

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: P312709

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CP187-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: P312709  
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: 22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-5000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 2355.0 lumens  
Efficiency: N/A  
Efficacy: 69.3 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

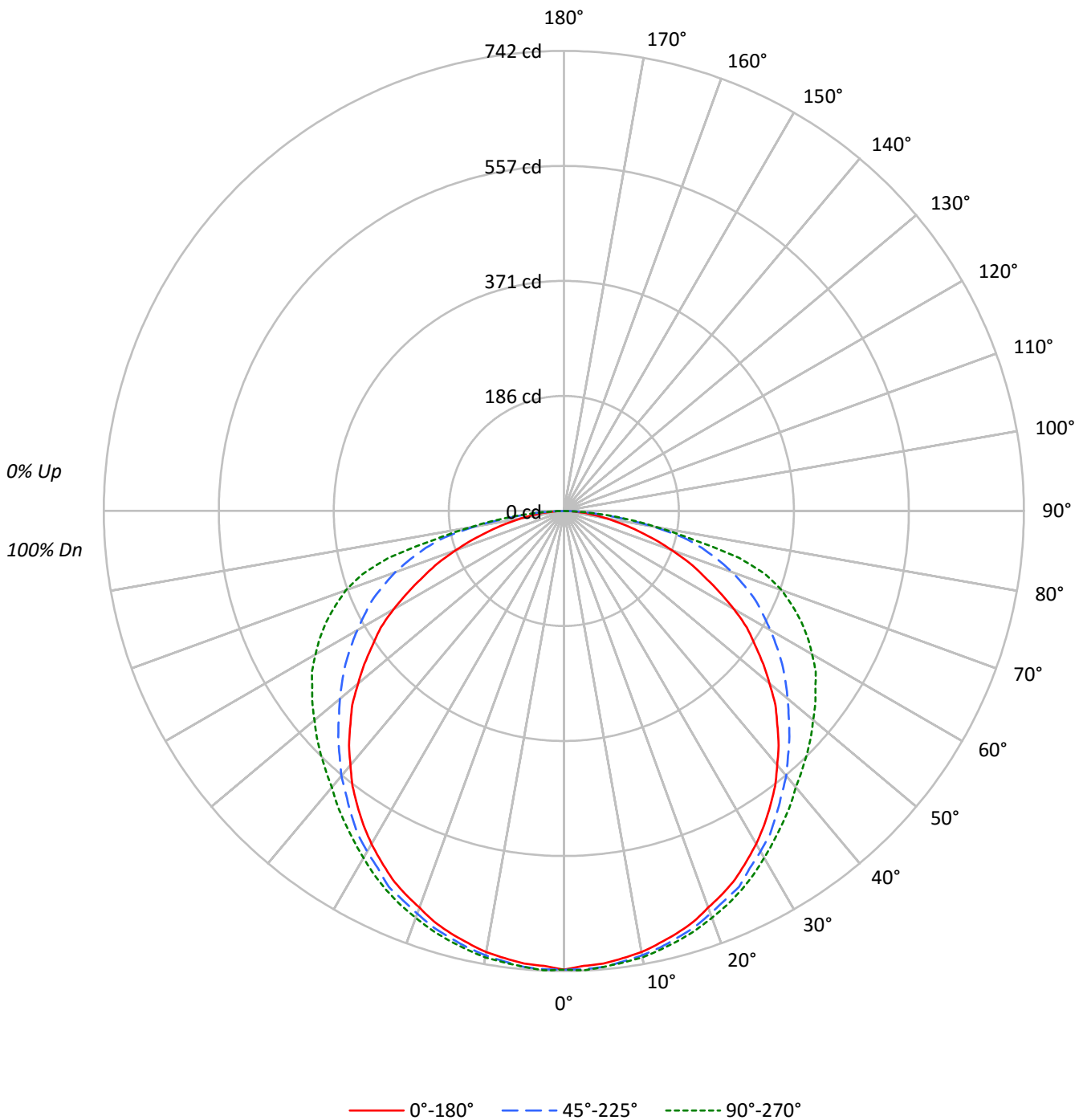
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1991	1991	1991
5°	1979	1994	1994
10°	1974	1988	1998
15°	1964	1984	1998
20°	1950	1979	1999
25°	1945	1985	2006
30°	1927	1970	2008
35°	1907	1963	2020
40°	1880	1959	2045
45°	1853	1958	2110
50°	1813	1973	2197
55°	1764	2016	2325
60°	1706	2070	2490
65°	1589	2173	2691
70°	1459	2276	2944
75°	1279	2396	3044
80°	1100	2283	2390
85°	963	1658	1819



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.0	3.0
10°-20°	200.9	8.5
20°-30°	306.5	13.0
30°-40°	374.3	15.9
40°-50°	400.2	17.0
50°-60°	386.3	16.4
60°-70°	332.5	14.1
70°-80°	225.0	9.6
80°-90°	59.4	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°	577.4	24.5
0°-40°	951.7	40.4
0°-60°	1738.1	73.8
0°-90°	2355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2355.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	733	734	738	738	738	70
15°	705	707	712	716	717	199
25°	655	658	669	672	676	301
35°	580	586	598	610	615	363
45°	487	496	514	540	554	376
55°	376	388	430	473	496	337
65°	250	274	341	395	423	248
75°	123	163	230	277	293	132
85°	31	43	54	55	59	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	739.7	739.7	739.7	739.7	739.7
2.5°	734.5	736.3	739.7	739.7	741.5
5°	732.8	734.5	738.0	738.0	738.0
7.5°	727.6	729.4	732.8	734.5	734.5
10°	722.4	724.2	727.6	729.4	731.1
12.5°	713.8	715.5	720.7	724.2	724.2
15°	705.1	706.8	712.0	715.5	717.2
17.5°	694.7	698.2	703.4	706.8	708.6
20°	680.8	684.3	691.2	696.4	698.2
22.5°	668.7	672.2	679.1	684.3	687.8
25°	654.9	658.3	668.7	672.2	675.6
27.5°	637.5	641.0	649.7	656.6	661.8
30°	620.2	623.7	634.1	642.7	646.2
32.5°	601.2	606.3	618.5	625.4	630.6
35°	580.4	585.6	597.7	609.8	615.0
37.5°	559.6	564.8	576.9	592.5	599.4
40°	535.3	542.2	557.8	578.6	582.1
42.5°	512.8	521.5	535.3	559.6	568.2
45°	486.8	495.5	514.5	540.5	554.4
47.5°	462.6	471.2	492.0	523.2	540.5
50°	433.1	445.2	471.2	507.6	524.9
52.5°	405.4	415.8	450.4	490.3	511.1
55°	375.9	388.1	429.6	473.0	495.5
57.5°	350.0	360.3	407.1	455.6	481.6
60°	317.0	330.9	384.6	436.6	462.6
62.5°	282.4	303.2	362.1	415.8	443.5
65°	249.5	273.7	341.3	395.0	422.7
67.5°	220.0	246.0	315.3	372.5	398.5
70°	185.4	218.3	289.3	344.8	374.2
72.5°	154.2	190.6	259.9	315.3	341.3
75°	123.0	162.8	230.4	277.2	292.8
77.5°	95.3	133.4	197.5	211.4	213.1
80°	71.0	105.7	147.3	149.0	154.2
82.5°	48.5	74.5	95.3	103.9	105.7
85°	31.2	43.3	53.7	55.4	58.9
87.5°	13.9	15.6	19.1	17.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)