

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: P312058

Luminaire Tested: **14FCZ2-29-UNV-L83050-RDP-CP187-W2A-U-4500K**

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: P312058
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-4500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 1783.0 lumens
Efficiency: N/A
Efficacy: 71.3 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

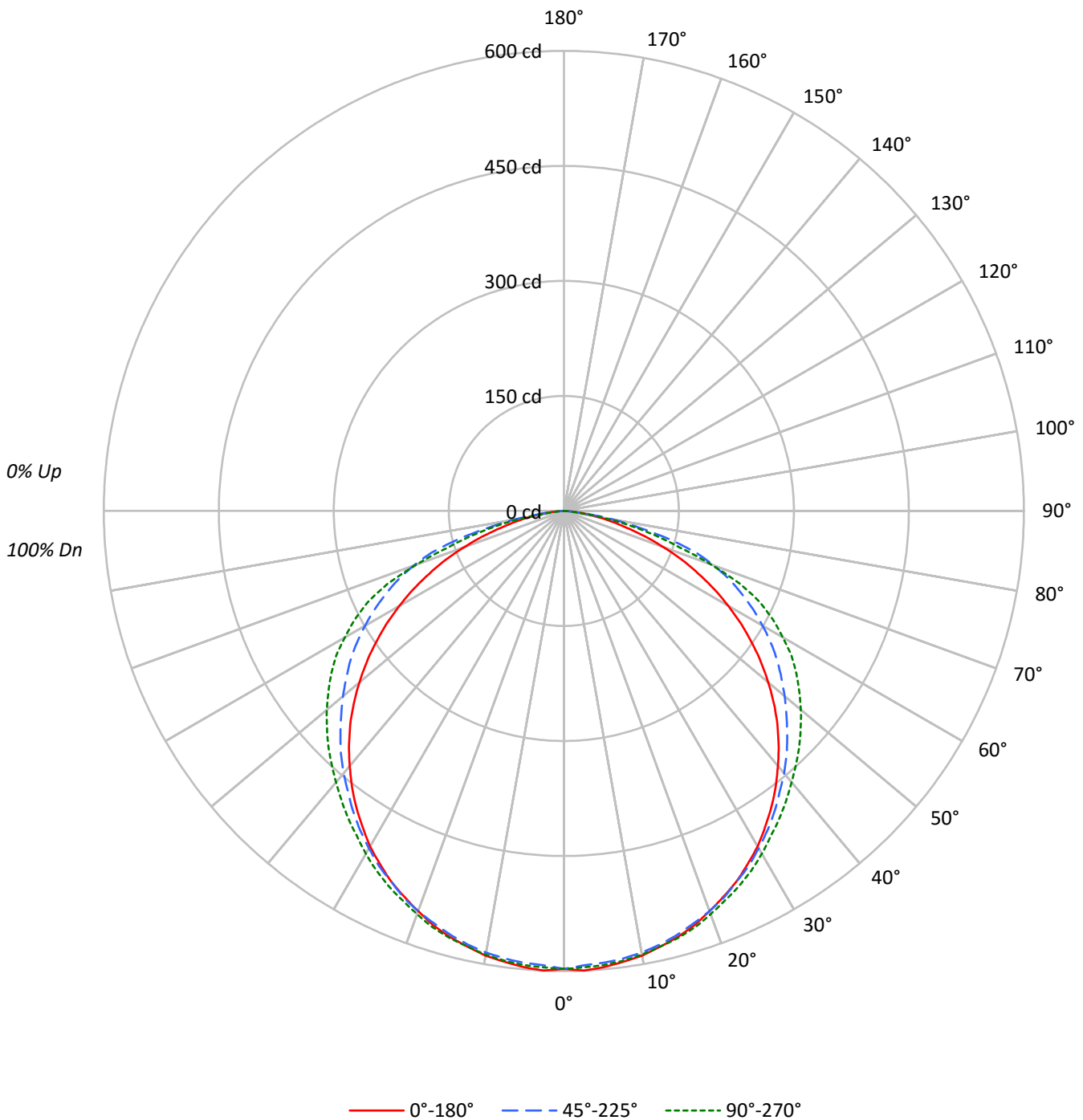
Input Watts (W): 25
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1607	1607	1607
5°	1613	1598	1606
10°	1609	1597	1605
15°	1602	1594	1606
20°	1590	1590	1603
25°	1583	1583	1604
30°	1570	1579	1605
35°	1550	1573	1610
40°	1526	1570	1623
45°	1499	1568	1653
50°	1457	1573	1690
55°	1404	1594	1737
60°	1334	1611	1776
65°	1232	1631	1799
70°	1095	1643	1610
75°	883	1476	1288
80°	690	1035	841
85°	472	299	216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.5	3.2
10°-20°	162.2	9.1
20°-30°	246.9	13.8
30°-40°	300.8	16.9
40°-50°	319.1	17.9
50°-60°	301.1	16.9
60°-70°	243.2	13.6
70°-80°	131.9	7.4
80°-90°	21.4	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°	465.6	26.1
0°-40°	766.4	43.0
0°-60°	1386.6	77.8
0°-90°	1783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1783.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	597	597	597	597	597	
5°	597	596	592	596	594	57
15°	575	574	572	576	576	162
25°	533	532	533	539	540	245
35°	472	475	479	489	490	295
45°	394	400	412	427	434	303
55°	299	312	340	362	370	267
65°	194	217	256	277	283	192
75°	85	124	142	128	124	93
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°	597.2	597.2	597.2	597.2	597.2
2.5°	600.0	597.2	593.0	597.2	595.8
5°	597.2	595.8	591.6	595.8	594.4
7.5°	593.0	593.0	588.8	591.6	591.6
10°	588.8	587.4	584.6	588.8	587.4
12.5°	581.9	580.5	579.1	583.3	581.9
15°	574.9	573.5	572.1	576.3	576.3
17.5°	566.5	565.2	563.8	569.3	569.3
20°	555.4	555.4	555.4	561.0	559.6
22.5°	544.3	544.3	545.7	551.2	549.8
25°	533.1	531.7	533.1	538.7	540.1
27.5°	519.2	520.6	522.0	527.6	529.0
30°	505.3	506.7	508.1	515.0	516.4
32.5°	488.6	491.4	494.2	502.5	502.5
35°	471.9	474.7	478.9	488.6	490.0
37.5°	453.8	456.6	462.1	473.3	476.1
40°	434.3	438.5	446.8	458.0	462.1
42.5°	414.8	420.4	430.1	442.7	448.2
45°	393.9	399.5	412.0	427.3	434.3
47.5°	371.7	378.6	393.9	413.4	419.0
50°	348.0	357.7	375.8	396.7	403.7
52.5°	324.3	335.5	357.7	380.0	387.0
55°	299.3	311.8	339.7	361.9	370.3
57.5°	274.2	288.1	320.2	343.8	352.2
60°	247.8	264.5	299.3	322.9	329.9
62.5°	221.3	240.8	278.4	302.1	307.6
65°	193.5	217.2	256.1	277.0	282.6
67.5°	167.0	194.9	233.9	249.2	249.2
70°	139.2	169.8	208.8	213.0	204.6
72.5°	111.4	146.2	181.0	165.6	158.7
75°	84.9	123.9	142.0	128.1	123.9
77.5°	64.0	100.2	100.2	91.9	89.1
80°	44.5	76.6	66.8	58.5	54.3
82.5°	29.2	43.2	34.8	27.8	23.7
85°	15.3	16.7	9.7	8.4	7.0
87.5°	5.6	2.8	1.4	2.8	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)