

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: P308681

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CP250-W2A-U-2700K**

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: P308681
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-2700K
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: 1869.0 lumens
Efficiency: N/A
Efficacy: 98.9 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

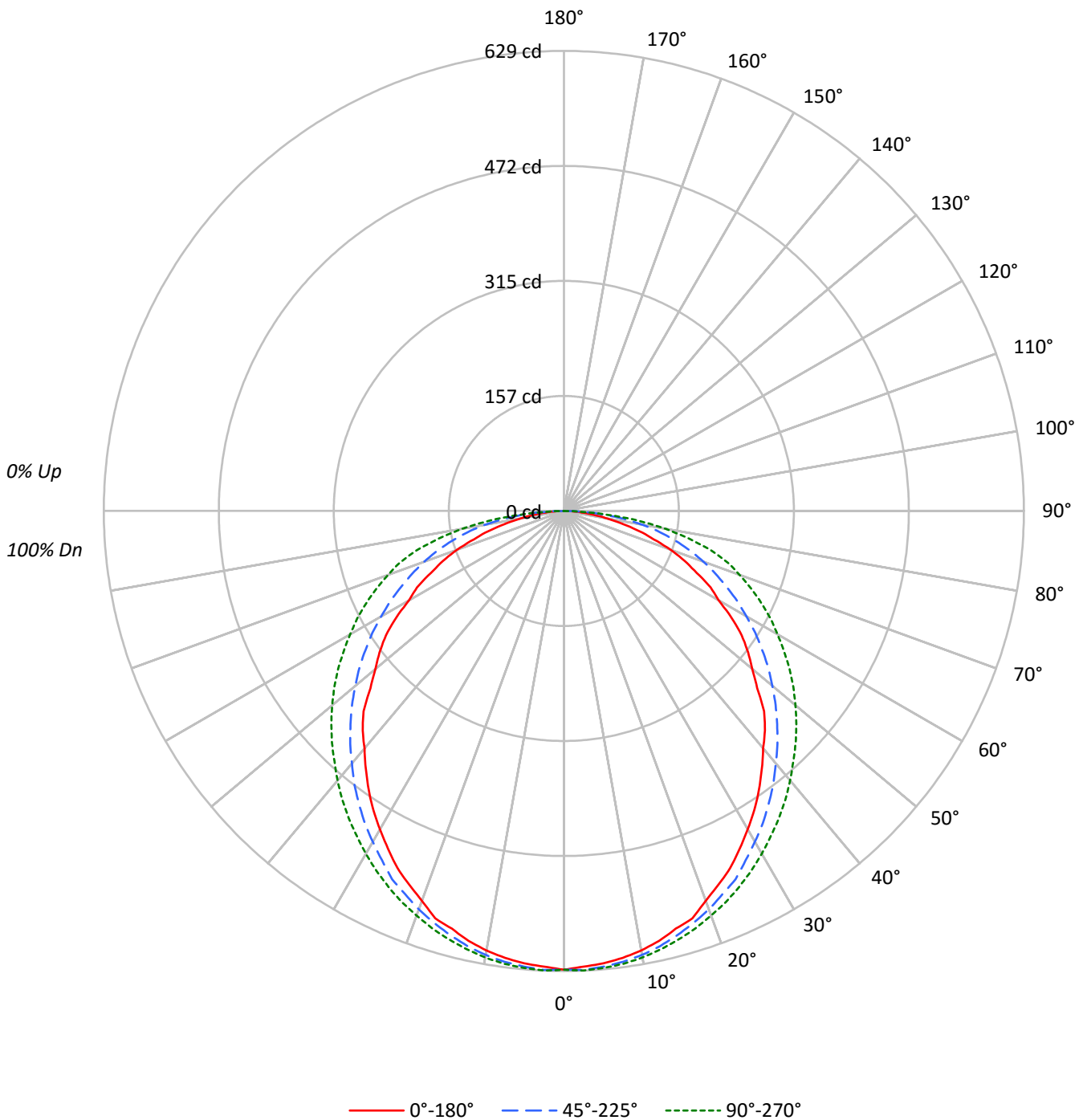
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1688	1688	1688
5°	1677	1689	1694
10°	1667	1684	1694
15°	1647	1672	1690
20°	1624	1660	1686
25°	1599	1649	1684
30°	1562	1623	1682
35°	1528	1604	1684
40°	1489	1584	1691
45°	1474	1569	1706
50°	1408	1558	1730
55°	1393	1553	1767
60°	1314	1550	1815
65°	1276	1561	1897
70°	1224	1598	2013
75°	1116	1646	2167
80°	956	1705	2190
85°	772	1630	1877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	3.2
10°-20°	169.3	9.1
20°-30°	254.8	13.6
30°-40°	305.8	16.4
40°-50°	319.6	17.1
50°-60°	297.8	15.9
60°-70°	244.3	13.1
70°-80°	164.6	8.8
80°-90°	53.6	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°	483.4	25.9
0°-40°	789.1	42.2
0°-60°	1406.5	75.3
0°-90°	1869.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1869.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	627	627	627	627	627	
5°	621	623	625	626	627	59
15°	591	595	600	606	606	167
25°	538	542	556	564	567	248
35°	465	471	488	505	513	291
45°	387	390	412	437	448	296
55°	297	302	331	362	377	263
65°	200	209	245	281	298	199
75°	107	119	158	194	208	113
85°	25	36	53	62	61	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	627.1	627.1	627.1	627.1	627.1
2.5°	623.5	625.3	628.0	628.9	628.9
5°	620.8	622.6	625.3	626.2	627.1
7.5°	616.3	618.1	621.7	623.5	624.4
10°	610.1	611.9	616.3	619.0	619.9
12.5°	602.0	603.8	609.2	612.8	613.6
15°	591.3	594.9	600.2	605.6	606.5
17.5°	584.1	583.2	590.4	596.7	598.4
20°	567.1	571.6	579.7	586.8	588.6
22.5°	552.8	556.4	567.1	575.2	578.8
25°	538.5	542.1	555.5	563.6	567.1
27.5°	520.6	526.0	538.5	550.1	554.6
30°	502.7	508.1	522.4	535.8	541.2
32.5°	484.8	491.1	506.3	520.6	526.9
35°	465.2	471.4	488.4	505.4	512.6
37.5°	444.6	452.6	470.5	489.3	497.4
40°	424.0	432.1	450.8	472.3	481.3
42.5°	407.0	410.6	432.1	455.3	464.3
45°	387.3	390.0	412.4	437.4	448.2
47.5°	358.7	368.5	392.7	420.4	431.2
50°	336.3	347.1	372.1	401.6	413.3
52.5°	317.6	324.7	352.4	382.0	395.4
55°	297.0	302.4	331.0	362.3	376.6
57.5°	271.9	281.8	310.4	342.6	356.9
60°	244.2	256.7	288.0	322.9	337.2
62.5°	226.3	233.5	267.5	302.4	318.5
65°	200.4	209.3	245.1	280.9	297.9
67.5°	178.9	187.9	224.5	260.3	277.3
70°	155.6	164.6	203.1	238.8	255.8
72.5°	128.8	141.3	181.6	217.4	235.3
75°	107.3	119.0	158.3	194.1	208.4
77.5°	83.2	98.4	135.1	164.6	175.3
80°	61.7	76.9	110.0	131.5	141.3
82.5°	42.0	57.2	82.3	98.4	103.8
85°	25.0	35.8	52.8	61.7	60.8
87.5°	11.6	15.2	21.5	21.5	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)