

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: P312668

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-RDP-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: P312668  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
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-L83050-RDP-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (168) 4500K 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**

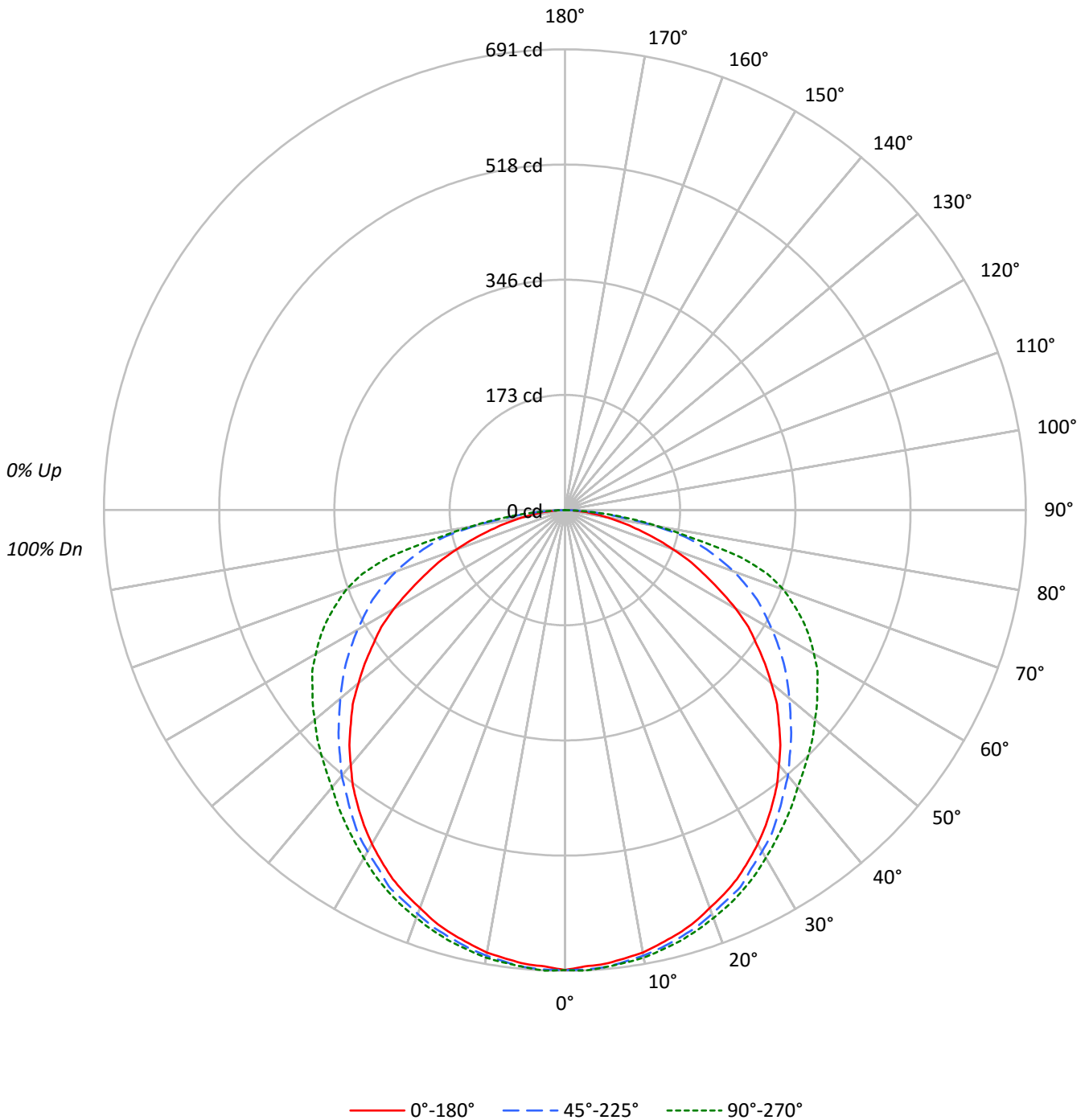
Lumens per Lamp: N/A  
Luminaire Lumens: 2196.0 lumens  
Efficiency: N/A  
Efficacy: 75.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29  
Input Voltage (V): NR  
Input Current (Ain): NR  
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				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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1856	1856	1856
5°	1846	1859	1859
10°	1841	1854	1863
15°	1832	1850	1863
20°	1818	1846	1864
25°	1813	1852	1871
30°	1797	1837	1872
35°	1778	1831	1884
40°	1754	1827	1907
45°	1727	1826	1967
50°	1691	1840	2049
55°	1645	1879	2168
60°	1591	1930	2321
65°	1481	2026	2510
70°	1360	2123	2745
75°	1193	2234	2838
80°	1026	2128	2228
85°	898	1547	1695



