217.3	279.4	323.1	340.3
72.5°	149.5	187.4	251.8	294.3	310.4
75°	117.3	159.8	223.1	261.0	269.0
77.5°	87.4	132.2	193.2	209.3	203.5
80°	62.1	105.8	150.6	142.6	146.0
82.5°	40.2	80.5	93.1	105.8	109.2
85°	23.0	47.1	57.5	62.1	64.4
87.5°	10.3	17.2	23.0	23.0	21.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)