

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: P310537

Luminaire Tested: **24FCZ2-30-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: P310537
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2708.0 lumens
Efficiency: N/A
Efficacy: 115.2 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

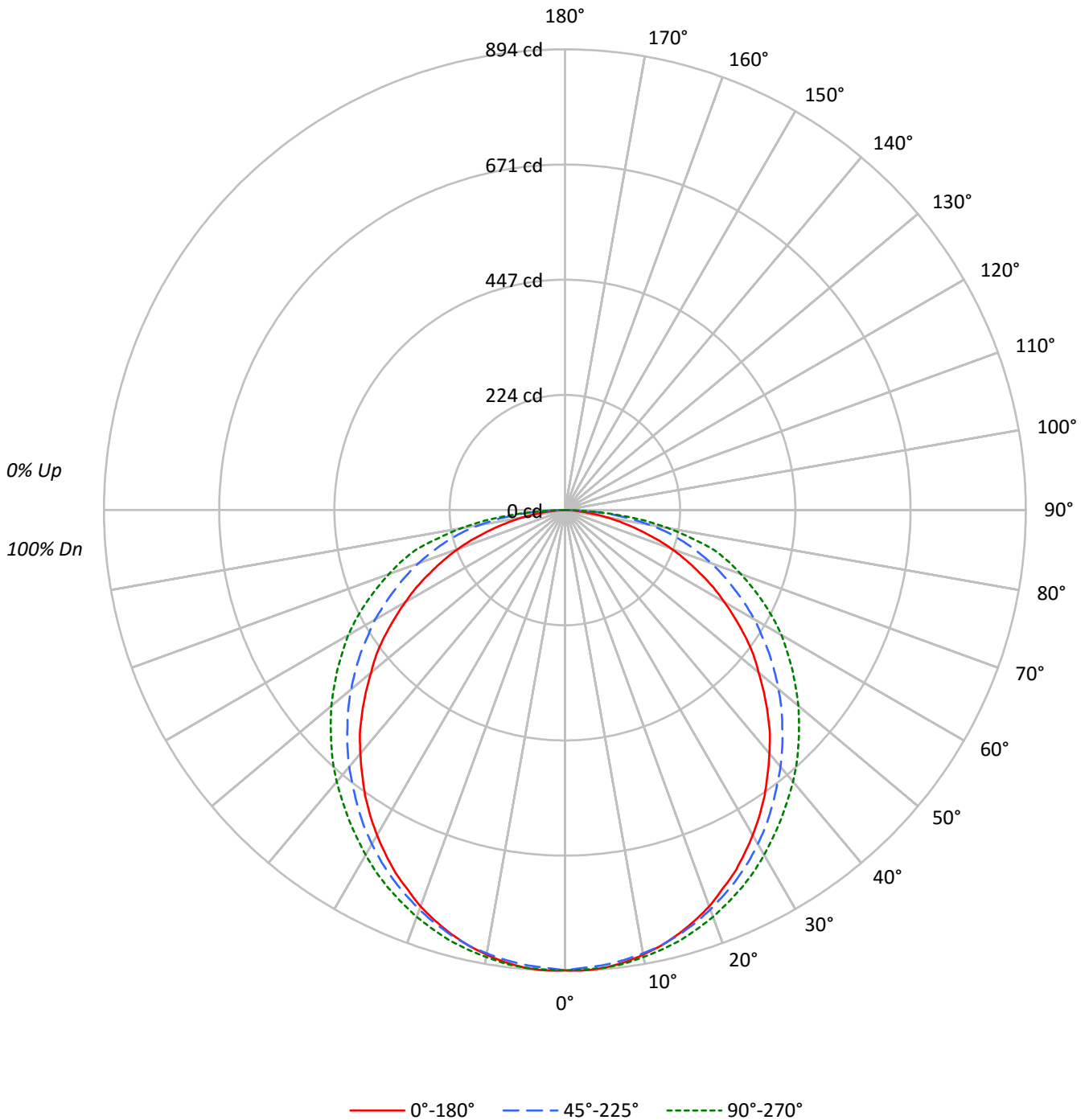
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1202	1202	1202
5°	1204	1197	1204
10°	1197	1193	1203
15°	1186	1189	1204
20°	1172	1181	1203
25°	1154	1173	1202
30°	1132	1163	1200
35°	1110	1151	1201
40°	1084	1143	1209
45°	1058	1135	1219
50°	1027	1132	1238
55°	1001	1134	1263
60°	962	1144	1306
65°	918	1156	1353
70°	869	1191	1428
75°	775	1242	1560
80°	662	1316	1594
85°	471	1304	1525



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.5	3.1
10°-20°	241.7	8.9
20°-30°	365.0	13.5
30°-40°	439.9	16.2
40°-50°	461.9	17.1
50°-60°	432.1	16.0
60°-70°	356.8	13.2
70°-80°	243.1	9.0
80°-90°	82.9	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°	691.2	25.5
0°-40°	1131.1	41.8
0°-60°	2025.1	74.8
0°-90°	2708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2708.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	893	893	893	893	893	
5°	891	890	886	891	891	85
15°	852	853	854	862	864	240
25°	777	781	790	805	810	358
35°	676	683	701	724	731	422
45°	556	568	597	629	641	429
55°	427	444	483	523	538	381
65°	288	313	363	409	425	286
75°	149	183	239	284	300	159
85°	30	60	84	95	99	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	893.1	893.1	893.1	893.1	893.1
2.5°	894.0	893.1	888.6	893.1	892.2
5°	891.3	890.4	885.9	891.3	891.3
7.5°	885.0	885.0	880.5	886.8	887.7
10°	876.0	876.0	873.3	880.5	880.5
12.5°	865.2	865.2	865.2	872.4	873.3
15°	851.7	852.6	853.5	862.5	864.3
17.5°	835.6	837.4	840.1	850.8	852.6
20°	818.5	820.3	824.8	837.4	840.1
22.5°	796.9	801.4	807.7	822.1	824.8
25°	777.2	780.8	789.8	805.0	809.5
27.5°	752.9	758.3	770.0	786.2	792.4
30°	728.7	734.0	748.4	767.3	772.7
32.5°	702.6	710.7	726.0	745.7	752.0
35°	675.6	682.8	700.8	724.2	731.4
37.5°	646.0	655.9	675.6	700.8	709.8
40°	617.2	628.0	650.5	677.4	688.2
42.5°	588.5	599.3	624.4	655.0	665.8
45°	556.2	567.8	596.6	628.9	640.6
47.5°	523.8	538.2	569.6	603.8	616.3
50°	490.6	506.7	540.9	576.8	591.2
52.5°	460.9	476.2	512.1	550.8	564.2
55°	426.8	443.8	483.4	522.9	538.2
57.5°	391.7	410.6	452.8	496.0	511.2
60°	357.6	378.3	425.0	468.1	485.2
62.5°	324.3	345.0	393.5	438.5	455.5
65°	288.4	312.7	363.0	408.8	425.0
67.5°	254.3	280.3	333.3	378.3	394.4
70°	221.0	246.2	302.8	346.8	363.0
72.5°	185.1	213.8	270.4	316.3	333.3
75°	149.1	183.3	239.0	283.9	300.1
77.5°	115.9	150.9	206.6	243.5	251.6
80°	85.4	121.3	169.8	195.9	205.7
82.5°	54.8	90.7	129.4	148.2	156.3
85°	30.5	60.2	84.5	95.2	98.8
87.5°	12.6	26.1	34.1	38.6	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)