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.3	3.0
10°-20°	187.3	8.5
20°-30°	285.8	13.0
30°-40°	349.0	15.9
40°-50°	373.2	17.0
50°-60°	360.2	16.4
60°-70°	310.1	14.1
70°-80°	209.8	9.6
80°-90°	55.4	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°	538.4	24.5
0°-40°	887.4	40.4
0°-60°	1620.8	73.8
0°-90°	2196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2196.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	690	690	690	690	690	
5°	683	685	688	688	688	65
15°	658	659	664	667	669	185
25°	611	614	624	627	630	281
35°	541	546	557	569	574	339
45°	454	462	480	504	517	350
55°	351	362	401	441	462	314
65°	233	255	318	368	394	231
75°	115	152	215	258	273	123
85°	29	40	50	52	55	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	689.8	689.8	689.8	689.8	689.8
2.5°	685.0	686.6	689.8	689.8	691.4
5°	683.3	685.0	688.2	688.2	688.2
7.5°	678.5	680.1	683.3	685.0	685.0
10°	673.6	675.3	678.5	680.1	681.7
12.5°	665.6	667.2	672.0	675.3	675.3
15°	657.5	659.1	664.0	667.2	668.8
17.5°	647.8	651.0	655.9	659.1	660.7
20°	634.9	638.1	644.6	649.4	651.0
22.5°	623.6	626.8	633.3	638.1	641.3
25°	610.6	613.9	623.6	626.8	630.0
27.5°	594.5	597.7	605.8	612.3	617.1
30°	578.3	581.6	591.3	599.3	602.6
32.5°	560.6	565.4	576.7	583.2	588.0
35°	541.2	546.0	557.3	568.6	573.5
37.5°	521.8	526.6	537.9	552.5	558.9
40°	499.2	505.6	520.2	539.6	542.8
42.5°	478.2	486.3	499.2	521.8	529.9
45°	453.9	462.0	479.8	504.0	516.9
47.5°	431.3	439.4	458.8	487.9	504.0
50°	403.9	415.2	439.4	473.3	489.5
52.5°	378.0	387.7	420.0	457.2	476.6
55°	350.6	361.9	400.6	441.0	462.0
57.5°	326.3	336.0	379.6	424.9	449.1
60°	295.6	308.6	358.6	407.1	431.3
62.5°	263.3	282.7	337.6	387.7	413.6
65°	232.6	255.2	318.2	368.3	394.2
67.5°	205.2	229.4	294.0	347.3	371.6
70°	172.9	203.5	269.8	321.5	348.9
72.5°	143.8	177.7	242.3	294.0	318.2
75°	114.7	151.9	214.9	258.5	273.0
77.5°	88.9	124.4	184.2	197.1	198.7
80°	66.2	98.5	137.3	138.9	143.8
82.5°	45.2	69.5	88.9	96.9	98.5
85°	29.1	40.4	50.1	51.7	54.9
87.5°	12.9	14.5	17.8	16.2	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)