

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: P311215

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CA08-W2A-U-5000K**

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: P311215  
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-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 5000K 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

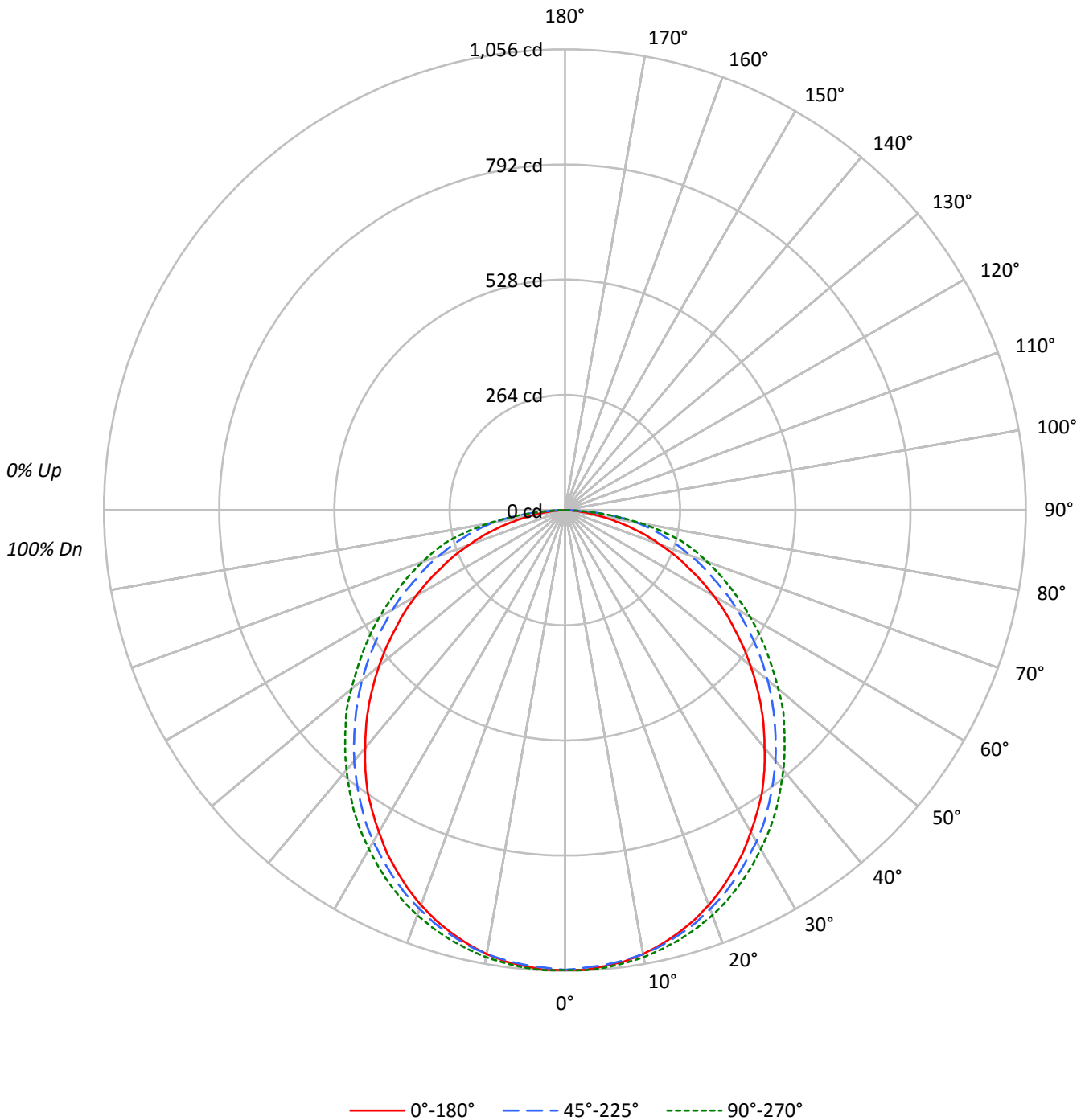
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3000.0 lumens  
Efficiency: N/A  
Efficacy: 125.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.9  
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°	1418	1418	1418
5°	1417	1413	1422
10°	1411	1411	1422
15°	1398	1404	1419
20°	1379	1393	1415
25°	1354	1379	1406
30°	1324	1363	1395
35°	1294	1341	1384
40°	1250	1319	1367
45°	1209	1293	1353
50°	1163	1269	1337
55°	1111	1245	1323
60°	1059	1226	1320
65°	992	1204	1329
70°	919	1211	1365
75°	822	1234	1442
80°	665	1307	1410
85°	500	1147	1118



