

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: P309192

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-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: P309192  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-HRP-CA08-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

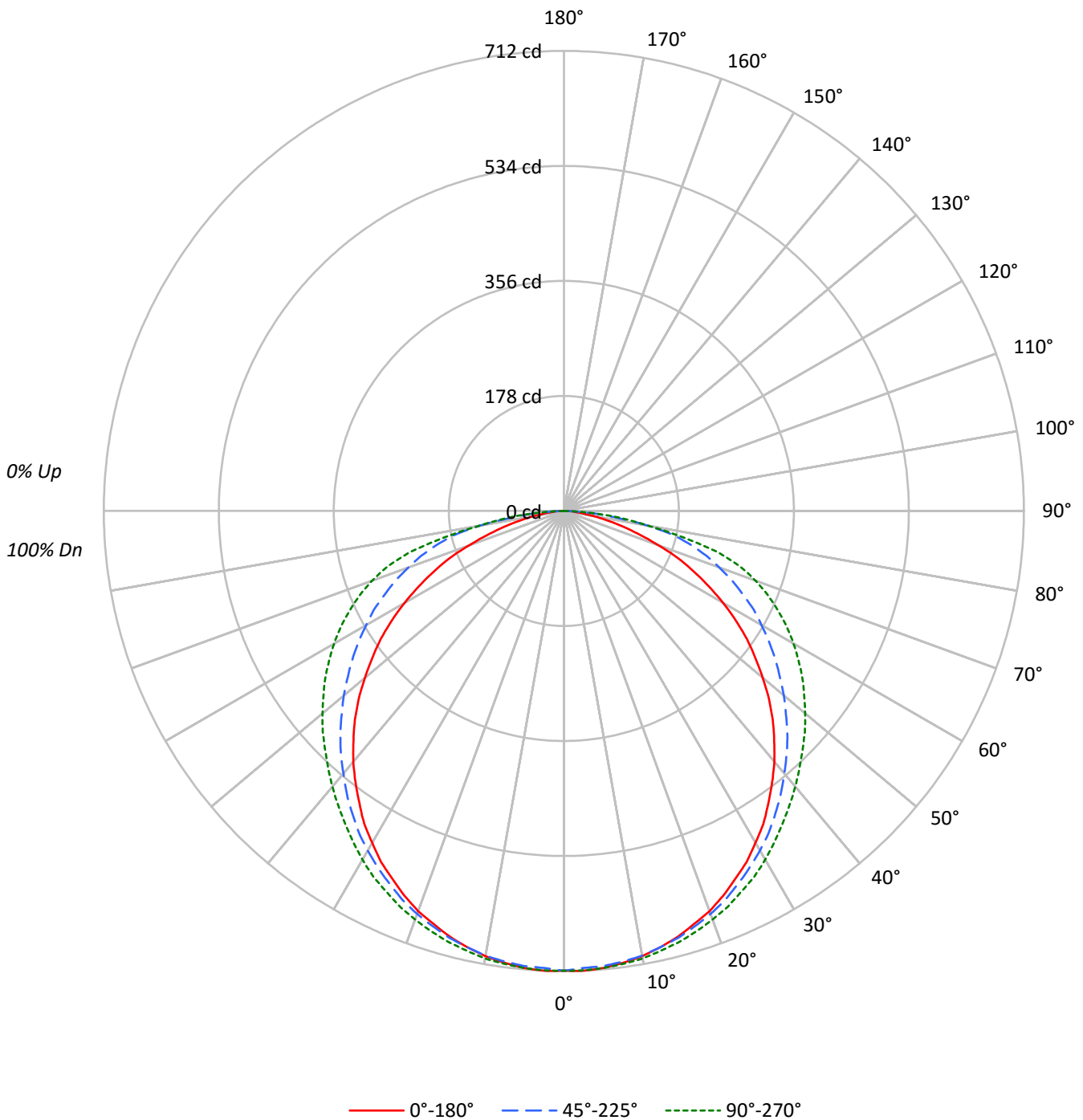
Lumens per Lamp: N/A  
Luminaire Lumens: 2193.0 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 24.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	957	957	957
5°	959	955	959
10°	956	955	961
15°	950	953	962
20°	944	950	964
25°	932	946	965
30°	921	943	969
35°	906	938	970
40°	890	932	979
45°	870	931	994
50°	842	930	1020
55°	812	937	1057
60°	766	951	1104
65°	707	973	1166
70°	618	1007	1242
75°	501	1059	1284
80°	370	1038	1038
85°	284	766	865



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.4	3.1
10°-20°	193.6	8.8
20°-30°	294.7	13.4
30°-40°	357.8	16.3
40°-50°	378.0	17.2
50°-60°	356.7	16.3
60°-70°	296.6	13.5
70°-80°	195.1	8.9
80°-90°	53.2	2.4
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°	555.6	25.3
0°-40°	913.4	41.7
0°-60°	1648.1	75.2
0°-90°	2193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2193.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	712	712	712	712	712	
5°	710	710	707	710	710	67
15°	682	683	684	690	690	192
25°	628	632	637	648	650	290
35°	552	558	571	586	590	345
45°	457	466	489	513	522	352
55°	346	361	399	437	451	308
65°	222	248	306	351	366	220
75°	96	140	204	242	247	104
85°	18	40	50	55	56	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	711.5	711.5	711.5	711.5	711.5
2.5°	712.4	711.5	707.8	711.5	711.5
5°	709.7	709.7	706.9	709.7	709.7
7.5°	705.1	705.1	703.3	706.9	706.9
10°	699.6	699.6	698.7	703.3	703.3
12.5°	691.3	692.2	691.3	696.8	696.8
15°	682.1	683.1	684.0	690.4	690.4
17.5°	670.2	672.0	673.9	681.2	682.1
20°	659.2	660.1	663.8	672.0	673.0
22.5°	644.5	647.3	651.8	660.1	662.9
25°	628.0	631.6	637.2	648.2	650.0
27.5°	612.4	615.1	622.5	634.4	638.1
30°	593.1	597.7	606.9	618.8	623.4
32.5°	574.7	579.3	590.3	603.2	606.9
35°	551.8	558.2	571.1	585.7	590.3
37.5°	529.7	536.2	551.8	568.3	573.8
40°	506.8	514.1	530.7	549.9	557.3
42.5°	482.0	492.1	510.5	531.6	539.8
45°	457.2	466.4	489.3	513.2	522.4
47.5°	430.6	441.6	466.4	494.9	505.9
50°	402.1	415.9	444.4	475.6	487.5
52.5°	373.7	389.3	421.4	456.3	469.1
55°	346.1	360.8	399.4	437.0	450.8
57.5°	315.8	334.2	376.4	416.8	430.6
60°	284.6	304.8	353.5	395.7	410.4
62.5°	253.4	276.3	331.4	373.7	389.3
65°	222.2	247.9	305.7	350.7	366.3
67.5°	191.9	220.3	281.9	326.8	342.4
70°	157.0	192.8	256.1	300.2	315.8
72.5°	124.9	166.2	231.4	272.7	286.4
75°	96.4	140.5	203.8	241.5	247.0
77.5°	70.7	114.8	175.4	188.2	189.1
80°	47.7	91.8	134.0	132.2	134.0
82.5°	31.2	68.9	84.5	94.6	95.5
85°	18.4	40.4	49.6	55.1	56.0
87.5°	9.2	13.8	17.4	18.4	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)