

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: P308696

Luminaire Tested: **22FCZ2-29HE-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: P308696
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: 22FCZ2-29HE-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: 2670.0 lumens
Efficiency: N/A
Efficacy: 116.1 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

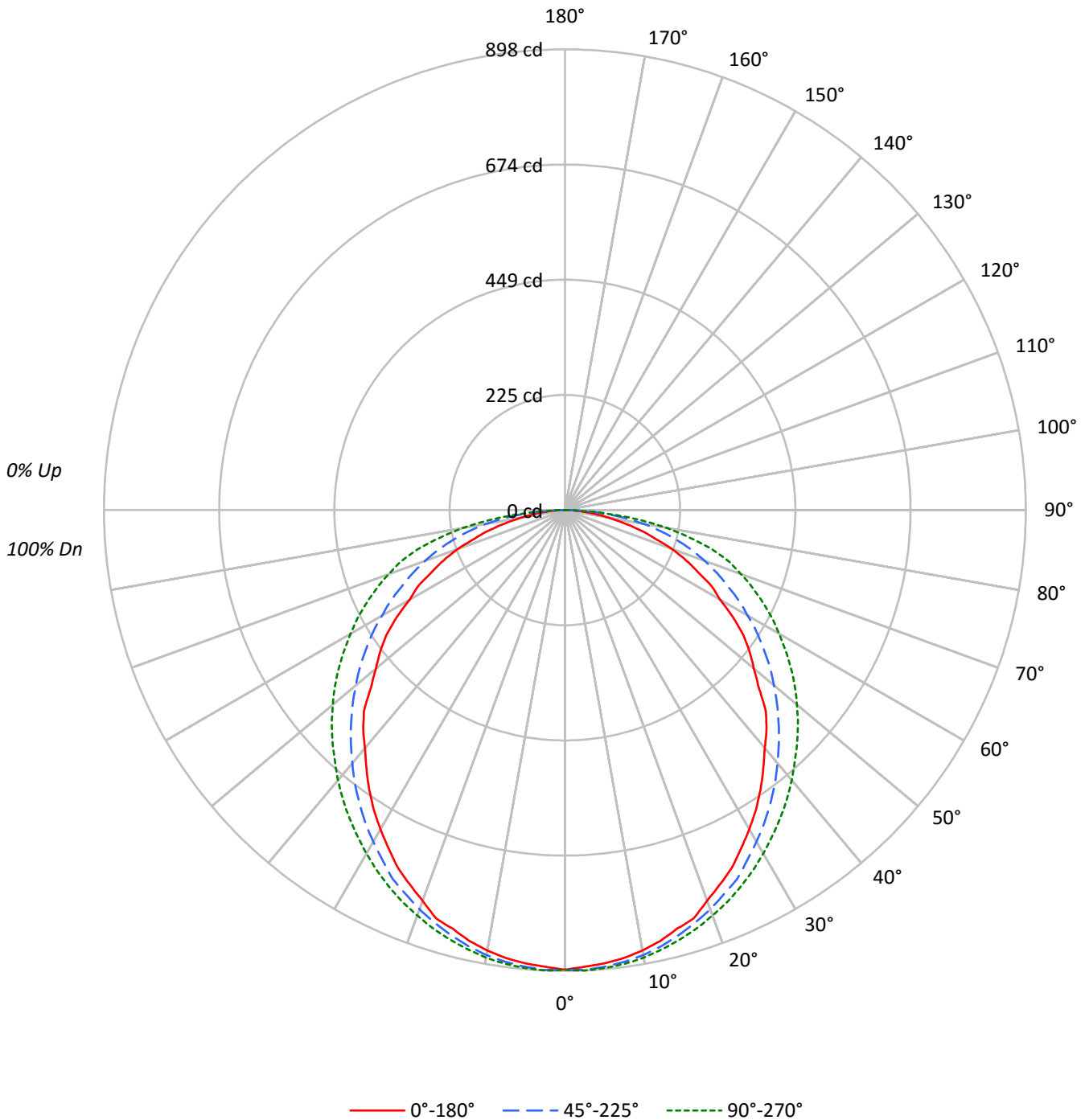
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2411	2411	2411
5°	2396	2413	2420
10°	2381	2406	2420
15°	2353	2389	2414
20°	2320	2371	2408
25°	2284	2356	2406
30°	2232	2319	2402
35°	2183	2292	2405
40°	2128	2263	2415
45°	2106	2242	2436
50°	2012	2226	2472
55°	1991	2218	2524
60°	1878	2215	2593
65°	1822	2229	2709
70°	1750	2282	2876
75°	1594	2352	3096
80°	1367	2436	3129
85°	1105	2328	2683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	3.2
10°-20°	241.8	9.1
20°-30°	363.9	13.6
30°-40°	436.8	16.4
40°-50°	456.5	17.1
50°-60°	425.5	15.9
60°-70°	349.0	13.1
70°-80°	235.1	8.8
80°-90°	76.6	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°	690.5	25.9
0°-40°	1127.3	42.2
0°-60°	2009.3	75.3
0°-90°	2670.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2670.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	887	889	893	894	896	84
15°	845	850	858	865	866	239
25°	769	774	794	805	810	354
35°	664	674	698	722	732	415
45°	553	557	589	625	640	423
55°	424	432	473	518	538	376
65°	286	299	350	401	426	285
75°	153	170	226	277	298	161
85°	36	51	75	88	87	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	895.8	895.8	895.8	895.8	895.8
2.5°	890.7	893.3	897.1	898.4	898.4
5°	886.9	889.4	893.3	894.5	895.8
7.5°	880.5	883.0	888.1	890.7	892.0
10°	871.5	874.1	880.5	884.3	885.6
12.5°	860.0	862.6	870.2	875.4	876.6
15°	844.7	849.8	857.5	865.1	866.4
17.5°	834.5	833.2	843.4	852.4	854.9
20°	810.2	816.6	828.1	838.3	840.9
22.5°	789.7	794.9	810.2	821.7	826.8
25°	769.3	774.4	793.6	805.1	810.2
27.5°	743.7	751.4	769.3	785.9	792.3
30°	718.2	725.8	746.3	765.5	773.1
32.5°	692.6	701.6	723.3	743.7	752.7
35°	664.5	673.5	697.7	722.0	732.2
37.5°	635.1	646.6	672.2	699.0	710.5
40°	605.7	617.2	644.1	674.7	687.5
42.5°	581.4	586.6	617.2	650.5	663.2
45°	553.3	557.2	589.1	624.9	640.2
47.5°	512.4	526.5	561.0	600.6	615.9
50°	480.5	495.8	531.6	573.8	590.4
52.5°	453.7	463.9	503.5	545.7	564.8
55°	424.3	431.9	472.8	517.5	538.0
57.5°	388.5	402.5	443.4	489.4	509.9
60°	348.9	366.8	411.5	461.3	481.8
62.5°	323.3	333.5	382.1	431.9	454.9
65°	286.2	299.0	350.1	401.3	425.5
67.5°	255.6	268.4	320.8	371.9	396.1
70°	222.4	235.1	290.1	341.2	365.5
72.5°	184.0	201.9	259.4	310.5	336.1
75°	153.3	170.0	226.2	277.3	297.8
77.5°	118.8	140.6	193.0	235.1	250.5
80°	88.2	109.9	157.2	187.9	201.9
82.5°	60.1	81.8	117.6	140.6	148.2
85°	35.8	51.1	75.4	88.2	86.9
87.5°	16.6	21.7	30.7	30.7	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)