

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: P308137

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5000K**

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: P308137
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-5000K
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: 1643.0 lumens
Efficiency: N/A
Efficacy: 85.1 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

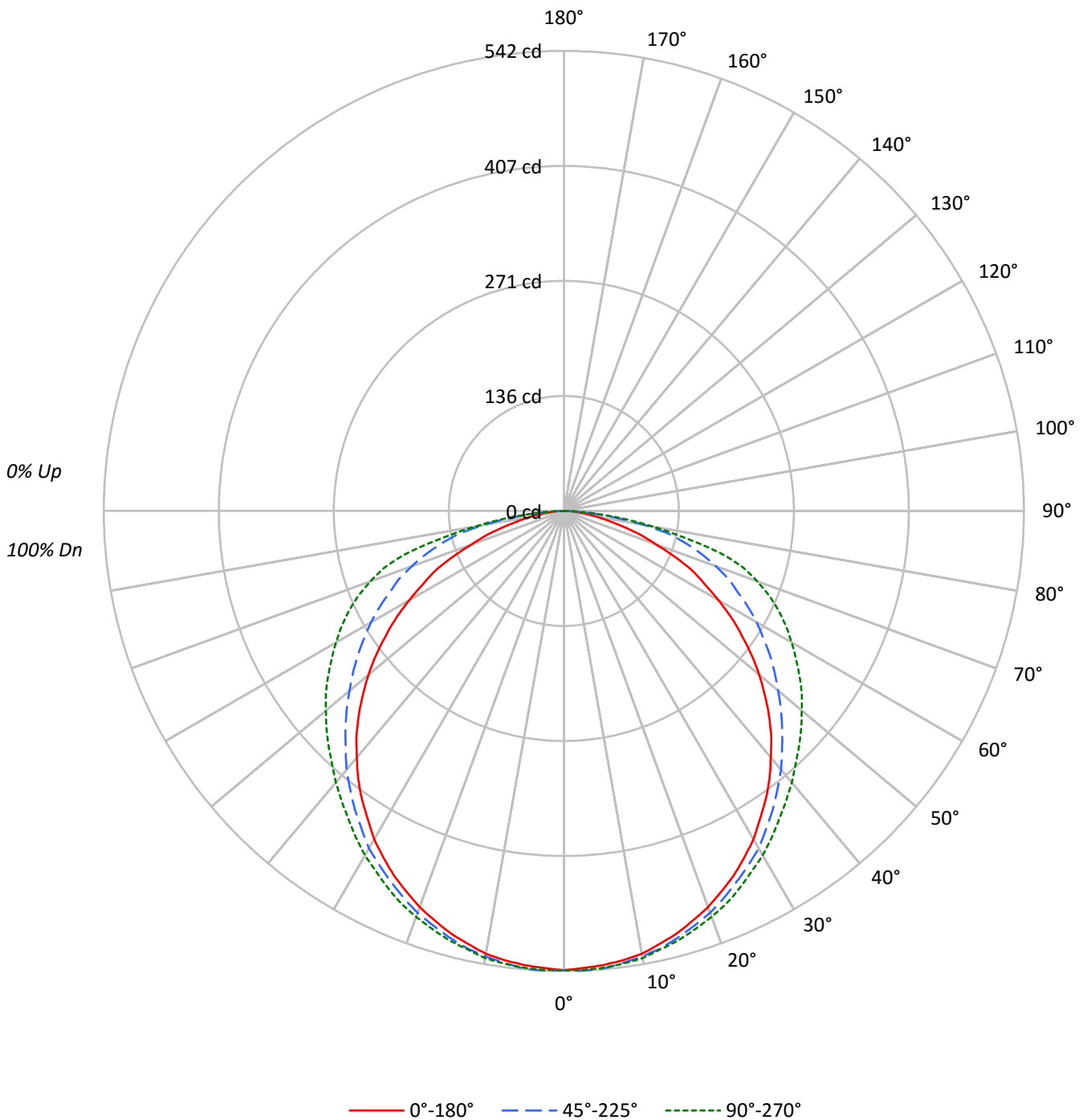
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1456	1456	1456
5°	1450	1461	1459
10°	1447	1456	1461
15°	1435	1450	1458
20°	1422	1442	1457
25°	1406	1431	1455
30°	1388	1427	1456
35°	1362	1410	1454
40°	1332	1398	1467
45°	1302	1384	1491
50°	1258	1380	1532
55°	1201	1391	1590
60°	1132	1411	1668
65°	1069	1438	1782
70°	913	1500	1908
75°	765	1563	1983
80°	626	1509	1655
85°	543	1121	1216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	3.1
10°-20°	146.7	8.9
20°-30°	222.3	13.5
30°-40°	268.4	16.3
40°-50°	282.0	17.2
50°-60°	265.4	16.2
60°-70°	221.3	13.5
70°-80°	146.6	8.9
80°-90°	39.1	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°	420.2	25.6
0°-40°	688.6	41.9
0°-60°	1236.0	75.2
0°-90°	1643.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1643.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	541	541	541	541	541	
5°	537	538	541	541	540	51
15°	515	517	520	522	523	145
25°	474	477	482	488	490	218
35°	415	419	429	438	443	259
45°	342	347	364	382	392	263
55°	256	267	296	326	339	229
65°	168	182	226	263	280	163
75°	74	103	150	181	191	80
85°	18	27	36	39	39	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	541.0	541.0	541.0	541.0	541.0
2.5°	538.9	540.0	542.1	542.1	541.0
5°	536.9	537.9	541.0	541.0	540.0
7.5°	533.8	534.8	536.9	538.9	537.9
10°	529.6	530.7	532.7	534.8	534.8
12.5°	522.4	523.4	527.5	528.6	528.6
15°	515.1	517.2	520.3	522.4	523.4
17.5°	505.8	507.9	512.0	516.1	516.1
20°	496.5	498.5	503.7	507.9	508.9
22.5°	485.1	488.2	493.3	498.5	500.6
25°	473.7	476.8	481.9	488.2	490.2
27.5°	460.2	463.3	470.5	477.8	478.8
30°	446.7	449.8	459.1	465.4	468.5
32.5°	430.1	434.3	443.6	452.9	456.0
35°	414.6	418.7	429.1	438.4	442.6
37.5°	398.0	402.1	413.5	424.9	430.1
40°	379.3	384.5	398.0	410.4	417.7
42.5°	361.7	366.9	380.4	397.0	404.2
45°	342.0	347.2	363.8	382.4	391.8
47.5°	321.3	327.5	347.2	370.0	379.3
50°	300.6	307.8	329.6	355.5	365.9
52.5°	278.8	288.1	313.0	341.0	353.4
55°	256.0	267.4	296.4	326.5	338.9
57.5°	234.2	244.6	278.8	310.9	324.4
60°	210.4	223.9	262.2	295.4	309.9
62.5°	187.6	202.1	244.6	279.8	295.4
65°	167.9	182.4	225.9	263.3	279.8
67.5°	142.0	161.7	210.4	245.6	262.2
70°	116.1	143.0	190.7	227.0	242.5
72.5°	96.4	122.3	171.0	207.3	221.8
75°	73.6	102.6	150.3	181.4	190.7
77.5°	54.9	85.0	128.5	144.1	145.1
80°	40.4	65.3	97.4	102.6	106.8
82.5°	28.0	45.6	63.2	69.4	71.5
85°	17.6	26.9	36.3	39.4	39.4
87.5°	9.3	10.4	12.4	12.4	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)