

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: P308199

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CA08-W2A-U-4500K**

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: P308199  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-34HE-UNV-L82765-HRP-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 3000K 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**

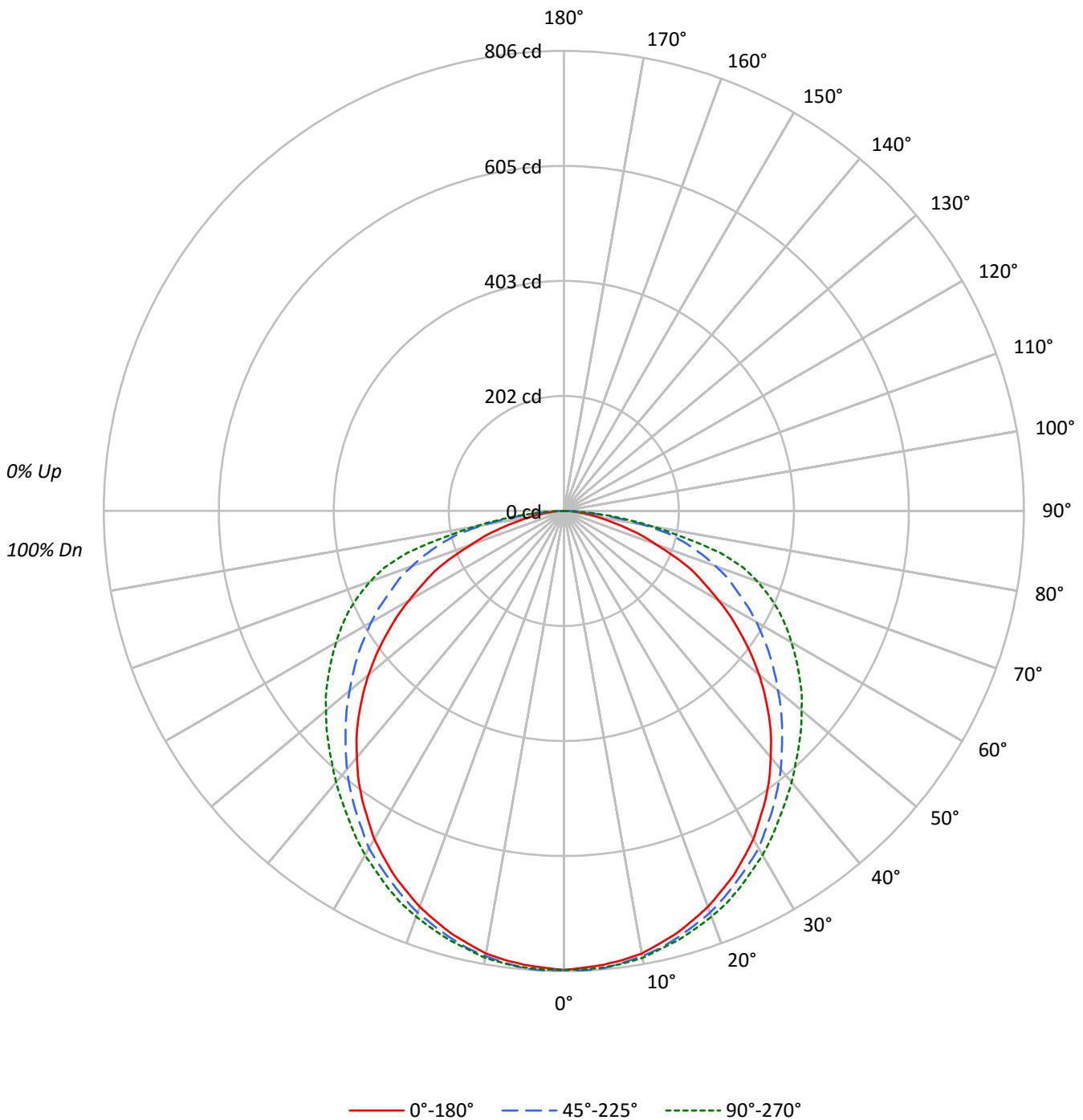
Lumens per Lamp: N/A  
Luminaire Lumens: 2442.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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°	2164	2164	2164
5°	2156	2172	2168
10°	2151	2164	2172
15°	2133	2154	2167
20°	2113	2144	2166
25°	2090	2127	2163
30°	2063	2120	2164
35°	2024	2095	2161
40°	1981	2078	2181
45°	1935	2058	2216
50°	1870	2051	2277
55°	1785	2067	2363
60°	1683	2097	2479
65°	1589	2138	2648
70°	1357	2230	2836
75°	1137	2323	2947
80°	931	2244	2459
85°	809	1664	1806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.2	3.1
10°-20°	218.0	8.9
20°-30°	330.4	13.5
30°-40°	398.9	16.3
40°-50°	419.2	17.2
50°-60°	394.4	16.2
60°-70°	328.9	13.5
70°-80°	217.9	8.9
80°-90°	58.1	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°	624.6	25.6
0°-40°	1023.5	41.9
0°-60°	1837.1	75.2
0°-90°	2442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2442.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	798	800	804	804	803	76
15°	766	769	773	776	778	216
25°	704	709	716	726	729	324
35°	616	622	638	652	658	385
45°	508	516	541	568	582	392
55°	380	397	441	485	504	340
65°	250	271	336	391	416	243
75°	109	152	223	270	283	119
85°	26	40	54	58	58	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	804.1	804.1	804.1	804.1	804.1
2.5°	801.0	802.6	805.7	805.7	804.1
5°	798.0	799.5	804.1	804.1	802.6
7.5°	793.3	794.9	798.0	801.0	799.5
10°	787.2	788.7	791.8	794.9	794.9
12.5°	776.4	777.9	784.1	785.6	785.6
15°	765.6	768.7	773.3	776.4	777.9
17.5°	751.7	754.8	761.0	767.2	767.2
20°	737.9	741.0	748.7	754.8	756.4
22.5°	720.9	725.6	733.3	741.0	744.0
25°	704.0	708.6	716.3	725.6	728.6
27.5°	684.0	688.6	699.4	710.2	711.7
30°	663.9	668.6	682.4	691.7	696.3
32.5°	639.3	645.5	659.3	673.2	677.8
35°	616.2	622.3	637.8	651.6	657.8
37.5°	591.5	597.7	614.6	631.6	639.3
40°	563.8	571.5	591.5	610.0	620.8
42.5°	537.6	545.3	565.4	590.0	600.8
45°	508.4	516.1	540.7	568.4	582.3
47.5°	477.5	486.8	516.1	549.9	563.8
50°	446.7	457.5	489.9	528.4	543.8
52.5°	414.4	428.2	465.2	506.8	525.3
55°	380.5	397.4	440.6	485.2	503.7
57.5°	348.1	363.5	414.4	462.1	482.2
60°	312.7	332.7	389.7	439.0	460.6
62.5°	278.8	300.4	363.5	415.9	439.0
65°	249.6	271.1	335.8	391.3	415.9
67.5°	211.0	240.3	312.7	365.1	389.7
70°	172.5	212.6	283.4	337.4	360.5
72.5°	143.3	181.8	254.2	308.1	329.7
75°	109.4	152.5	223.4	269.6	283.4
77.5°	81.6	126.3	191.0	214.1	215.7
80°	60.1	97.0	144.8	152.5	158.7
82.5°	41.6	67.8	94.0	103.2	106.3
85°	26.2	40.1	53.9	58.5	58.5
87.5°	13.9	15.4	18.5	18.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)