

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: P312305

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-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: P312305
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-S-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 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: 1795.0 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

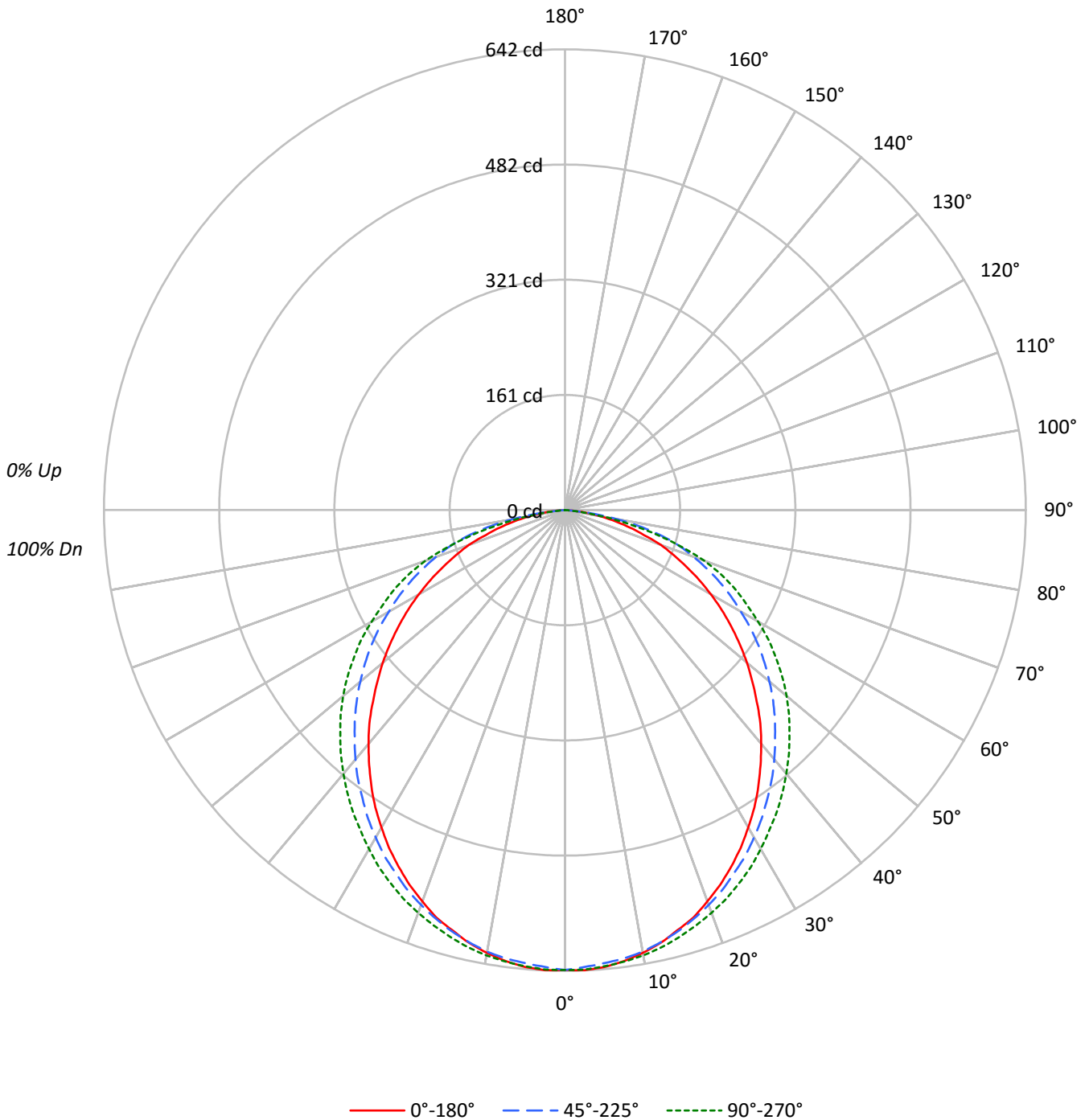
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1724	1724	1724
5°	1726	1712	1724
10°	1712	1707	1722
15°	1689	1694	1716
20°	1662	1677	1710
25°	1628	1657	1704
30°	1587	1637	1695
35°	1544	1614	1690
40°	1494	1594	1685
45°	1439	1575	1683
50°	1386	1557	1688
55°	1328	1545	1683
60°	1265	1523	1672
65°	1190	1519	1671
70°	1120	1505	1625
75°	971	1471	1388
80°	786	1185	924
85°	522	411	275



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.5	3.4
10°-20°	172.2	9.6
20°-30°	258.3	14.4
30°-40°	308.1	17.2
40°-50°	318.5	17.7
50°-60°	290.8	16.2
60°-70°	228.9	12.7
70°-80°	133.2	7.4
80°-90°	24.5	1.4
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°	491.0	27.4
0°-40°	799.1	44.5
0°-60°	1408.4	78.5
0°-90°	1795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	641	641	641	641	641	
5°	639	637	634	639	638	61
15°	606	607	608	616	616	171
25°	548	551	558	571	574	252
35°	470	476	491	510	514	294
45°	378	391	414	437	442	292
55°	283	298	329	353	359	253
65°	187	206	238	257	262	186
75°	93	116	142	139	134	99
85°	17	24	13	11	9	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	640.8	640.8	640.8	640.8	640.8
2.5°	641.7	639.9	637.2	641.7	640.8
5°	639.0	637.2	633.7	639.0	638.1
7.5°	633.7	631.9	630.1	635.4	634.6
10°	626.5	625.7	624.8	631.0	630.1
12.5°	617.6	617.6	616.8	623.9	623.9
15°	606.1	607.0	607.9	615.9	615.9
17.5°	595.4	594.5	597.2	606.1	607.0
20°	580.3	582.0	585.6	596.3	597.2
22.5°	565.1	566.9	573.1	583.8	586.5
25°	548.2	550.9	558.0	571.4	574.0
27.5°	530.4	534.0	543.8	558.0	560.7
30°	510.8	516.2	526.9	542.9	545.6
32.5°	491.3	496.6	510.0	526.0	529.5
35°	469.9	476.1	491.3	510.0	514.4
37.5°	447.7	455.7	473.5	492.2	497.5
40°	425.4	434.3	453.9	473.5	479.7
42.5°	403.2	412.1	433.4	455.7	461.9
45°	378.2	390.7	413.8	437.0	442.3
47.5°	354.2	367.6	393.4	416.5	423.6
50°	331.1	344.4	372.0	396.0	403.2
52.5°	307.0	321.3	350.7	375.6	381.8
55°	283.0	298.1	329.3	353.3	358.7
57.5°	259.0	275.0	307.0	330.2	336.4
60°	235.0	251.9	283.0	306.2	310.6
62.5°	210.9	228.7	260.8	281.2	285.7
65°	186.9	206.5	238.5	257.2	262.5
67.5°	163.8	183.3	214.5	232.3	236.7
70°	142.4	160.2	191.3	204.7	206.5
72.5°	115.7	137.9	168.2	175.3	170.9
75°	93.4	115.7	141.5	138.8	133.5
77.5°	71.2	93.4	110.4	101.5	94.3
80°	50.7	73.0	76.5	63.2	59.6
82.5°	32.9	50.7	42.7	32.9	26.7
85°	16.9	24.0	13.3	10.7	8.9
87.5°	5.3	3.6	1.8	1.8	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)