

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: P312105

Luminaire Tested: **14FCZ2-39-UNV-L83050-RDP-CP187-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: P312105
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: 14FCZ2-39-UNV-L83050-RDP-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.187" 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: 2110.0 lumens
Efficiency: N/A
Efficacy: 63.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

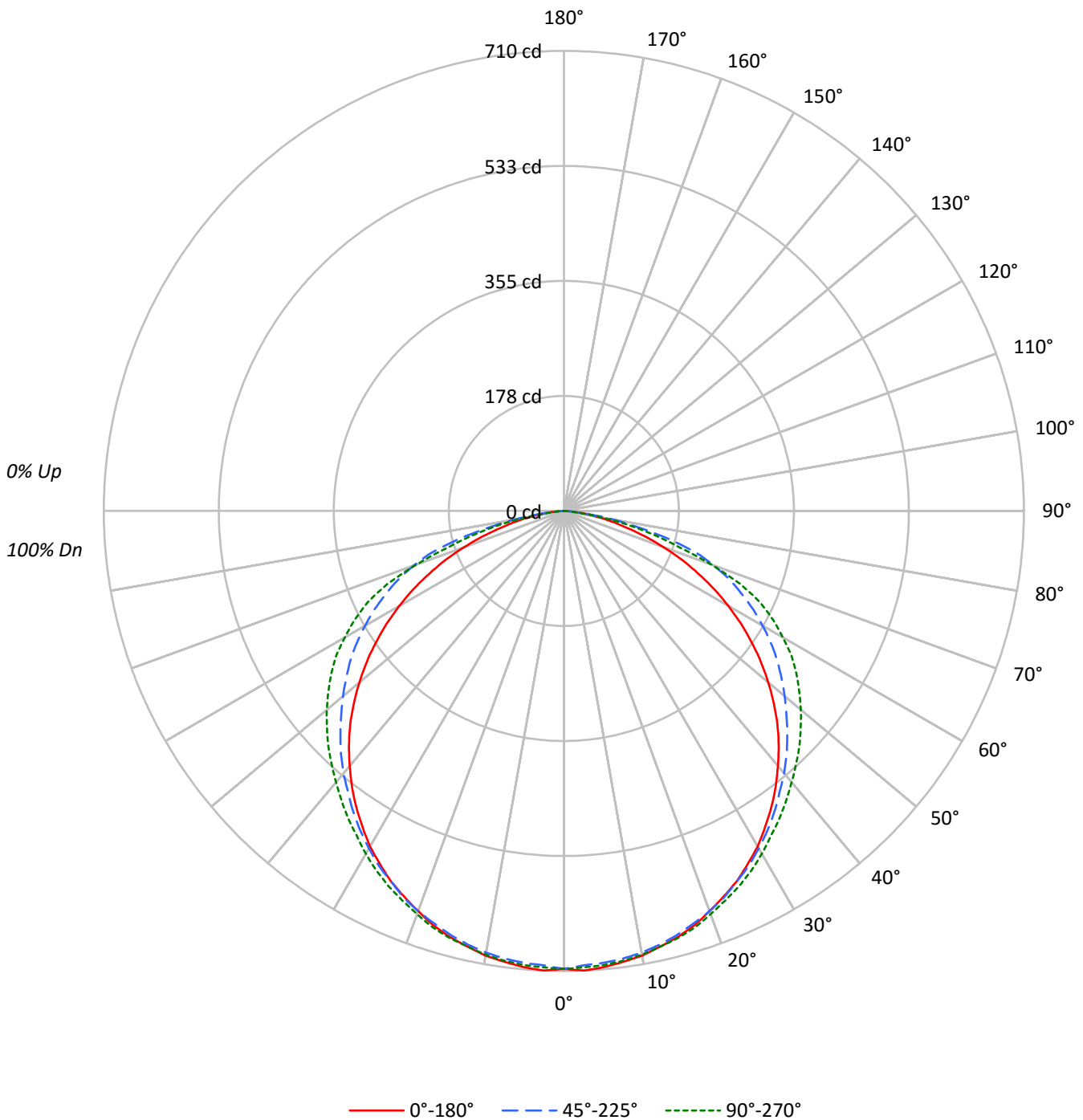
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1902	1902	1902
5°	1909	1891	1900
10°	1904	1891	1900
15°	1895	1886	1900
20°	1882	1882	1896
25°	1873	1873	1898
30°	1858	1868	1899
35°	1834	1862	1905
40°	1806	1858	1921
45°	1774	1856	1956
50°	1724	1862	2000
55°	1662	1886	2056
60°	1578	1906	2101
65°	1458	1930	2129
70°	1296	1944	1906
75°	1045	1747	1524
80°	817	1226	995
85°	559	355	253



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.9	3.2
10°-20°	191.9	9.1
20°-30°	292.2	13.8
30°-40°	355.9	16.9
40°-50°	377.6	17.9
50°-60°	356.4	16.9
60°-70°	287.7	13.6
70°-80°	156.1	7.4
80°-90°	25.3	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°	551.0	26.1
0°-40°	906.9	43.0
0°-60°	1640.9	77.8
0°-90°	2110.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2110.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	707	707	707	707	707	
5°	707	705	700	705	703	67
15°	680	679	677	682	682	192
25°	631	629	631	638	639	290
35°	558	562	567	578	580	349
45°	466	473	488	506	514	359
55°	354	369	402	428	438	316
65°	229	257	303	328	334	227
75°	100	147	168	152	147	110
85°	18	20	12	10	8	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	706.7	706.7	706.7	706.7	706.7
2.5°	710.0	706.7	701.8	706.7	705.0
5°	706.7	705.0	700.1	705.0	703.4
7.5°	701.8	701.8	696.8	700.1	700.1
10°	696.8	695.2	691.9	696.8	695.2
12.5°	688.6	686.9	685.3	690.2	688.6
15°	680.3	678.7	677.0	682.0	682.0
17.5°	670.5	668.8	667.2	673.7	673.7
20°	657.3	657.3	657.3	663.9	662.2
22.5°	644.1	644.1	645.7	652.3	650.7
25°	630.9	629.3	630.9	637.5	639.2
27.5°	614.4	616.1	617.7	624.3	626.0
30°	598.0	599.6	601.3	609.5	611.1
32.5°	578.2	581.5	584.8	594.7	594.7
35°	558.4	561.7	566.7	578.2	579.9
37.5°	537.0	540.3	546.9	560.1	563.4
40°	514.0	518.9	528.8	542.0	546.9
42.5°	490.9	497.5	509.0	523.8	530.4
45°	466.2	472.8	487.6	505.7	514.0
47.5°	439.8	448.1	466.2	489.2	495.8
50°	411.8	423.4	444.8	469.5	477.7
52.5°	383.8	397.0	423.4	449.7	458.0
55°	354.2	369.0	401.9	428.3	438.2
57.5°	324.5	341.0	378.9	406.9	416.8
60°	293.2	313.0	354.2	382.2	390.4
62.5°	261.9	285.0	329.5	357.5	364.1
65°	229.0	257.0	303.1	327.8	334.4
67.5°	197.7	230.6	276.7	294.9	294.9
70°	164.7	201.0	247.1	252.0	242.2
72.5°	131.8	173.0	214.1	196.0	187.8
75°	100.5	146.6	168.0	151.6	146.6
77.5°	75.8	118.6	118.6	108.7	105.4
80°	52.7	90.6	79.1	69.2	64.2
82.5°	34.6	51.1	41.2	32.9	28.0
85°	18.1	19.8	11.5	9.9	8.2
87.5°	6.6	3.3	1.6	3.3	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)