

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: P308679

Luminaire Tested: **22FCZ2-24HE-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: P308679
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-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: 2142.0 lumens
Efficiency: N/A
Efficacy: 110.4 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

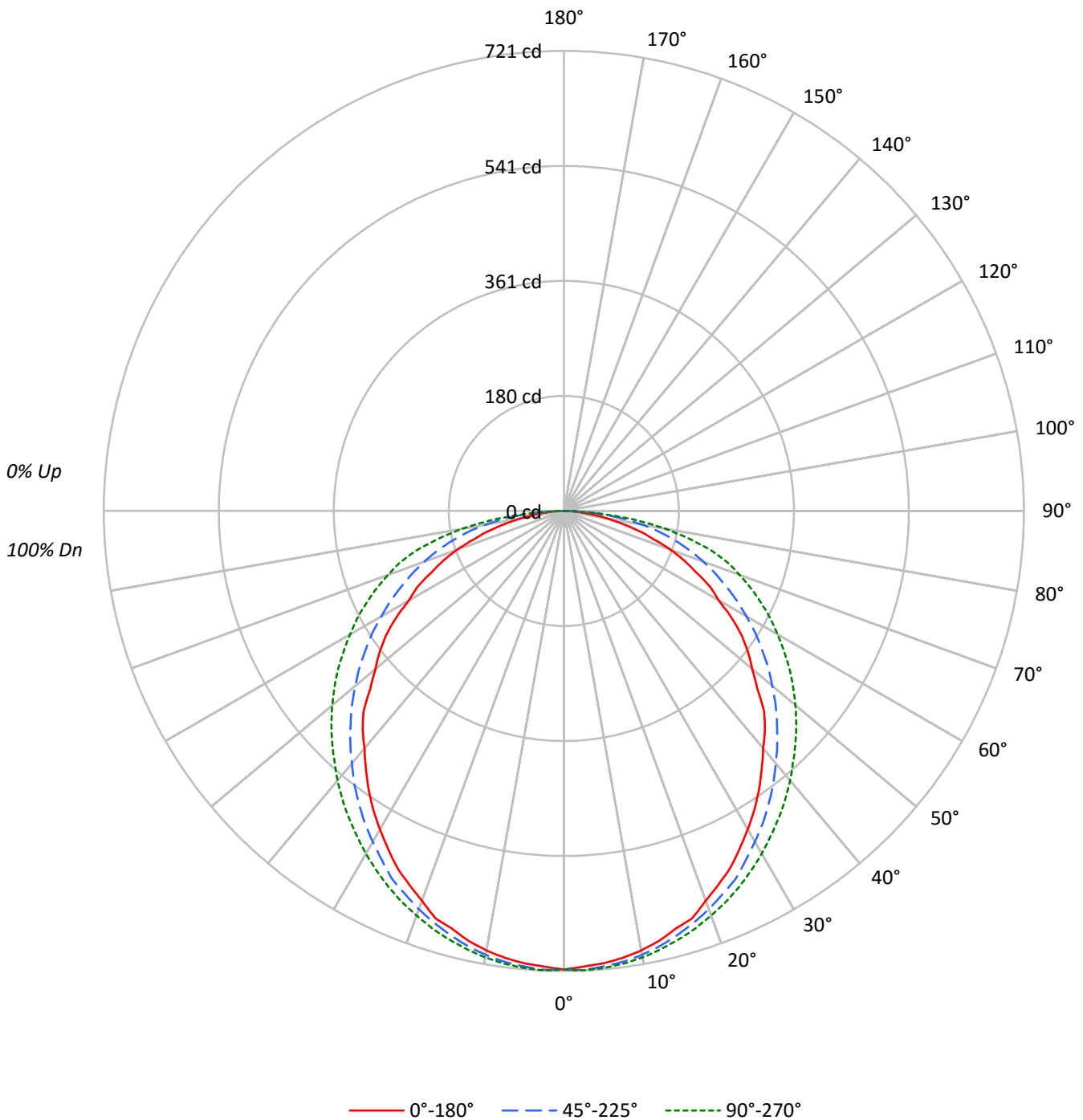
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1934	1934	1934
5°	1922	1936	1941
10°	1911	1930	1941
15°	1888	1916	1936
20°	1861	1902	1932
25°	1833	1890	1930
30°	1790	1860	1927
35°	1751	1839	1930
40°	1707	1815	1938
45°	1689	1799	1955
50°	1614	1786	1983
55°	1597	1780	2025
60°	1506	1777	2080
65°	1462	1789	2174
70°	1404	1831	2307
75°	1279	1887	2484
80°	1096	1954	2510
85°	886	1868	2152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	3.2
10°-20°	194.0	9.1
20°-30°	292.0	13.6
30°-40°	350.4	16.4
40°-50°	366.3	17.1
50°-60°	341.3	15.9
60°-70°	279.9	13.1
70°-80°	188.6	8.8
80°-90°	61.4	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°	554.0	25.9
0°-40°	904.4	42.2
0°-60°	1612.0	75.3
0°-90°	2142.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2142.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	712	714	717	718	719	68
15°	678	682	688	694	695	192
25°	617	621	637	646	650	284
35°	533	540	560	579	587	333
45°	444	447	473	501	514	339
55°	340	346	379	415	432	302
65°	230	240	281	322	341	228
75°	123	136	182	222	239	129
85°	29	41	60	71	70	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.7	718.7	718.7	718.7	718.7
2.5°	714.6	716.6	719.7	720.7	720.7
5°	711.5	713.5	716.6	717.6	718.7
7.5°	706.4	708.4	712.5	714.6	715.6
10°	699.2	701.2	706.4	709.4	710.5
12.5°	690.0	692.0	698.2	702.3	703.3
15°	677.7	681.8	687.9	694.1	695.1
17.5°	669.4	668.4	676.6	683.8	685.9
20°	650.0	655.1	664.3	672.5	674.6
22.5°	633.6	637.7	650.0	659.2	663.3
25°	617.2	621.3	636.6	645.9	650.0
27.5°	596.7	602.8	617.2	630.5	635.6
30°	576.2	582.3	598.7	614.1	620.2
32.5°	555.7	562.8	580.3	596.7	603.8
35°	533.1	540.3	559.8	579.2	587.4
37.5°	509.5	518.7	539.3	560.8	570.0
40°	485.9	495.2	516.7	541.3	551.6
42.5°	466.5	470.6	495.2	521.8	532.1
45°	443.9	447.0	472.6	501.3	513.6
47.5°	411.1	422.4	450.1	481.8	494.1
50°	385.5	397.8	426.5	460.3	473.6
52.5°	363.9	372.1	403.9	437.8	453.1
55°	340.4	346.5	379.3	415.2	431.6
57.5°	311.7	322.9	355.7	392.6	409.1
60°	279.9	294.2	330.1	370.1	386.5
62.5°	259.4	267.6	306.5	346.5	365.0
65°	229.6	239.9	280.9	321.9	341.4
67.5°	205.0	215.3	257.3	298.3	317.8
70°	178.4	188.6	232.7	273.7	293.2
72.5°	147.6	162.0	208.1	249.1	269.6
75°	123.0	136.4	181.5	222.5	238.9
77.5°	95.3	112.8	154.8	188.6	200.9
80°	70.7	88.2	126.1	150.7	162.0
82.5°	48.2	65.6	94.3	112.8	118.9
85°	28.7	41.0	60.5	70.7	69.7
87.5°	13.3	17.4	24.6	24.6	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)