

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: P308633

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP187-W2A-U-5500K**

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: P308633
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-CP187-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 1893.0 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

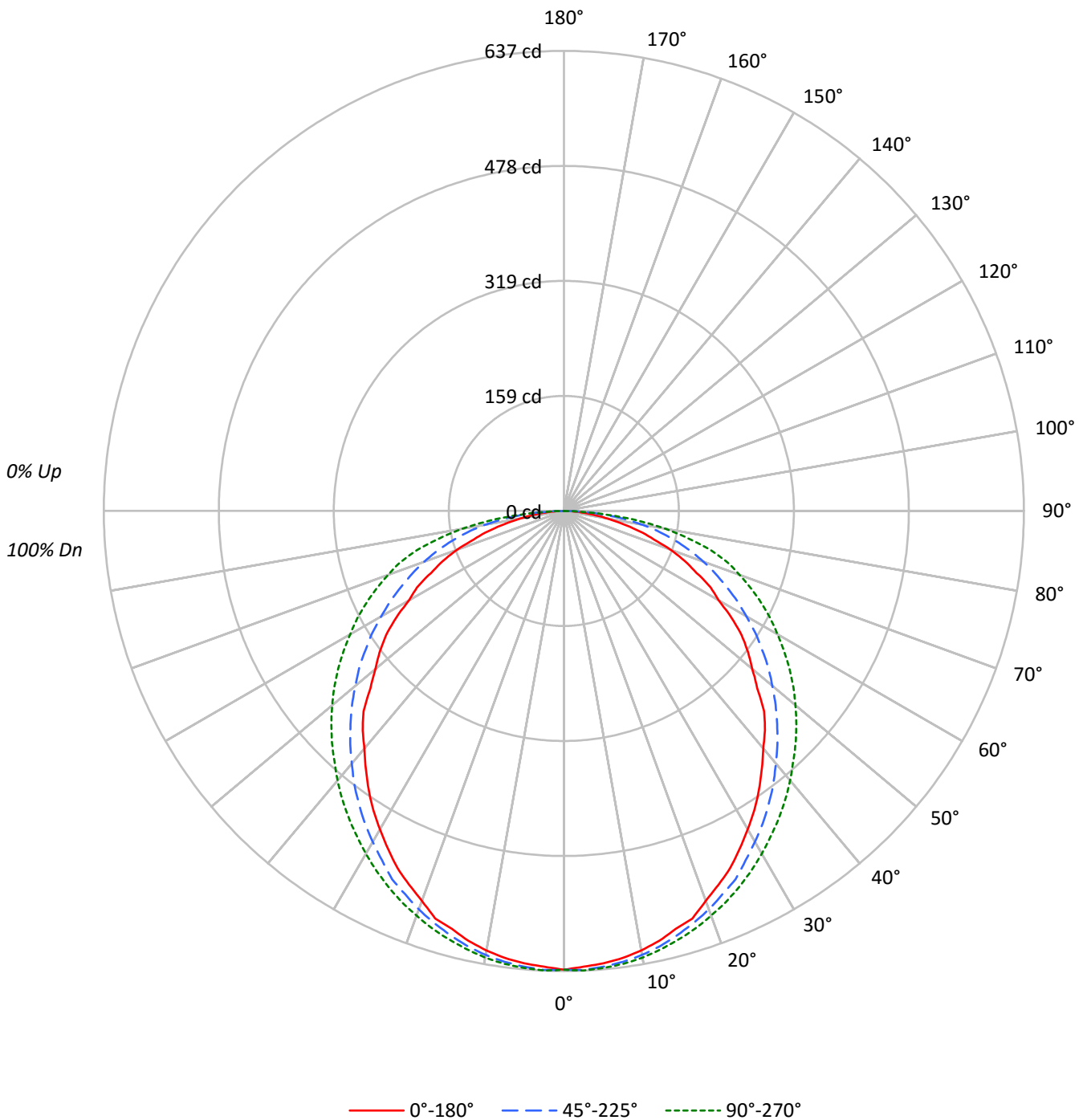
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1709	1709	1709
5°	1699	1711	1716
10°	1688	1706	1716
15°	1668	1694	1711
20°	1645	1681	1707
25°	1619	1670	1705
30°	1582	1644	1703
35°	1548	1625	1705
40°	1509	1604	1712
45°	1493	1590	1727
50°	1426	1578	1752
55°	1411	1573	1789
60°	1331	1570	1838
65°	1292	1580	1921
70°	1240	1618	2039
75°	1130	1668	2195
80°	969	1726	2219
85°	784	1652	1902



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.1	3.2
10°-20°	171.4	9.1
20°-30°	258.0	13.6
30°-40°	309.7	16.4
40°-50°	323.7	17.1
50°-60°	301.6	15.9
60°-70°	247.4	13.1
70°-80°	166.7	8.8
80°-90°	54.3	2.9
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°	489.6	25.9
0°-40°	799.2	42.2
0°-60°	1424.6	75.3
0°-90°	1893.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1893.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	635	635	635	635	635	
5°	629	631	633	634	635	60
15°	599	602	608	613	614	169
25°	545	549	563	571	574	251
35°	471	478	495	512	519	295
45°	392	395	418	443	454	300
55°	301	306	335	367	381	267
65°	203	212	248	284	302	202
75°	109	120	160	197	211	114
85°	25	36	54	62	62	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	635.1	635.1	635.1	635.1	635.1
2.5°	631.5	633.3	636.0	636.9	636.9
5°	628.8	630.6	633.3	634.2	635.1
7.5°	624.2	626.1	629.7	631.5	632.4
10°	617.9	619.7	624.2	627.0	627.9
12.5°	609.7	611.6	617.0	620.6	621.5
15°	598.9	602.5	607.9	613.4	614.3
17.5°	591.6	590.7	598.0	604.3	606.1
20°	574.4	578.9	587.1	594.3	596.2
22.5°	559.9	563.5	574.4	582.6	586.2
25°	545.4	549.0	562.6	570.8	574.4
27.5°	527.3	532.7	545.4	557.2	561.7
30°	509.2	514.6	529.1	542.7	548.1
32.5°	491.1	497.4	512.8	527.3	533.6
35°	471.1	477.5	494.7	511.9	519.1
37.5°	450.3	458.4	476.6	495.6	503.7
40°	429.5	437.6	456.6	478.4	487.4
42.5°	412.2	415.9	437.6	461.2	470.2
45°	392.3	395.0	417.7	443.0	453.9
47.5°	363.3	373.3	397.7	425.8	436.7
50°	340.7	351.5	376.9	406.8	418.6
52.5°	321.6	328.9	357.0	386.9	400.5
55°	300.8	306.2	335.2	366.9	381.4
57.5°	275.4	285.4	314.4	347.0	361.5
60°	247.3	260.0	291.7	327.1	341.6
62.5°	229.2	236.5	270.9	306.2	322.5
65°	202.9	212.0	248.2	284.5	301.7
67.5°	181.2	190.3	227.4	263.7	280.9
70°	157.6	166.7	205.7	241.9	259.1
72.5°	130.5	143.2	183.9	220.2	238.3
75°	108.7	120.5	160.4	196.6	211.1
77.5°	84.3	99.7	136.8	166.7	177.6
80°	62.5	77.9	111.4	133.2	143.2
82.5°	42.6	58.0	83.4	99.7	105.1
85°	25.4	36.2	53.5	62.5	61.6
87.5°	11.8	15.4	21.7	21.7	20.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)