

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: P308685

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CP250-W2A-U-4500K**

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: P308685
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-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 2070.0 lumens
Efficiency: N/A
Efficacy: 107.3 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

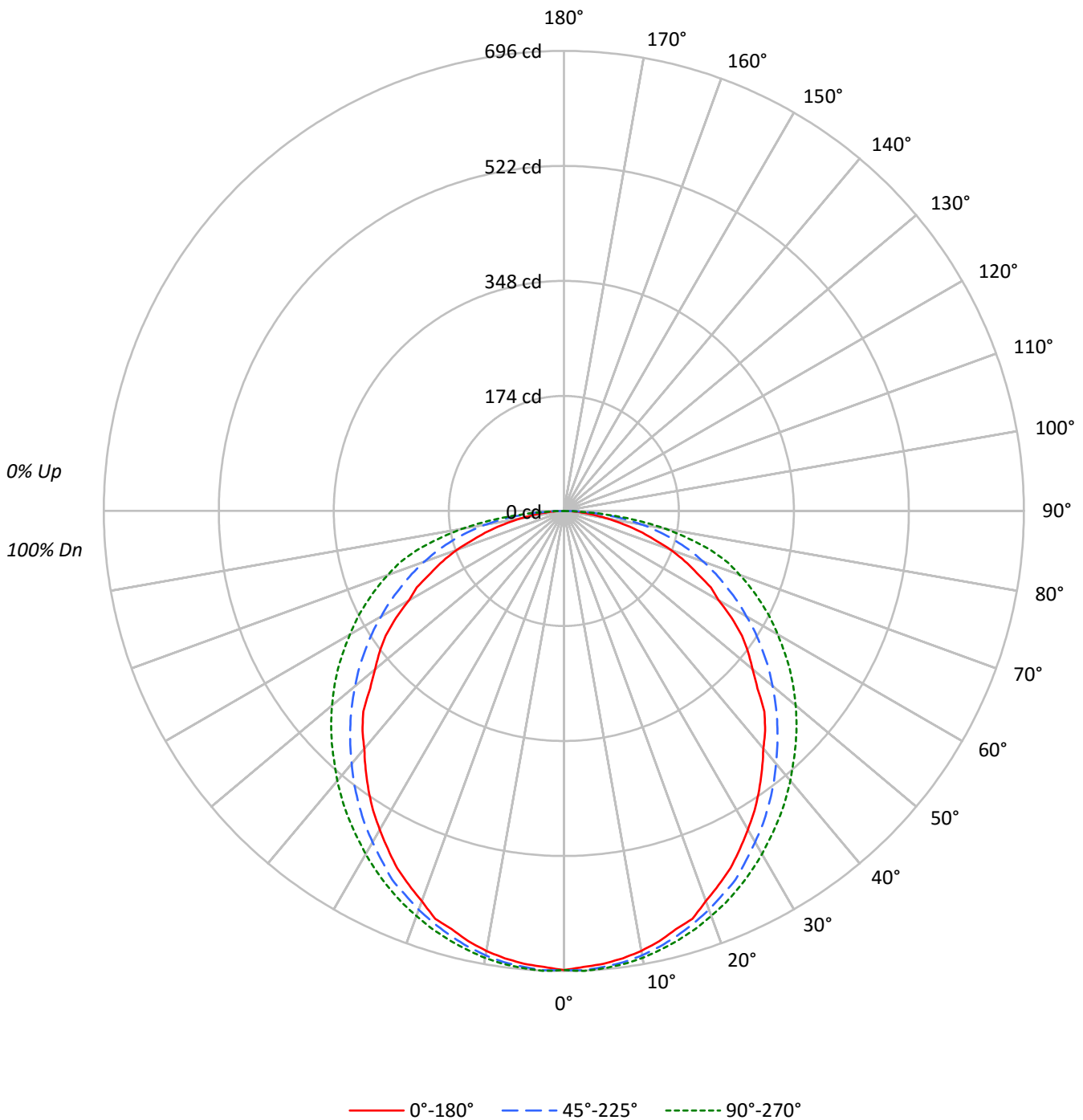
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1869	1869	1869
5°	1857	1871	1876
10°	1846	1865	1876
15°	1824	1852	1871
20°	1799	1838	1867
25°	1771	1827	1865
30°	1730	1798	1863
35°	1692	1777	1865
40°	1650	1754	1872
45°	1633	1738	1889
50°	1559	1725	1916
55°	1543	1720	1957
60°	1456	1717	2010
65°	1413	1729	2101
70°	1356	1769	2229
75°	1236	1824	2400
80°	1060	1889	2425
85°	855	1806	2081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.7	3.2
10°-20°	187.5	9.1
20°-30°	282.2	13.6
30°-40°	338.6	16.4
40°-50°	353.9	17.1
50°-60°	329.9	15.9
60°-70°	270.5	13.1
70°-80°	182.3	8.8
80°-90°	59.4	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°	535.3	25.9
0°-40°	874.0	42.2
0°-60°	1557.8	75.3
0°-90°	2070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	688	690	692	694	694	65
15°	655	659	665	671	672	185
25°	596	600	615	624	628	274
35°	515	522	541	560	568	322
45°	429	432	457	484	496	328
55°	329	335	367	401	417	291
65°	222	232	272	311	330	221
75°	119	132	175	215	231	125
85°	28	40	58	68	67	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	694.5	694.5	694.5	694.5	694.5
2.5°	690.5	692.5	695.5	696.5	696.5
5°	687.6	689.5	692.5	693.5	694.5
7.5°	682.6	684.6	688.6	690.5	691.5
10°	675.7	677.7	682.6	685.6	686.6
12.5°	666.8	668.7	674.7	678.7	679.6
15°	654.9	658.8	664.8	670.7	671.7
17.5°	646.9	646.0	653.9	660.8	662.8
20°	628.1	633.1	642.0	649.9	651.9
22.5°	612.3	616.2	628.1	637.0	641.0
25°	596.4	600.4	615.2	624.2	628.1
27.5°	576.6	582.5	596.4	609.3	614.3
30°	556.8	562.7	578.6	593.4	599.4
32.5°	537.0	543.9	560.8	576.6	583.5
35°	515.2	522.1	540.9	559.8	567.7
37.5°	492.4	501.3	521.1	541.9	550.8
40°	469.6	478.5	499.3	523.1	533.0
42.5°	450.8	454.7	478.5	504.3	514.2
45°	429.0	432.0	456.7	484.5	496.4
47.5°	397.3	408.2	434.9	465.6	477.5
50°	372.5	384.4	412.1	444.8	457.7
52.5°	351.7	359.6	390.3	423.0	437.9
55°	328.9	334.9	366.6	401.2	417.1
57.5°	301.2	312.1	343.8	379.5	395.3
60°	270.5	284.3	319.0	357.7	373.5
62.5°	250.7	258.6	296.2	334.9	352.7
65°	221.9	231.8	271.5	311.1	329.9
67.5°	198.1	208.1	248.7	288.3	307.1
70°	172.4	182.3	224.9	264.5	283.3
72.5°	142.7	156.5	201.1	240.7	260.6
75°	118.9	131.8	175.4	215.0	230.8
77.5°	92.1	109.0	149.6	182.3	194.2
80°	68.4	85.2	121.9	145.6	156.5
82.5°	46.6	63.4	91.1	109.0	114.9
85°	27.7	39.6	58.5	68.4	67.4
87.5°	12.9	16.8	23.8	23.8	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)