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.8	3.3
10°-20°	285.1	9.5
20°-30°	428.6	14.3
30°-40°	510.5	17.0
40°-50°	522.5	17.4
50°-60°	470.4	15.7
60°-70°	369.4	12.3
70°-80°	239.7	8.0
80°-90°	74.1	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°	813.4	27.1
0°-40°	1323.9	44.1
0°-60°	2316.8	77.2
0°-90°	3000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3000.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1054	1054	1054	1054	1054	
5°	1049	1051	1046	1052	1053	100
15°	1003	1006	1008	1017	1019	283
25°	912	920	929	944	947	420
35°	788	798	817	837	842	492
45°	636	651	679	705	711	490
55°	474	495	531	558	564	425
65°	312	335	378	410	417	310
75°	158	189	237	270	277	167
85°	32	60	74	72	72	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1053.9	1053.9	1053.9	1053.9	1053.9
2.5°	1054.9	1054.9	1050.1	1054.9	1055.8
5°	1049.2	1051.1	1046.3	1052.0	1053.0
7.5°	1043.4	1043.4	1040.6	1046.3	1047.2
10°	1033.0	1033.9	1033.0	1039.6	1040.6
12.5°	1019.6	1021.5	1022.5	1029.1	1030.1
15°	1003.4	1006.3	1008.2	1016.8	1018.7
17.5°	985.3	988.2	992.9	1002.5	1004.4
20°	963.4	967.2	972.9	985.3	988.2
22.5°	939.6	943.4	952.9	964.3	969.1
25°	911.9	919.6	929.1	944.3	947.2
27.5°	884.3	891.0	903.4	919.6	923.4
30°	851.9	862.4	877.6	893.8	897.6
32.5°	820.5	830.9	849.0	866.2	871.0
35°	788.1	797.6	816.6	836.7	842.4
37.5°	750.9	763.3	784.2	804.3	810.0
40°	711.8	727.1	750.9	771.9	778.5
42.5°	674.7	690.9	714.7	737.6	745.2
45°	635.6	650.8	679.4	705.2	710.9
47.5°	595.6	612.7	643.2	668.9	678.5
50°	555.5	573.7	606.1	632.7	638.5
52.5°	515.5	534.6	568.9	597.5	600.3
55°	473.6	494.6	530.8	558.4	564.1
57.5°	435.5	453.6	492.7	521.2	527.9
60°	393.6	413.6	455.5	482.2	490.7
62.5°	353.5	374.5	418.3	445.0	452.6
65°	311.6	335.4	378.3	409.8	417.4
67.5°	275.4	298.3	344.0	374.5	382.1
70°	233.5	259.2	307.8	339.2	346.9
72.5°	197.3	223.9	272.5	303.0	314.5
75°	158.2	188.7	237.3	269.7	277.3
77.5°	120.1	155.3	204.9	229.7	229.7
80°	85.8	122.9	168.7	180.1	182.0
82.5°	56.2	92.4	124.8	123.9	123.9
85°	32.4	60.0	74.3	72.4	72.4
87.5°	12.4	24.8	26.7	26.7	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)