

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: P308648

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CA08-W2A-U-4000K**

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: P308648
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-4000K
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: 2192.0 lumens
Efficiency: N/A
Efficacy: 114.8 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

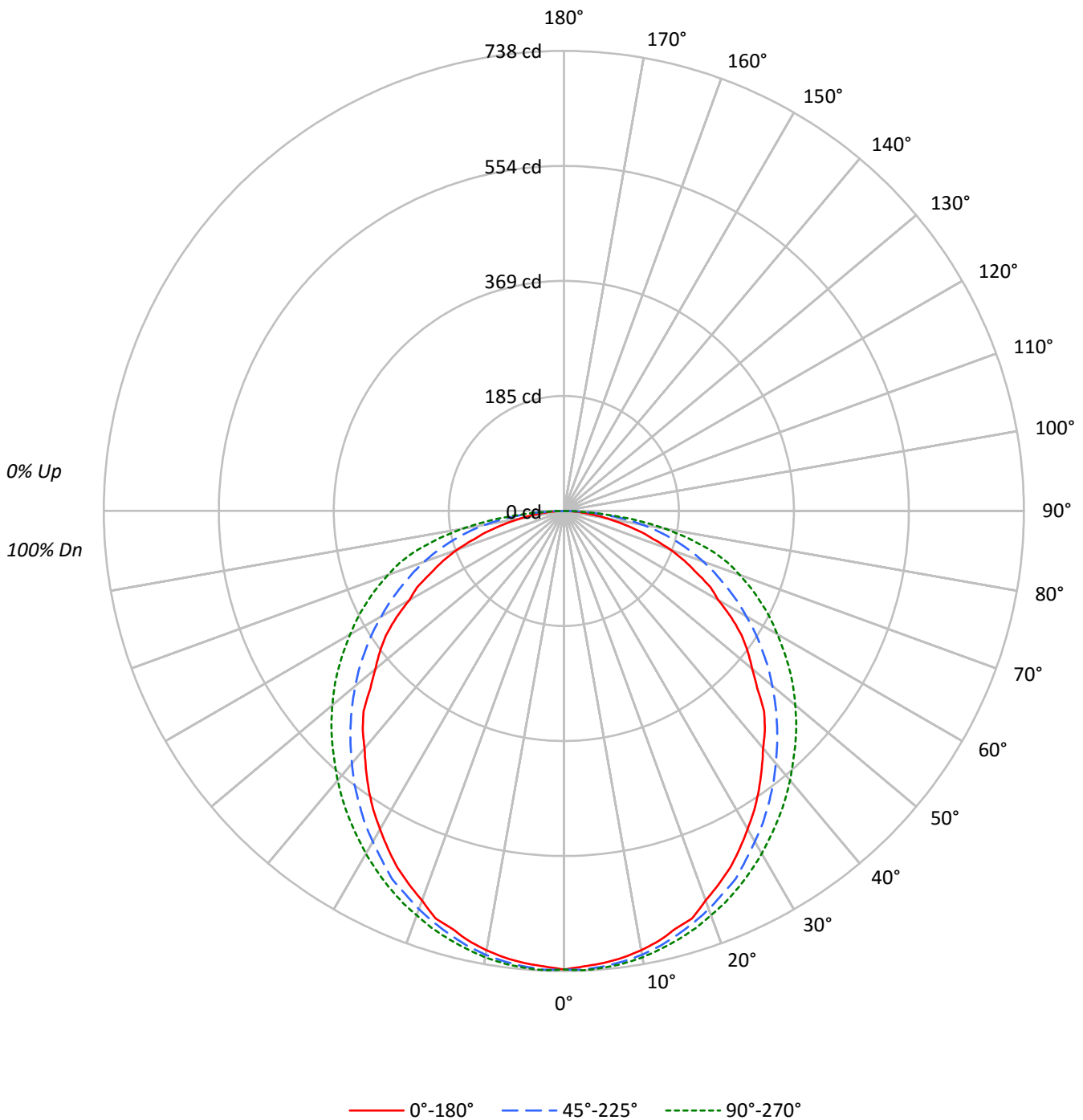
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1979	1979	1979
5°	1967	1981	1987
10°	1955	1975	1987
15°	1932	1961	1982
20°	1905	1947	1977
25°	1875	1934	1975
30°	1832	1904	1972
35°	1792	1882	1975
40°	1747	1858	1983
45°	1729	1840	2000
50°	1652	1827	2029
55°	1634	1821	2072
60°	1541	1818	2129
65°	1496	1831	2225
70°	1436	1874	2360
75°	1309	1931	2541
80°	1122	1999	2569
85°	908	1911	2201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	3.2
10°-20°	198.5	9.1
20°-30°	298.8	13.6
30°-40°	358.6	16.4
40°-50°	374.8	17.1
50°-60°	349.3	15.9
60°-70°	286.5	13.1
70°-80°	193.0	8.8
80°-90°	62.9	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°	566.9	25.9
0°-40°	925.5	42.2
0°-60°	1649.6	75.3
0°-90°	2192.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2192.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	735	735	735	735	735	
5°	728	730	733	734	735	69
15°	694	698	704	710	711	196
25°	632	636	652	661	665	290
35°	546	553	573	593	601	341
45°	454	457	484	513	526	347
55°	348	355	388	425	442	309
65°	235	246	288	329	349	234
75°	126	140	186	228	244	132
85°	29	42	62	72	71	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	735.4	735.4	735.4	735.4	735.4
2.5°	731.2	733.3	736.5	737.5	737.5
5°	728.1	730.2	733.3	734.4	735.4
7.5°	722.8	724.9	729.1	731.2	732.3
10°	715.5	717.6	722.8	726.0	727.0
12.5°	706.1	708.2	714.5	718.6	719.7
15°	693.5	697.7	704.0	710.3	711.3
17.5°	685.1	684.0	692.4	699.8	701.9
20°	665.1	670.4	679.8	688.2	690.3
22.5°	648.4	652.6	665.1	674.6	678.8
25°	631.6	635.8	651.5	660.9	665.1
27.5°	610.6	616.9	631.6	645.2	650.5
30°	589.6	595.9	612.7	628.4	634.7
32.5°	568.6	576.0	593.8	610.6	617.9
35°	545.5	552.9	572.8	592.8	601.1
37.5°	521.4	530.9	551.8	573.9	583.3
40°	497.3	506.7	528.8	553.9	564.4
42.5°	477.4	481.5	506.7	534.0	544.5
45°	454.3	457.4	483.6	513.0	525.6
47.5°	420.7	432.2	460.6	493.1	505.7
50°	394.5	407.1	436.4	471.1	484.7
52.5°	372.4	380.8	413.4	448.0	463.7
55°	348.3	354.6	388.2	424.9	441.7
57.5°	318.9	330.5	364.0	401.8	418.6
60°	286.4	301.1	337.8	378.7	395.5
62.5°	265.4	273.8	313.7	354.6	373.5
65°	235.0	245.5	287.5	329.4	349.4
67.5°	209.8	220.3	263.3	305.3	325.2
70°	182.5	193.0	238.2	280.1	300.0
72.5°	151.1	165.8	213.0	254.9	275.9
75°	125.9	139.5	185.7	227.7	244.4
77.5°	97.6	115.4	158.4	193.0	205.6
80°	72.4	90.2	129.0	154.2	165.8
82.5°	49.3	67.1	96.5	115.4	121.7
85°	29.4	42.0	61.9	72.4	71.3
87.5°	13.6	17.8	25.2	25.2	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)