

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: P310535

Luminaire Tested: **24FCZ2-30-UNV-L82765-CA08-W2A-U-2700K**

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: P310535
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L82765-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 2700K 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: 2544.0 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

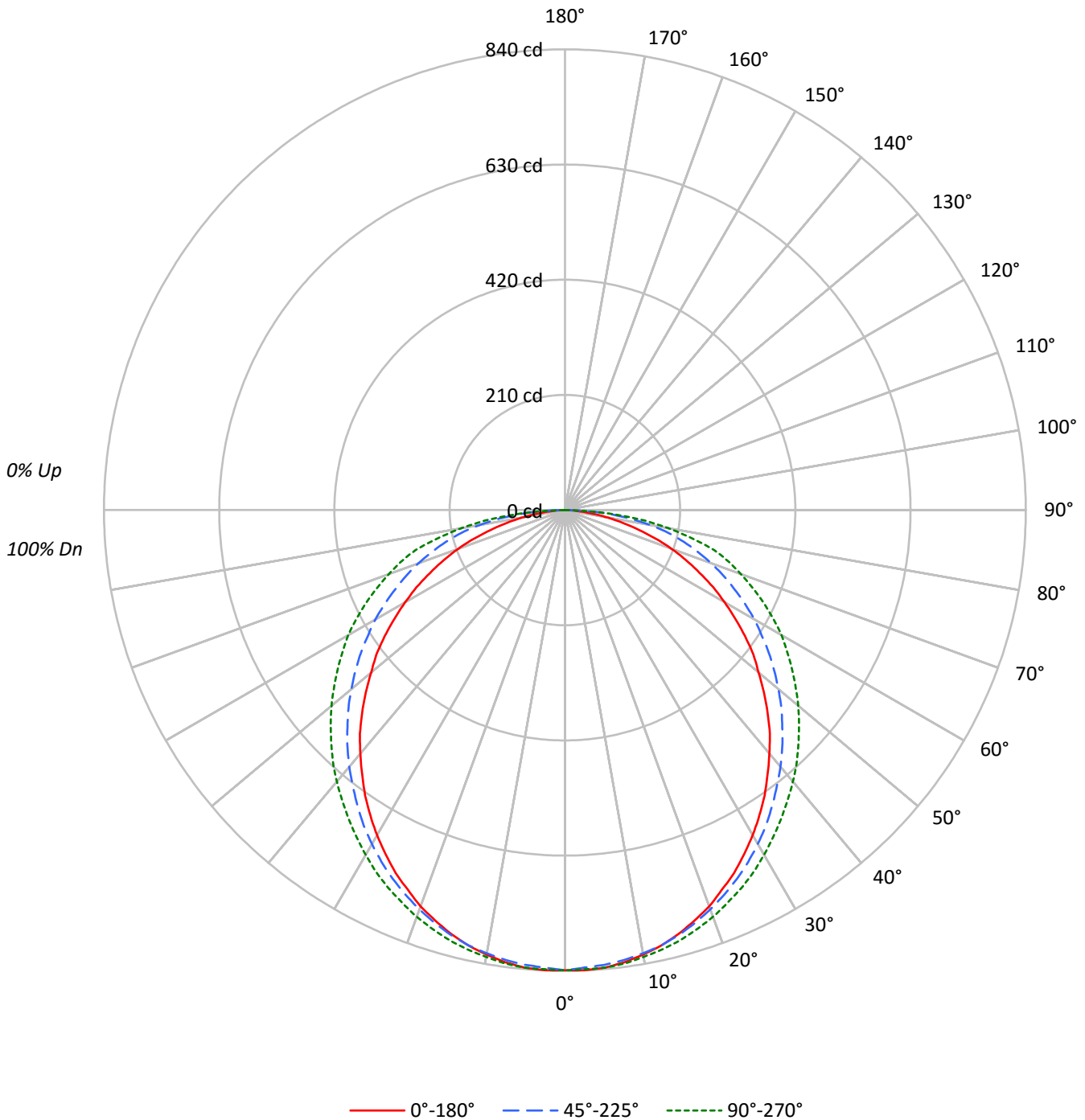
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1129	1129	1129
5°	1131	1124	1131
10°	1124	1121	1130
15°	1115	1117	1131
20°	1101	1109	1130
25°	1084	1101	1129
30°	1063	1092	1128
35°	1043	1081	1129
40°	1019	1073	1136
45°	994	1067	1145
50°	965	1064	1163
55°	940	1065	1186
60°	904	1074	1227
65°	862	1086	1271
70°	817	1119	1341
75°	728	1167	1465
80°	621	1236	1498
85°	443	1224	1433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	3.1
10°-20°	227.0	8.9
20°-30°	342.9	13.5
30°-40°	413.3	16.2
40°-50°	433.9	17.1
50°-60°	405.9	16.0
60°-70°	335.2	13.2
70°-80°	228.4	9.0
80°-90°	77.9	3.1
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°	649.4	25.5
0°-40°	1062.7	41.8
0°-60°	1902.4	74.8
0°-90°	2544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2544.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	839	839	839	839	839	
5°	837	836	832	837	837	79
15°	800	801	802	810	812	226
25°	730	734	742	756	760	336
35°	635	642	658	680	687	397
45°	522	533	560	591	602	403
55°	401	417	454	491	506	358
65°	271	294	341	384	399	269
75°	140	172	224	267	282	149
85°	29	57	79	90	93	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	839.0	839.0	839.0	839.0	839.0
2.5°	839.8	839.0	834.8	839.0	838.1
5°	837.3	836.5	832.2	837.3	837.3
7.5°	831.4	831.4	827.2	833.1	833.9
10°	823.0	823.0	820.4	827.2	827.2
12.5°	812.8	812.8	812.8	819.6	820.4
15°	800.2	801.0	801.9	810.3	812.0
17.5°	785.0	786.7	789.2	799.3	801.0
20°	768.9	770.6	774.8	786.7	789.2
22.5°	748.7	752.9	758.8	772.3	774.8
25°	730.1	733.5	741.9	756.3	760.5
27.5°	707.3	712.4	723.4	738.5	744.5
30°	684.5	689.6	703.1	720.8	725.9
32.5°	660.0	667.6	682.0	700.6	706.5
35°	634.7	641.5	658.4	680.3	687.1
37.5°	606.9	616.2	634.7	658.4	666.8
40°	579.9	590.0	611.1	636.4	646.5
42.5°	552.9	563.0	586.6	615.3	625.4
45°	522.5	533.4	560.5	590.8	601.8
47.5°	492.1	505.6	535.1	567.2	579.0
50°	460.9	476.0	508.1	541.9	555.4
52.5°	433.0	447.3	481.1	517.4	530.1
55°	400.9	417.0	454.1	491.2	505.6
57.5°	368.0	385.7	425.4	465.9	480.3
60°	335.9	355.3	399.2	439.8	455.8
62.5°	304.7	324.1	369.7	411.9	427.9
65°	270.9	293.7	341.0	384.0	399.2
67.5°	238.9	263.3	313.1	355.3	370.5
70°	207.6	231.3	284.4	325.8	341.0
72.5°	173.9	200.9	254.1	297.1	313.1
75°	140.1	172.2	224.5	266.7	281.9
77.5°	108.9	141.8	194.1	228.7	236.3
80°	80.2	113.9	159.5	184.0	193.3
82.5°	51.5	85.2	121.5	139.3	146.9
85°	28.7	56.6	79.3	89.5	92.8
87.5°	11.8	24.5	32.1	36.3	36.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)