

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: P310542

Luminaire Tested: **24FCZ2-30-UNV-L82765-CA08-W2A-U-5700K**

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: P310542
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-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5700K 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: 2891.0 lumens
Efficiency: N/A
Efficacy: 120.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

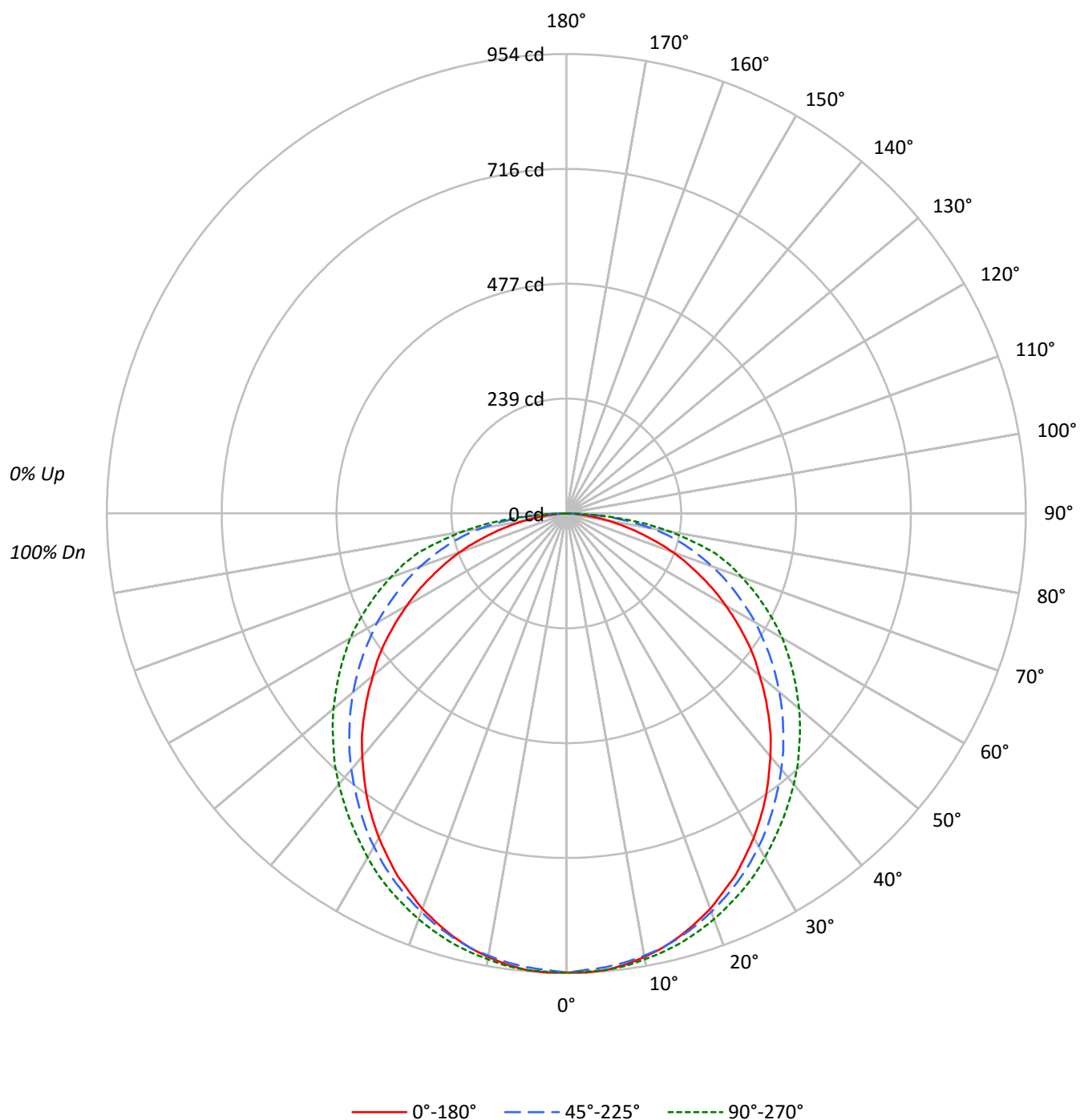
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1283	1283	1283
5°	1285	1277	1285
10°	1278	1274	1284
15°	1267	1269	1285
20°	1251	1261	1284
25°	1232	1252	1283
30°	1209	1241	1282
35°	1185	1229	1282
40°	1157	1220	1290
45°	1130	1212	1301
50°	1096	1209	1321
55°	1069	1210	1348
60°	1027	1221	1394
65°	980	1234	1444
70°	928	1271	1524
75°	828	1326	1666
80°	706	1405	1702
85°	503	1392	1629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.2	3.1
10°-20°	258.0	8.9
20°-30°	389.7	13.5
30°-40°	469.7	16.2
40°-50°	493.1	17.1
50°-60°	461.3	16.0
60°-70°	380.9	13.2
70°-80°	259.6	9.0
80°-90°	88.5	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°	737.9	25.5
0°-40°	1207.6	41.8
0°-60°	2161.9	74.8
0°-90°	2891.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2891.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	953	953	953	953	953	
5°	952	950	946	952	952	90
15°	909	910	911	921	923	256
25°	830	834	843	859	864	382
35°	721	729	748	773	781	451
45°	594	606	637	671	684	458
55°	456	474	516	558	574	407
65°	308	334	388	436	454	305
75°	159	196	255	303	320	170
85°	33	64	90	102	106	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	953.4	953.4	953.4	953.4	953.4
2.5°	954.4	953.4	948.6	953.4	952.5
5°	951.5	950.5	945.8	951.5	951.5
7.5°	944.8	944.8	940.0	946.7	947.7
10°	935.2	935.2	932.3	940.0	940.0
12.5°	923.7	923.7	923.7	931.4	932.3
15°	909.3	910.3	911.2	920.8	922.7
17.5°	892.0	894.0	896.8	908.3	910.3
20°	873.8	875.7	880.5	894.0	896.8
22.5°	850.8	855.6	862.3	877.7	880.5
25°	829.7	833.5	843.1	859.4	864.2
27.5°	803.8	809.5	822.0	839.3	846.0
30°	777.9	783.7	799.0	819.1	824.9
32.5°	750.1	758.7	775.0	796.1	802.8
35°	721.3	729.0	748.2	773.1	780.8
37.5°	689.7	700.2	721.3	748.2	757.8
40°	659.0	670.5	694.4	723.2	734.7
42.5°	628.3	639.8	666.6	699.2	710.8
45°	593.7	606.2	636.9	671.4	683.9
47.5°	559.2	574.5	608.1	644.6	658.0
50°	523.7	541.0	577.4	615.8	631.1
52.5°	492.1	508.4	546.7	588.0	602.4
55°	455.6	473.8	516.0	558.2	574.5
57.5°	418.2	438.3	483.4	529.5	545.8
60°	381.8	403.8	453.7	499.7	518.0
62.5°	346.3	368.3	420.1	468.1	486.3
65°	307.9	333.8	387.5	436.4	453.7
67.5°	271.4	299.3	355.9	403.8	421.1
70°	236.0	262.8	323.2	370.2	387.5
72.5°	197.6	228.3	288.7	337.6	355.9
75°	159.2	195.7	255.1	303.1	320.4
77.5°	123.7	161.1	220.6	259.9	268.6
80°	91.1	129.5	181.3	209.1	219.7
82.5°	58.5	96.9	138.1	158.3	166.9
85°	32.6	64.3	90.2	101.7	105.5
87.5°	13.4	27.8	36.4	41.2	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)