

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: P308651

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CA08-W2A-U-5500K**

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: P308651
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-CA08-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 2282.0 lumens
Efficiency: N/A
Efficacy: 117.6 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

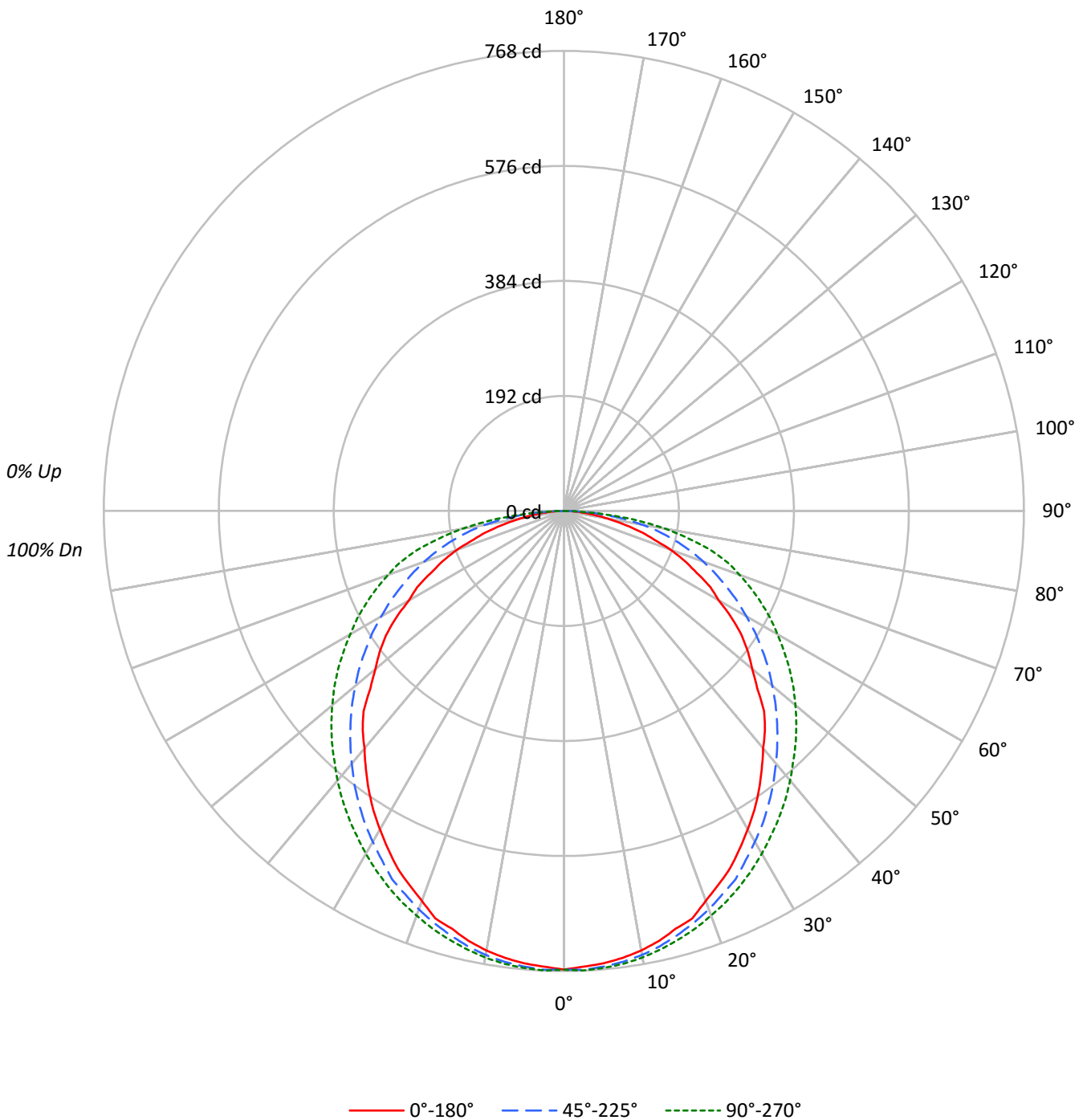
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2060	2060	2060
5°	2048	2062	2068
10°	2035	2056	2068
15°	2011	2042	2063
20°	1983	2027	2058
25°	1952	2014	2056
30°	1907	1982	2053
35°	1866	1959	2056
40°	1819	1934	2064
45°	1800	1916	2082
50°	1719	1902	2112
55°	1701	1896	2157
60°	1605	1893	2216
65°	1558	1906	2316
70°	1495	1950	2458
75°	1363	2010	2646
80°	1168	2081	2675
85°	945	1988	2294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.4	3.2
10°-20°	206.7	9.1
20°-30°	311.1	13.6
30°-40°	373.3	16.4
40°-50°	390.2	17.1
50°-60°	363.6	15.9
60°-70°	298.3	13.1
70°-80°	201.0	8.8
80°-90°	65.5	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°	590.2	25.9
0°-40°	963.5	42.2
0°-60°	1717.3	75.3
0°-90°	2282.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2282.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	766	766	766	766	766	
5°	758	760	763	764	766	72
15°	722	726	733	739	740	204
25°	658	662	678	688	692	302
35°	568	576	596	617	626	355
45°	473	476	504	534	547	361
55°	363	369	404	442	460	321
65°	245	256	299	343	364	243
75°	131	145	193	237	254	138
85°	31	44	64	75	74	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	765.6	765.6	765.6	765.6	765.6
2.5°	761.3	763.4	766.7	767.8	767.8
5°	758.0	760.2	763.4	764.5	765.6
7.5°	752.5	754.7	759.1	761.3	762.4
10°	744.9	747.1	752.5	755.8	756.9
12.5°	735.0	737.2	743.8	748.2	749.2
15°	721.9	726.3	732.9	739.4	740.5
17.5°	713.2	712.1	720.9	728.5	730.7
20°	692.5	697.9	707.7	716.5	718.7
22.5°	675.0	679.3	692.5	702.3	706.7
25°	657.5	661.9	678.3	688.1	692.5
27.5°	635.7	642.2	657.5	671.7	677.2
30°	613.8	620.4	637.8	654.2	660.8
32.5°	592.0	599.6	618.2	635.7	643.3
35°	567.9	575.6	596.3	617.1	625.8
37.5°	542.8	552.7	574.5	597.4	607.3
40°	517.7	527.5	550.5	576.7	587.6
42.5°	496.9	501.3	527.5	555.9	566.9
45°	472.9	476.2	503.5	534.1	547.2
47.5°	438.0	450.0	479.5	513.3	526.4
50°	410.7	423.8	454.4	490.4	504.6
52.5°	387.7	396.5	430.3	466.4	482.8
55°	362.6	369.2	404.1	442.3	459.8
57.5°	332.0	344.0	379.0	418.3	435.8
60°	298.2	313.5	351.7	394.3	411.8
62.5°	276.3	285.1	326.6	369.2	388.8
65°	244.7	255.6	299.3	342.9	363.7
67.5°	218.4	229.4	274.1	317.8	338.6
70°	190.0	201.0	247.9	291.6	312.4
72.5°	157.3	172.6	221.7	265.4	287.2
75°	131.1	145.3	193.3	237.0	254.5
77.5°	101.6	120.1	164.9	201.0	214.1
80°	75.4	93.9	134.3	160.6	172.6
82.5°	51.3	69.9	100.5	120.1	126.7
85°	30.6	43.7	64.4	75.4	74.3
87.5°	14.2	18.6	26.2	26.2	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)