

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: P312057

Luminaire Tested: **14FCZ2-29-UNV-L83050-RDP-CP187-W2A-U-4000K**

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: P312057
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
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-RDP-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.187" POLYCARB SHEET
Light Source: (168) 4000K 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: 1767.0 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

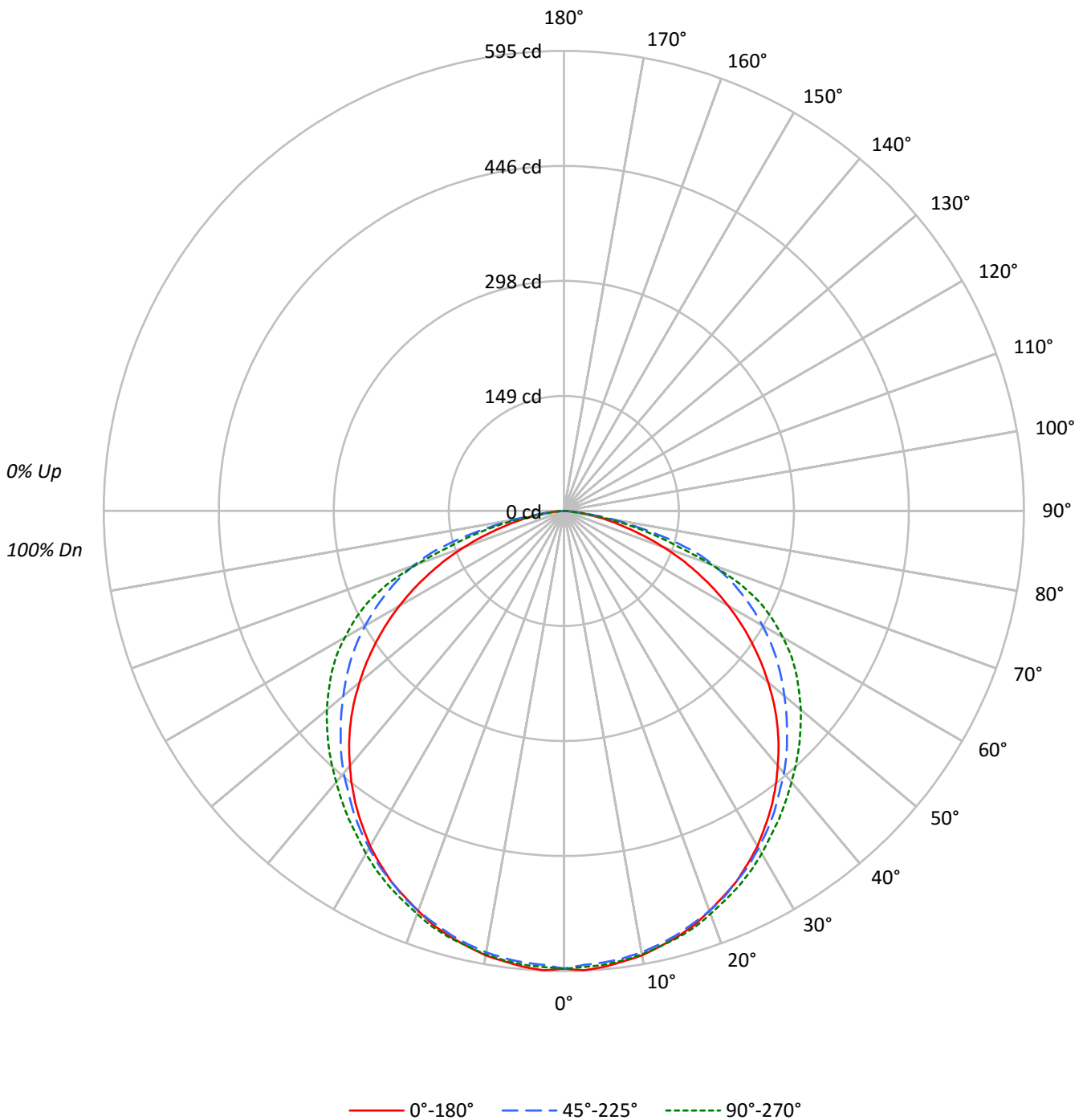
Input Watts (W): 24.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	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	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1593	1593	1593
5°	1599	1584	1591
10°	1594	1583	1591
15°	1587	1580	1591
20°	1576	1576	1588
25°	1569	1569	1589
30°	1556	1565	1590
35°	1536	1559	1595
40°	1512	1555	1609
45°	1486	1554	1638
50°	1444	1559	1675
55°	1392	1579	1722
60°	1322	1596	1759
65°	1221	1616	1783
70°	1086	1628	1596
75°	875	1463	1277
80°	683	1026	834
85°	469	299	213



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	3.2
10°-20°	160.7	9.1
20°-30°	244.7	13.8
30°-40°	298.1	16.9
40°-50°	316.2	17.9
50°-60°	298.4	16.9
60°-70°	241.0	13.6
70°-80°	130.7	7.4
80°-90°	21.2	1.2
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°	461.4	26.1
0°-40°	759.5	43.0
0°-60°	1374.2	77.8
0°-90°	1767.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1767.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	592	590	586	590	589	56
15°	570	568	567	571	571	161
25°	528	527	528	534	535	243
35°	468	470	475	484	486	292
45°	390	396	408	424	430	301
55°	297	309	337	359	367	265
65°	192	215	254	274	280	190
75°	84	123	141	127	123	92
85°	15	17	10	8	7	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	591.8	591.8	591.8	591.8	591.8
2.5°	594.6	591.8	587.7	591.8	590.4
5°	591.8	590.4	586.3	590.4	589.1
7.5°	587.7	587.7	583.5	586.3	586.3
10°	583.5	582.2	579.4	583.5	582.2
12.5°	576.6	575.3	573.9	578.0	576.6
15°	569.7	568.4	567.0	571.1	571.1
17.5°	561.5	560.1	558.7	564.2	564.2
20°	550.4	550.4	550.4	555.9	554.6
22.5°	539.4	539.4	540.8	546.3	544.9
25°	528.4	527.0	528.4	533.9	535.3
27.5°	514.6	515.9	517.3	522.8	524.2
30°	500.8	502.1	503.5	510.4	511.8
32.5°	484.2	487.0	489.7	498.0	498.0
35°	467.7	470.4	474.6	484.2	485.6
37.5°	449.7	452.5	458.0	469.0	471.8
40°	430.4	434.5	442.8	453.9	458.0
42.5°	411.1	416.6	426.3	438.7	444.2
45°	390.4	395.9	408.3	423.5	430.4
47.5°	368.3	375.2	390.4	409.7	415.2
50°	344.9	354.5	372.5	393.2	400.1
52.5°	321.4	332.5	354.5	376.6	383.5
55°	296.6	309.0	336.6	358.7	367.0
57.5°	271.8	285.6	317.3	340.7	349.0
60°	245.6	262.1	296.6	320.0	326.9
62.5°	219.3	238.7	275.9	299.4	304.9
65°	191.8	215.2	253.8	274.5	280.0
67.5°	165.5	193.1	231.8	246.9	246.9
70°	138.0	168.3	206.9	211.1	202.8
72.5°	110.4	144.8	179.3	164.2	157.3
75°	84.2	122.8	140.7	126.9	122.8
77.5°	63.5	99.3	99.3	91.0	88.3
80°	44.1	75.9	66.2	57.9	53.8
82.5°	29.0	42.8	34.5	27.6	23.5
85°	15.2	16.6	9.7	8.3	6.9
87.5°	5.5	2.8	1.4	2.8	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)