

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: P311216

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-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: P311216  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
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-S-CA08-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 5500K 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: 3030.0 lumens  
Efficiency: N/A  
Efficacy: 125.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

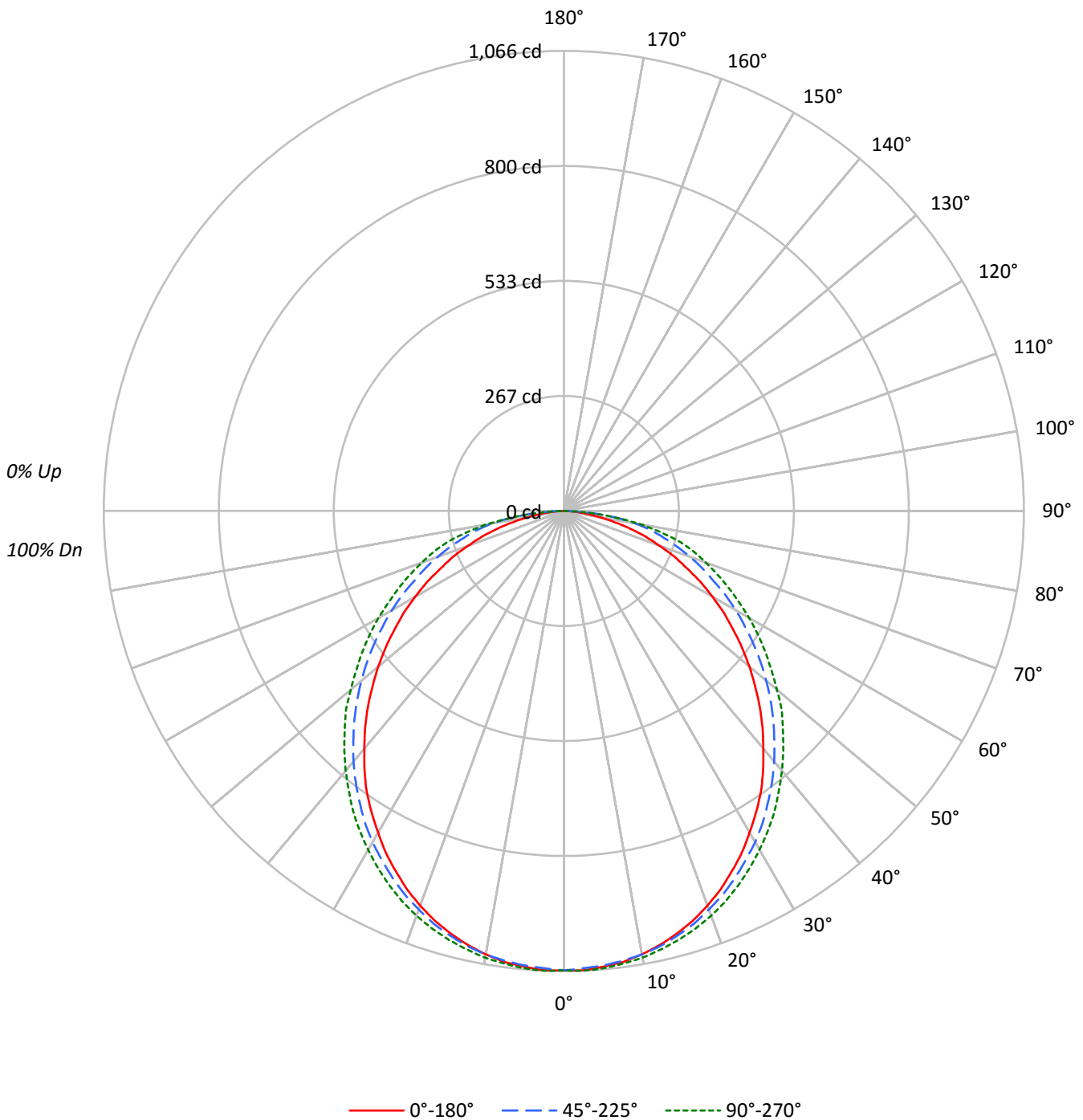
Input Watts (W): 24.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1432	1432	1432
5°	1431	1427	1436
10°	1425	1425	1436
15°	1412	1418	1433
20°	1393	1407	1429
25°	1367	1393	1420
30°	1337	1377	1409
35°	1307	1355	1397
40°	1263	1332	1381
45°	1221	1306	1366
50°	1175	1281	1350
55°	1122	1258	1337
60°	1070	1238	1334
65°	1002	1216	1342
70°	928	1223	1378
75°	831	1246	1456
80°	671	1320	1424
85°	505	1159	1129



