

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: P308673

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-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: P308673
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: 22FCZ2-24HE-UNV-L82765-CP187-W2A-U-3000K
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: 1939.0 lumens
Efficiency: N/A
Efficacy: 103.1 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

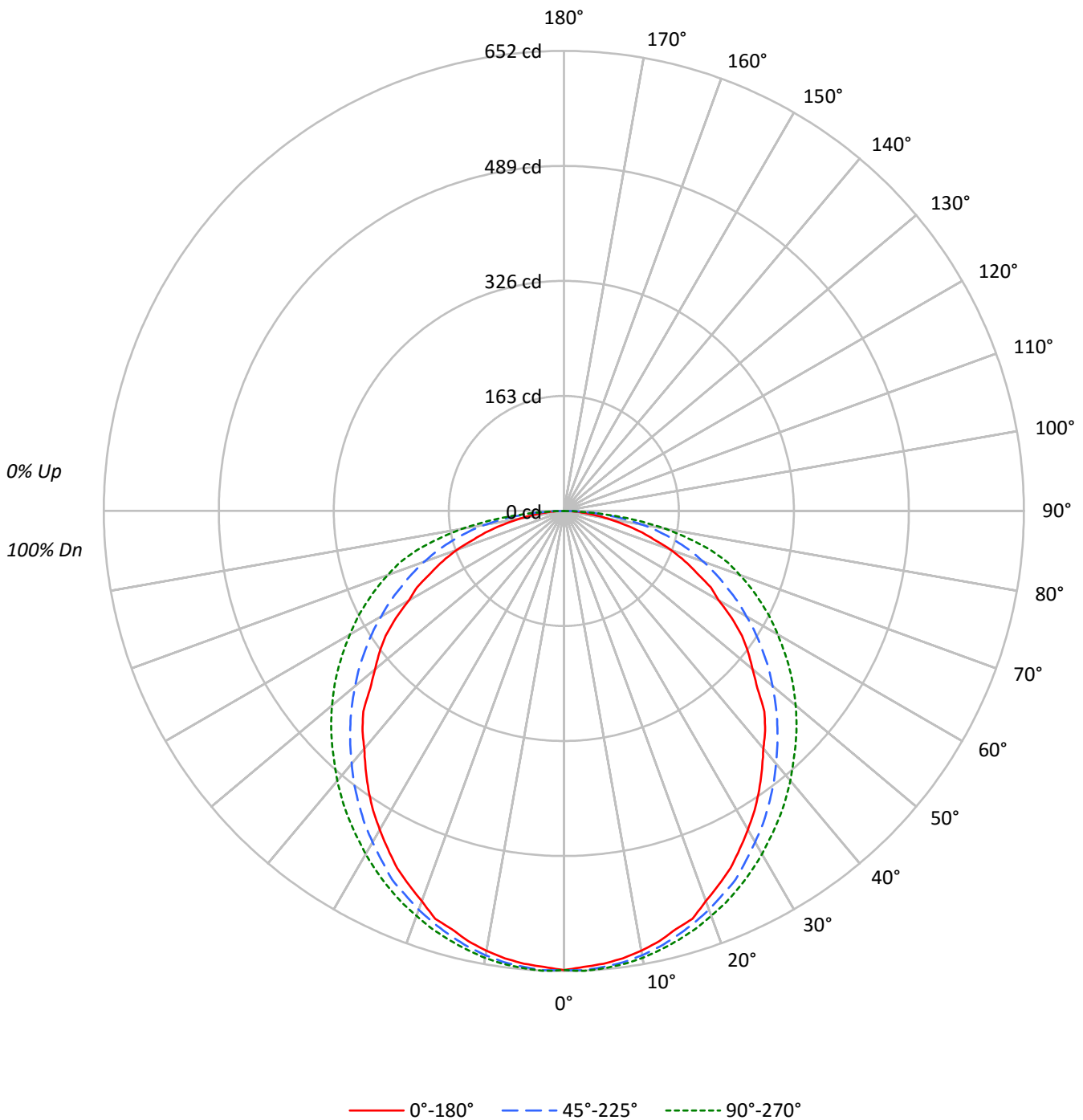
Input Watts (W): 18.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1751	1751	1751
5°	1740	1752	1757
10°	1729	1747	1757
15°	1709	1735	1753
20°	1685	1722	1749
25°	1659	1711	1747
30°	1621	1684	1745
35°	1585	1665	1747
40°	1545	1643	1754
45°	1529	1628	1769
50°	1461	1616	1795
55°	1445	1611	1833
60°	1364	1608	1883
65°	1324	1619	1968
70°	1271	1658	2088
75°	1158	1708	2248
80°	992	1768	2272
85°	803	1692	1948



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.6	3.2
10°-20°	175.6	9.1
20°-30°	264.3	13.6
30°-40°	317.2	16.4
40°-50°	331.5	17.1
50°-60°	309.0	15.9
60°-70°	253.4	13.1
70°-80°	170.8	8.8
80°-90°	55.6	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°	501.5	25.9
0°-40°	818.7	42.2
0°-60°	1459.2	75.3
0°-90°	1939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	651	651	651	651	651	
5°	644	646	649	650	651	61
15°	613	617	623	628	629	173
25°	559	562	576	585	588	257
35°	483	489	507	524	532	302
45°	402	405	428	454	465	307
55°	308	314	343	376	391	273
65°	208	217	254	291	309	207
75°	111	123	164	201	216	117
85°	26	37	55	64	63	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	650.6	650.6	650.6	650.6	650.6
2.5°	646.8	648.7	651.5	652.4	652.4
5°	644.1	645.9	648.7	649.6	650.6
7.5°	639.4	641.3	645.0	646.8	647.8
10°	632.9	634.8	639.4	642.2	643.1
12.5°	624.6	626.4	632.0	635.7	636.6
15°	613.4	617.1	622.7	628.3	629.2
17.5°	606.0	605.1	612.5	619.0	620.9
20°	588.4	593.0	601.4	608.8	610.6
22.5°	573.5	577.2	588.4	596.7	600.4
25°	558.7	562.4	576.3	584.7	588.4
27.5°	540.1	545.7	558.7	570.7	575.4
30°	521.6	527.1	542.0	555.9	561.5
32.5°	503.0	509.5	525.3	540.1	546.6
35°	482.6	489.1	506.7	524.3	531.8
37.5°	461.2	469.6	488.1	507.6	516.0
40°	439.9	448.2	467.7	490.0	499.3
42.5°	422.3	426.0	448.2	472.4	481.6
45°	401.8	404.6	427.8	453.8	464.9
47.5°	372.1	382.3	407.4	436.2	447.3
50°	348.9	360.1	386.1	416.7	428.8
52.5°	329.5	336.9	365.6	396.3	410.2
55°	308.1	313.7	343.4	375.9	390.7
57.5°	282.1	292.3	322.0	355.4	370.3
60°	253.4	266.3	298.8	335.0	349.9
62.5°	234.8	242.2	277.5	313.7	330.4
65°	207.9	217.2	254.3	291.4	309.0
67.5°	185.6	194.9	232.9	270.1	287.7
70°	161.5	170.8	210.7	247.8	265.4
72.5°	133.6	146.6	188.4	225.5	244.1
75°	111.4	123.4	164.3	201.4	216.2
77.5°	86.3	102.1	140.1	170.8	181.9
80°	64.0	79.8	114.1	136.4	146.6
82.5°	43.6	59.4	85.4	102.1	107.7
85°	26.0	37.1	54.8	64.0	63.1
87.5°	12.1	15.8	22.3	22.3	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)