

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: P308140

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P308140
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
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-HRP-CP187-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 1668.0 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

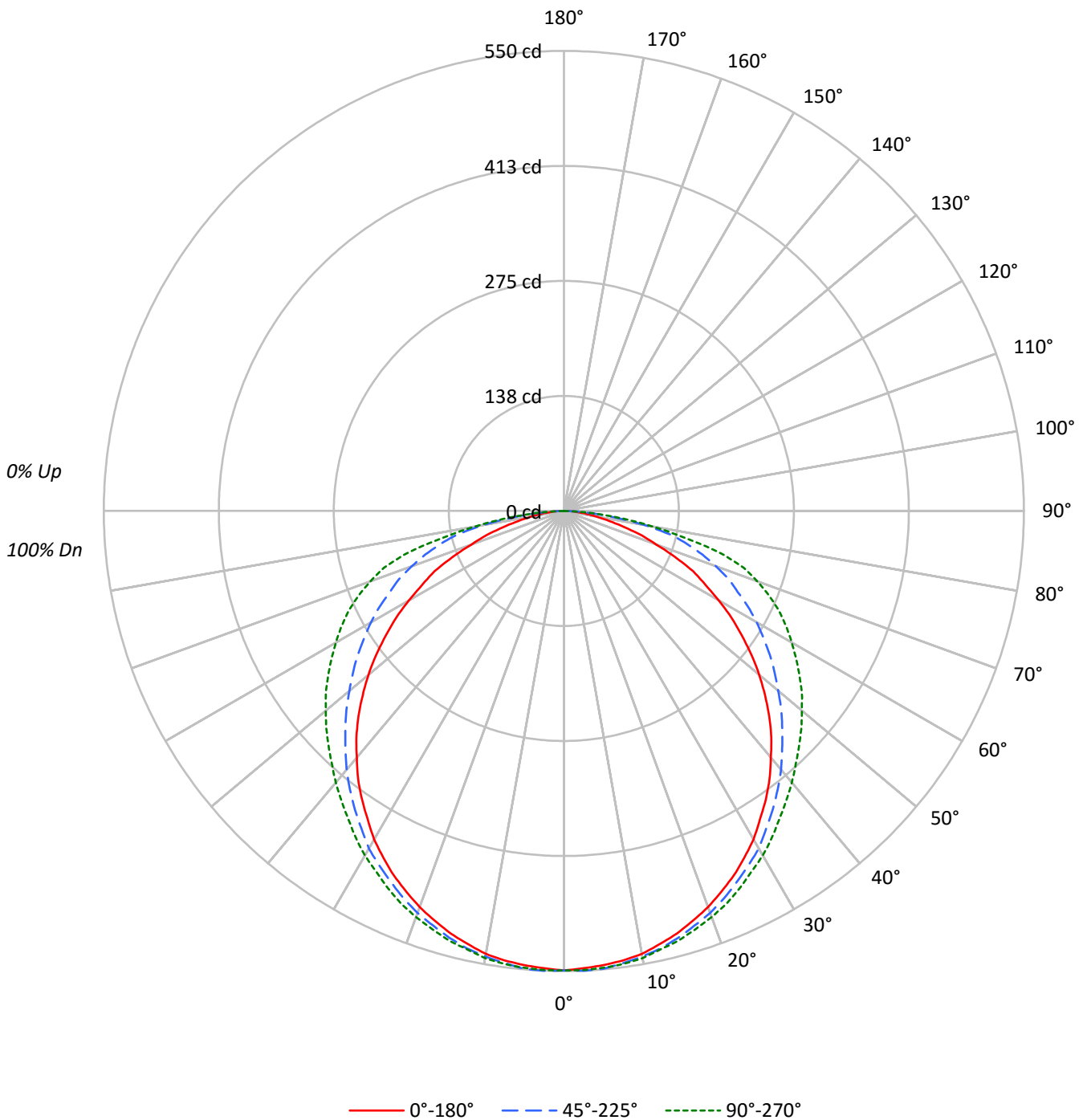
Input Watts (W): 19.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1478	1478	1478
5°	1472	1484	1481
10°	1469	1478	1483
15°	1457	1472	1480
20°	1443	1464	1479
25°	1428	1453	1478
30°	1409	1448	1478
35°	1383	1431	1476
40°	1353	1419	1489
45°	1321	1405	1513
50°	1277	1401	1555
55°	1219	1412	1614
60°	1150	1433	1693
65°	1086	1461	1809
70°	927	1523	1937
75°	777	1587	2013
80°	635	1533	1680
85°	553	1136	1235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	3.1
10°-20°	148.9	8.9
20°-30°	225.7	13.5
30°-40°	272.5	16.3
40°-50°	286.3	17.2
50°-60°	269.4	16.2
60°-70°	224.6	13.5
70°-80°	148.8	8.9
80°-90°	39.7	2.4
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°	426.6	25.6
0°-40°	699.1	41.9
0°-60°	1254.9	75.2
0°-90°	1668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1668.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	549	549	549	549	549	
5°	545	546	549	549	548	52
15°	523	525	528	530	531	147
25°	481	484	489	496	498	221
35°	421	425	436	445	449	263
45°	347	352	369	388	398	267
55°	260	272	301	331	344	232
65°	170	185	229	267	284	166
75°	75	104	153	184	194	81
85°	18	27	37	40	40	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	549.3	549.3	549.3	549.3	549.3
2.5°	547.1	548.2	550.3	550.3	549.3
5°	545.0	546.1	549.3	549.3	548.2
7.5°	541.9	542.9	545.0	547.1	546.1
10°	537.7	538.7	540.8	542.9	542.9
12.5°	530.3	531.4	535.6	536.6	536.6
15°	522.9	525.1	528.2	530.3	531.4
17.5°	513.5	515.6	519.8	524.0	524.0
20°	504.0	506.1	511.4	515.6	516.6
22.5°	492.4	495.6	500.9	506.1	508.2
25°	480.9	484.0	489.3	495.6	497.7
27.5°	467.2	470.3	477.7	485.1	486.1
30°	453.5	456.7	466.1	472.4	475.6
32.5°	436.7	440.9	450.3	459.8	463.0
35°	420.9	425.1	435.6	445.1	449.3
37.5°	404.0	408.3	419.8	431.4	436.7
40°	385.1	390.4	404.0	416.7	424.0
42.5°	367.2	372.5	386.2	403.0	410.4
45°	347.2	352.5	369.3	388.3	397.7
47.5°	326.2	332.5	352.5	375.6	385.1
50°	305.1	312.5	334.6	360.9	371.4
52.5°	283.0	292.5	317.8	346.2	358.8
55°	259.9	271.5	300.9	331.4	344.1
57.5°	237.8	248.3	283.0	315.7	329.3
60°	213.6	227.3	266.2	299.9	314.6
62.5°	190.5	205.2	248.3	284.1	299.9
65°	170.5	185.2	229.4	267.3	284.1
67.5°	144.2	164.1	213.6	249.4	266.2
70°	117.8	145.2	193.6	230.4	246.2
72.5°	97.9	124.2	173.6	210.4	225.2
75°	74.7	104.2	152.6	184.1	193.6
77.5°	55.8	86.3	130.5	146.3	147.3
80°	41.0	66.3	98.9	104.2	108.4
82.5°	28.4	46.3	64.2	70.5	72.6
85°	17.9	27.4	36.8	40.0	40.0
87.5°	9.5	10.5	12.6	12.6	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)