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.8	3.3
10°-20°	287.9	9.5
20°-30°	432.9	14.3
30°-40°	515.6	17.0
40°-50°	527.7	17.4
50°-60°	475.1	15.7
60°-70°	373.1	12.3
70°-80°	242.1	8.0
80°-90°	74.9	2.5
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°	821.6	27.1
0°-40°	1337.2	44.1
0°-60°	2339.9	77.2
0°-90°	3030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3030.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1064	1064	1064	1064	1064	
5°	1060	1062	1057	1062	1064	101
15°	1013	1016	1018	1027	1029	286
25°	921	929	938	954	957	424
35°	796	806	825	845	851	497
45°	642	657	686	712	718	495
55°	478	500	536	564	570	429
65°	315	339	382	414	422	313
75°	160	191	240	272	280	169
85°	33	61	75	73	73	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1064.5	1064.5	1064.5	1064.5	1064.5
2.5°	1065.4	1065.4	1060.6	1065.4	1066.4
5°	1059.6	1061.6	1056.8	1062.5	1063.5
7.5°	1053.9	1053.9	1051.0	1056.8	1057.7
10°	1043.3	1044.2	1043.3	1050.0	1051.0
12.5°	1029.8	1031.7	1032.7	1039.4	1040.4
15°	1013.4	1016.3	1018.3	1026.9	1028.8
17.5°	995.2	998.1	1002.9	1012.5	1014.4
20°	973.0	976.9	982.7	995.2	998.1
22.5°	949.0	952.8	962.4	974.0	978.8
25°	921.1	928.8	938.4	953.8	956.7
27.5°	893.1	899.9	912.4	928.8	932.6
30°	860.4	871.0	886.4	902.8	906.6
32.5°	828.7	839.2	857.5	874.9	879.7
35°	795.9	805.6	824.8	845.0	850.8
37.5°	758.4	770.9	792.1	812.3	818.1
40°	718.9	734.3	758.4	779.6	786.3
42.5°	681.4	697.8	721.8	744.9	752.6
45°	641.9	657.3	686.2	712.2	718.0
47.5°	601.5	618.8	649.6	675.6	685.3
50°	561.1	579.4	612.1	639.1	644.8
52.5°	520.7	539.9	574.6	603.4	606.3
55°	478.3	499.5	536.1	564.0	569.8
57.5°	439.8	458.1	497.6	526.5	533.2
60°	397.5	417.7	460.0	487.0	495.7
62.5°	357.1	378.2	422.5	449.5	457.2
65°	314.7	338.8	382.1	413.8	421.5
67.5°	278.1	301.2	347.4	378.2	385.9
70°	235.8	261.8	310.9	342.6	350.3
72.5°	199.2	226.2	275.3	306.1	317.6
75°	159.8	190.6	239.6	272.4	280.1
77.5°	121.3	156.9	206.9	231.9	231.9
80°	86.6	124.2	170.4	181.9	183.8
82.5°	56.8	93.4	126.1	125.1	125.1
85°	32.7	60.6	75.1	73.1	73.1
87.5°	12.5	25.0	26.9	26.9	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)