

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: P308647

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CA08-W2A-U-3500K**

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: P308647
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-3500K
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: 2144.0 lumens
Efficiency: N/A
Efficacy: 112.8 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

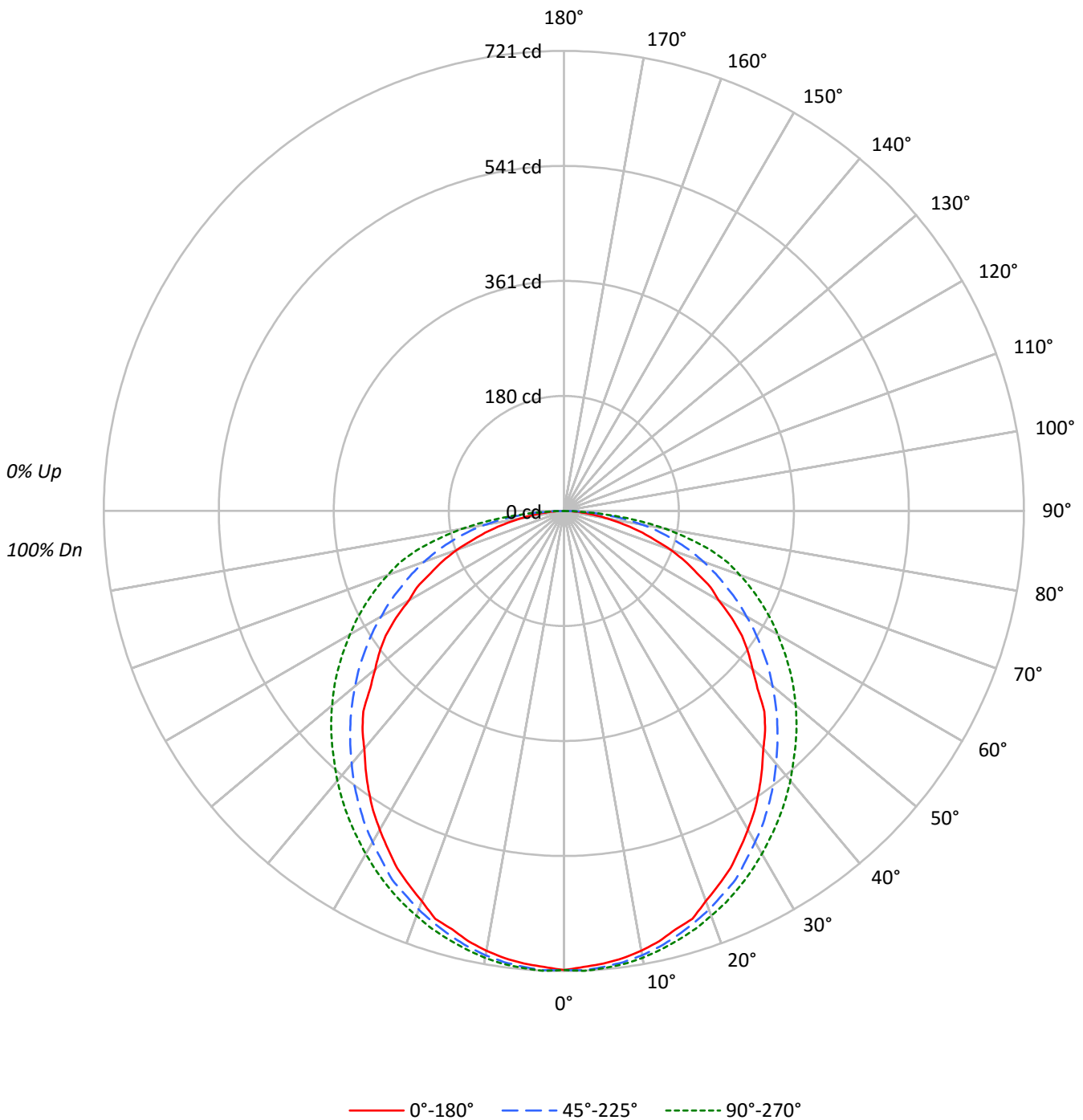
Input Watts (W): 19
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1936	1936	1936
5°	1924	1938	1943
10°	1912	1932	1943
15°	1890	1918	1938
20°	1863	1904	1934
25°	1834	1892	1932
30°	1792	1862	1929
35°	1753	1841	1932
40°	1709	1817	1939
45°	1691	1800	1956
50°	1615	1787	1985
55°	1598	1781	2027
60°	1507	1778	2082
65°	1464	1791	2176
70°	1404	1832	2309
75°	1280	1888	2486
80°	1097	1956	2512
85°	886	1868	2155



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.1	3.2
10°-20°	194.2	9.1
20°-30°	292.2	13.6
30°-40°	350.8	16.4
40°-50°	366.6	17.1
50°-60°	341.6	15.9
60°-70°	280.2	13.1
70°-80°	188.8	8.8
80°-90°	61.5	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°	554.5	25.9
0°-40°	905.2	42.2
0°-60°	1613.5	75.3
0°-90°	2144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2144.0	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	695	696	192
25°	618	622	637	646	651	284
35°	534	541	560	580	588	334
45°	444	447	473	502	514	339
55°	341	347	380	416	432	302
65°	230	240	281	322	342	229
75°	123	136	182	223	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°	719.3	719.3	719.3	719.3	719.3
2.5°	715.2	717.3	720.4	721.4	721.4
5°	712.1	714.2	717.3	718.3	719.3
7.5°	707.0	709.1	713.2	715.2	716.3
10°	699.8	701.9	707.0	710.1	711.1
12.5°	690.6	692.7	698.8	702.9	703.9
15°	678.3	682.4	688.5	694.7	695.7
17.5°	670.1	669.0	677.3	684.4	686.5
20°	650.6	655.7	664.9	673.2	675.2
22.5°	634.2	638.3	650.6	659.8	663.9
25°	617.7	621.8	637.2	646.5	650.6
27.5°	597.2	603.4	617.7	631.1	636.2
30°	576.7	582.9	599.3	614.7	620.8
32.5°	556.2	563.4	580.8	597.2	604.4
35°	533.6	540.8	560.3	579.8	588.0
37.5°	510.0	519.2	539.8	561.3	570.5
40°	486.4	495.6	517.2	541.8	552.1
42.5°	466.9	471.0	495.6	522.3	532.6
45°	444.3	447.4	473.1	501.8	514.1
47.5°	411.5	422.8	450.5	482.3	494.6
50°	385.8	398.1	426.9	460.7	474.1
52.5°	364.3	372.5	404.3	438.2	453.6
55°	340.7	346.8	379.7	415.6	432.0
57.5°	311.9	323.2	356.1	393.0	409.4
60°	280.1	294.5	330.4	370.4	386.9
62.5°	259.6	267.8	306.8	346.8	365.3
65°	229.9	240.1	281.2	322.2	341.7
67.5°	205.2	215.5	257.6	298.6	318.1
70°	178.5	188.8	232.9	274.0	293.5
72.5°	147.8	162.1	208.3	249.4	269.9
75°	123.1	136.5	181.6	222.7	239.1
77.5°	95.4	112.9	154.9	188.8	201.1
80°	70.8	88.2	126.2	150.8	162.1
82.5°	48.2	65.7	94.4	112.9	119.0
85°	28.7	41.0	60.5	70.8	69.8
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)