

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: P309868

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-6500K**

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: P309868
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: 24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 6500K 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: 1949.0 lumens
Efficiency: N/A
Efficacy: 79.9 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

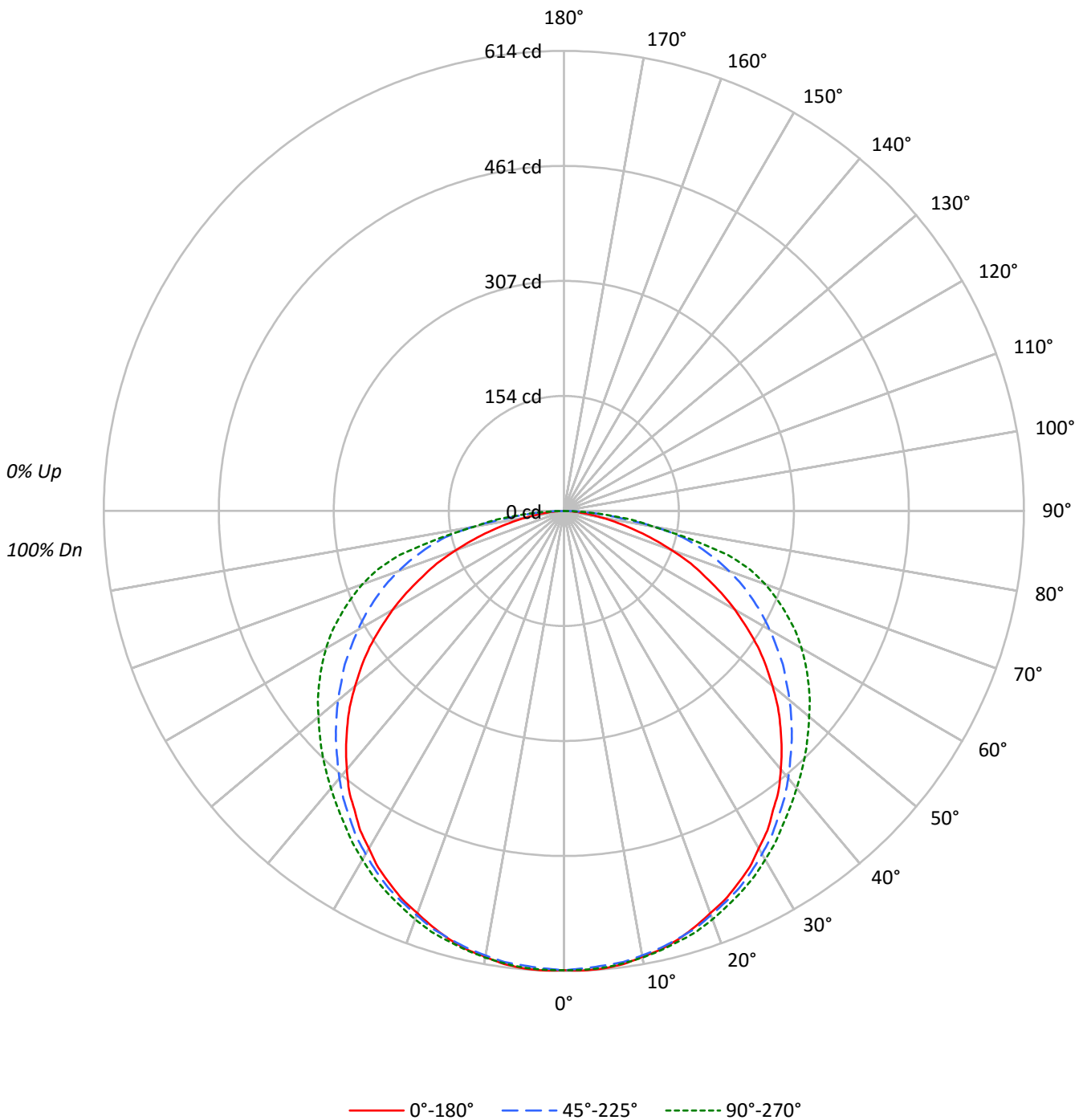
Input Watts (W): 24.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	825	825	825
5°	828	823	826
10°	825	823	827
15°	824	823	828
20°	818	822	830
25°	815	824	832
30°	808	822	835
35°	800	819	838
40°	791	818	849
45°	778	819	868
50°	761	824	894
55°	742	837	934
60°	710	853	986
65°	665	883	1046
70°	605	924	1126
75°	513	975	1176
80°	404	981	951
85°	298	746	835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.1	3.0
10°-20°	167.3	8.6
20°-30°	255.9	13.1
30°-40°	312.8	16.0
40°-50°	333.4	17.1
50°-60°	318.8	16.4
60°-70°	270.0	13.9
70°-80°	181.5	9.3
80°-90°	51.2	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°	481.3	24.7
0°-40°	794.1	40.7
0°-60°	1446.3	74.2
0°-90°	1949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	613	613	613	613	613	
5°	613	612	609	612	612	58
15°	592	592	591	596	594	167
25°	549	551	555	560	561	253
35°	487	491	499	508	510	305
45°	409	416	430	449	456	315
55°	316	328	357	385	398	282
65°	209	230	278	314	329	207
75°	99	134	188	219	226	106
85°	19	40	48	52	54	24
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°	613.9	613.9	611.0	612.9	612.9
5°	612.9	611.9	609.0	611.9	611.9
7.5°	610.0	609.0	607.1	610.0	609.0
10°	604.2	604.2	602.3	605.2	605.2
12.5°	599.4	598.4	597.4	601.3	600.3
15°	591.6	591.6	590.7	595.5	594.5
17.5°	582.0	582.9	583.9	587.8	588.7
20°	571.3	573.3	574.2	580.0	580.0
22.5°	561.7	562.6	564.6	570.4	570.4
25°	549.1	551.0	554.9	559.7	560.7
27.5°	536.5	537.5	542.3	549.1	550.1
30°	520.1	523.0	528.8	536.5	537.5
32.5°	505.6	508.5	515.3	523.0	524.9
35°	487.2	491.1	498.8	508.5	510.4
37.5°	470.8	473.7	483.4	494.0	496.9
40°	450.5	456.3	466.0	478.5	483.4
42.5°	430.2	436.0	447.6	464.0	469.8
45°	408.9	415.7	430.2	448.6	456.3
47.5°	387.7	395.4	411.8	433.1	441.8
50°	363.5	373.2	393.5	417.6	427.3
52.5°	340.3	351.9	374.1	401.2	413.8
55°	316.1	327.7	356.7	384.8	398.3
57.5°	289.1	304.5	336.4	368.3	382.8
60°	263.9	278.4	317.1	351.9	366.4
62.5°	236.8	256.2	297.8	334.5	349.0
65°	208.8	230.1	277.5	314.2	328.7
67.5°	183.7	206.9	257.1	293.9	308.4
70°	153.7	182.7	234.9	271.7	286.2
72.5°	125.7	157.6	211.7	247.5	261.0
75°	98.6	134.4	187.5	219.4	226.2
77.5°	73.5	111.2	162.4	175.9	171.1
80°	52.2	88.9	126.6	119.9	122.8
82.5°	33.8	67.7	78.3	88.9	91.8
85°	19.3	39.6	48.3	52.2	54.1
87.5°	8.7	14.5	19.3	19.3	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)