

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: P308634

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP187-W2A-U-5700K**

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: P308634
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-5700K
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: 1898.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

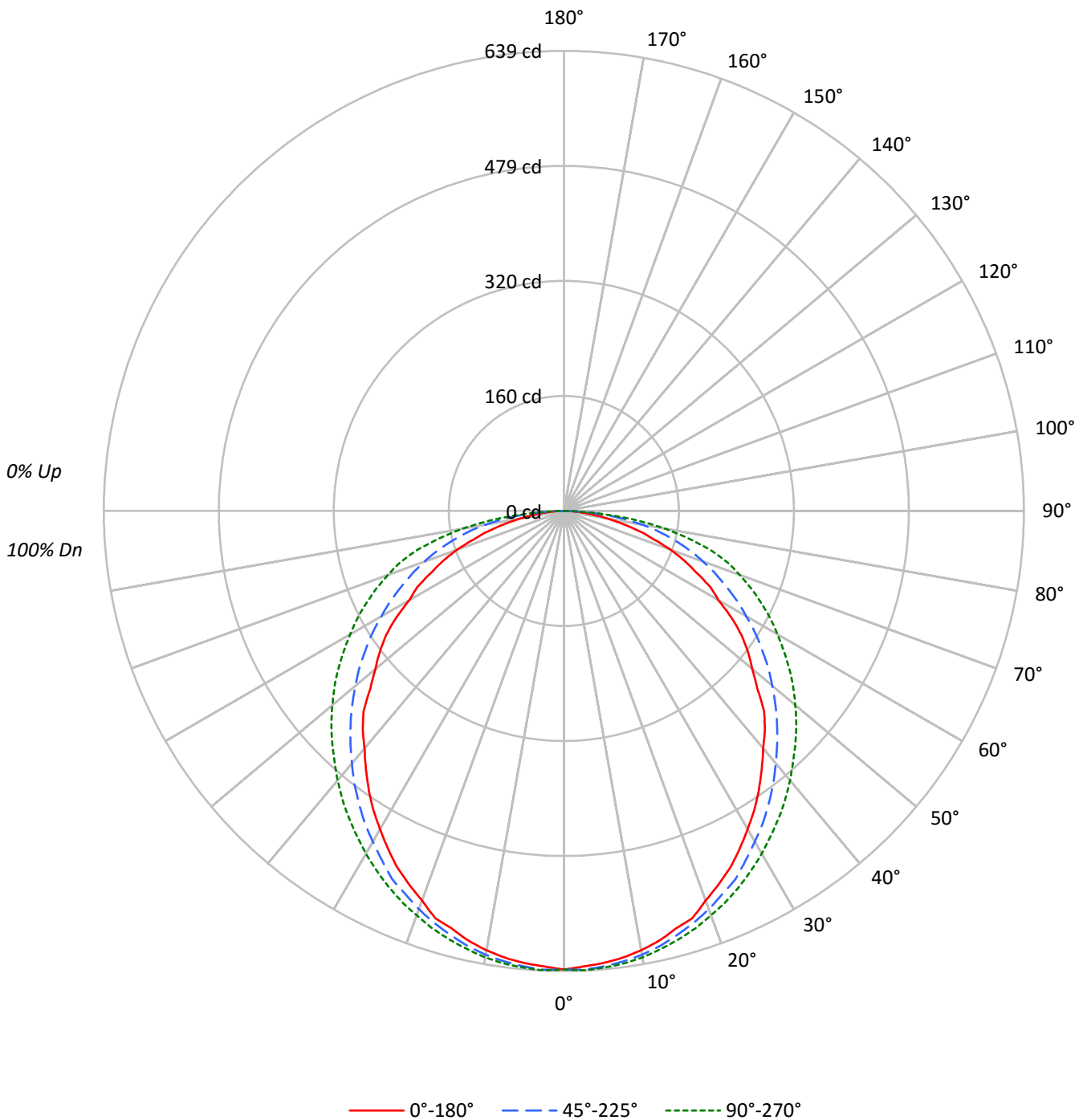
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1714	1714	1714
5°	1703	1715	1720
10°	1693	1710	1720
15°	1673	1698	1716
20°	1649	1686	1712
25°	1624	1675	1710
30°	1586	1648	1708
35°	1552	1629	1710
40°	1513	1608	1717
45°	1497	1594	1732
50°	1430	1582	1757
55°	1415	1577	1794
60°	1335	1574	1843
65°	1296	1585	1926
70°	1244	1622	2044
75°	1133	1672	2201
80°	972	1731	2224
85°	784	1655	1908



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.3	3.2
10°-20°	171.9	9.1
20°-30°	258.7	13.6
30°-40°	310.5	16.4
40°-50°	324.5	17.1
50°-60°	302.4	15.9
60°-70°	248.0	13.1
70°-80°	167.1	8.8
80°-90°	54.4	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°	490.9	25.9
0°-40°	801.4	42.2
0°-60°	1428.4	75.3
0°-90°	1898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1898.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	637	637	637	637	637	
5°	630	632	635	636	637	60
15°	600	604	610	615	616	170
25°	547	550	564	572	576	251
35°	472	479	496	513	520	295
45°	393	396	419	444	455	300
55°	302	307	336	368	382	267
65°	204	213	249	285	302	202
75°	109	121	161	197	212	115
85°	25	36	54	63	62	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	636.8	636.8	636.8	636.8	636.8
2.5°	633.2	635.0	637.7	638.6	638.6
5°	630.4	632.3	635.0	635.9	636.8
7.5°	625.9	627.7	631.3	633.2	634.1
10°	619.5	621.4	625.9	628.6	629.5
12.5°	611.4	613.2	618.6	622.3	623.2
15°	600.5	604.1	609.5	615.0	615.9
17.5°	593.2	592.3	599.6	605.9	607.7
20°	575.9	580.5	588.6	595.9	597.7
22.5°	561.4	565.0	575.9	584.1	587.7
25°	546.9	550.5	564.1	572.3	575.9
27.5°	528.7	534.1	546.9	558.7	563.2
30°	510.5	516.0	530.5	544.1	549.6
32.5°	492.4	498.7	514.2	528.7	535.1
35°	472.4	478.7	496.0	513.3	520.5
37.5°	451.5	459.7	477.8	496.9	505.1
40°	430.6	438.8	457.8	479.6	488.7
42.5°	413.3	417.0	438.8	462.4	471.5
45°	393.3	396.1	418.8	444.2	455.1
47.5°	364.3	374.3	398.8	427.0	437.9
50°	341.6	352.5	377.9	407.9	419.7
52.5°	322.5	329.8	357.9	387.9	401.5
55°	301.6	307.0	336.1	367.9	382.4
57.5°	276.2	286.1	315.2	347.9	362.5
60°	248.0	260.7	292.5	327.9	342.5
62.5°	229.8	237.1	271.6	307.0	323.4
65°	203.5	212.6	248.9	285.2	302.5
67.5°	181.7	190.8	228.0	264.3	281.6
70°	158.1	167.1	206.2	242.5	259.8
72.5°	130.8	143.5	184.4	220.7	238.9
75°	109.0	120.8	160.8	197.1	211.7
77.5°	84.5	99.9	137.2	167.1	178.0
80°	62.7	78.1	111.7	133.5	143.5
82.5°	42.7	58.1	83.6	99.9	105.4
85°	25.4	36.3	53.6	62.7	61.8
87.5°	11.8	15.4	21.8	21.8	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)