

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: P312765

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CA08-W2A-U-3000K**

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: P312765
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-L83050-CA08-W2A-U-3000K
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

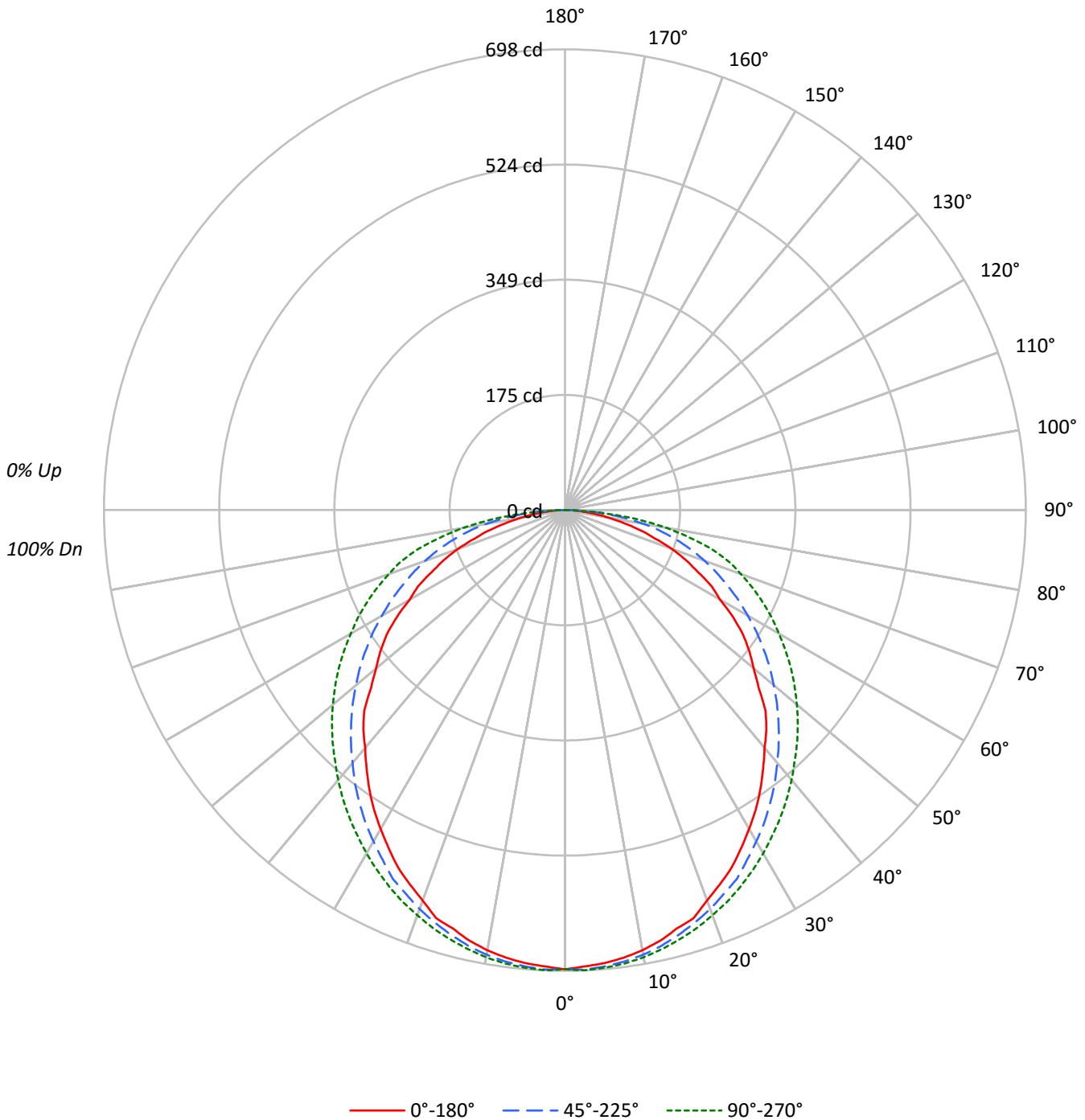
Lumens per Lamp: N/A
Luminaire Lumens: 2074.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1872	1872	1872
5°	1861	1874	1880
10°	1850	1869	1880
15°	1828	1856	1875
20°	1802	1842	1871
25°	1774	1830	1868
30°	1734	1801	1866
35°	1696	1781	1869
40°	1653	1757	1876
45°	1636	1741	1893
50°	1562	1729	1920
55°	1546	1723	1961
60°	1459	1720	2014
65°	1416	1732	2105
70°	1359	1773	2234
75°	1238	1827	2405
80°	1062	1892	2430
85°	858	1809	2084



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	3.2
10°-20°	187.8	9.1
20°-30°	282.7	13.6
30°-40°	339.3	16.4
40°-50°	354.6	17.1
50°-60°	330.5	15.9
60°-70°	271.1	13.1
70°-80°	182.6	8.8
80°-90°	59.5	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°	536.4	25.9
0°-40°	875.7	42.2
0°-60°	1560.8	75.3
0°-90°	2074.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2074.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	696	696	696	696	696	
5°	689	691	694	695	696	65
15°	656	660	666	672	673	185
25°	598	602	616	625	629	275
35°	516	523	542	561	569	323
45°	430	433	458	485	497	328
55°	330	336	367	402	418	292
65°	222	232	272	312	331	221
75°	119	132	176	215	231	125
85°	28	40	59	68	68	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	695.8	695.8	695.8	695.8	695.8
2.5°	691.9	693.9	696.8	697.8	697.8
5°	688.9	690.9	693.9	694.9	695.8
7.5°	683.9	685.9	689.9	691.9	692.9
10°	677.0	679.0	683.9	686.9	687.9
12.5°	668.1	670.0	676.0	680.0	681.0
15°	656.1	660.1	666.1	672.0	673.0
17.5°	648.2	647.2	655.1	662.1	664.1
20°	629.3	634.3	643.2	651.2	653.2
22.5°	613.5	617.4	629.3	638.3	642.2
25°	597.6	601.5	616.4	625.4	629.3
27.5°	577.7	583.7	597.6	610.5	615.4
30°	557.9	563.8	579.7	594.6	600.6
32.5°	538.0	545.0	561.8	577.7	584.7
35°	516.2	523.1	542.0	560.8	568.8
37.5°	493.3	502.3	522.1	543.0	551.9
40°	470.5	479.4	500.3	524.1	534.0
42.5°	451.7	455.6	479.4	505.3	515.2
45°	429.8	432.8	457.6	485.4	497.3
47.5°	398.1	409.0	435.8	466.5	478.5
50°	373.2	385.1	412.9	445.7	458.6
52.5°	352.4	360.3	391.1	423.9	438.7
55°	329.6	335.5	367.3	402.0	417.9
57.5°	301.8	312.7	344.4	380.2	396.1
60°	271.0	284.9	319.6	358.3	374.2
62.5°	251.1	259.1	296.8	335.5	353.4
65°	222.4	232.3	272.0	311.7	330.6
67.5°	198.5	208.5	249.2	288.9	307.7
70°	172.7	182.6	225.3	265.0	283.9
72.5°	142.9	156.8	201.5	241.2	261.1
75°	119.1	132.0	175.7	215.4	231.3
77.5°	92.3	109.2	149.9	182.6	194.6
80°	68.5	85.4	122.1	145.9	156.8
82.5°	46.7	63.5	91.3	109.2	115.1
85°	27.8	39.7	58.6	68.5	67.5
87.5°	12.9	16.9	23.8	23.8	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)