

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: P312707

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CP187-W2A-U-4000K**

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: P312707  
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-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (168) 4000K 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**

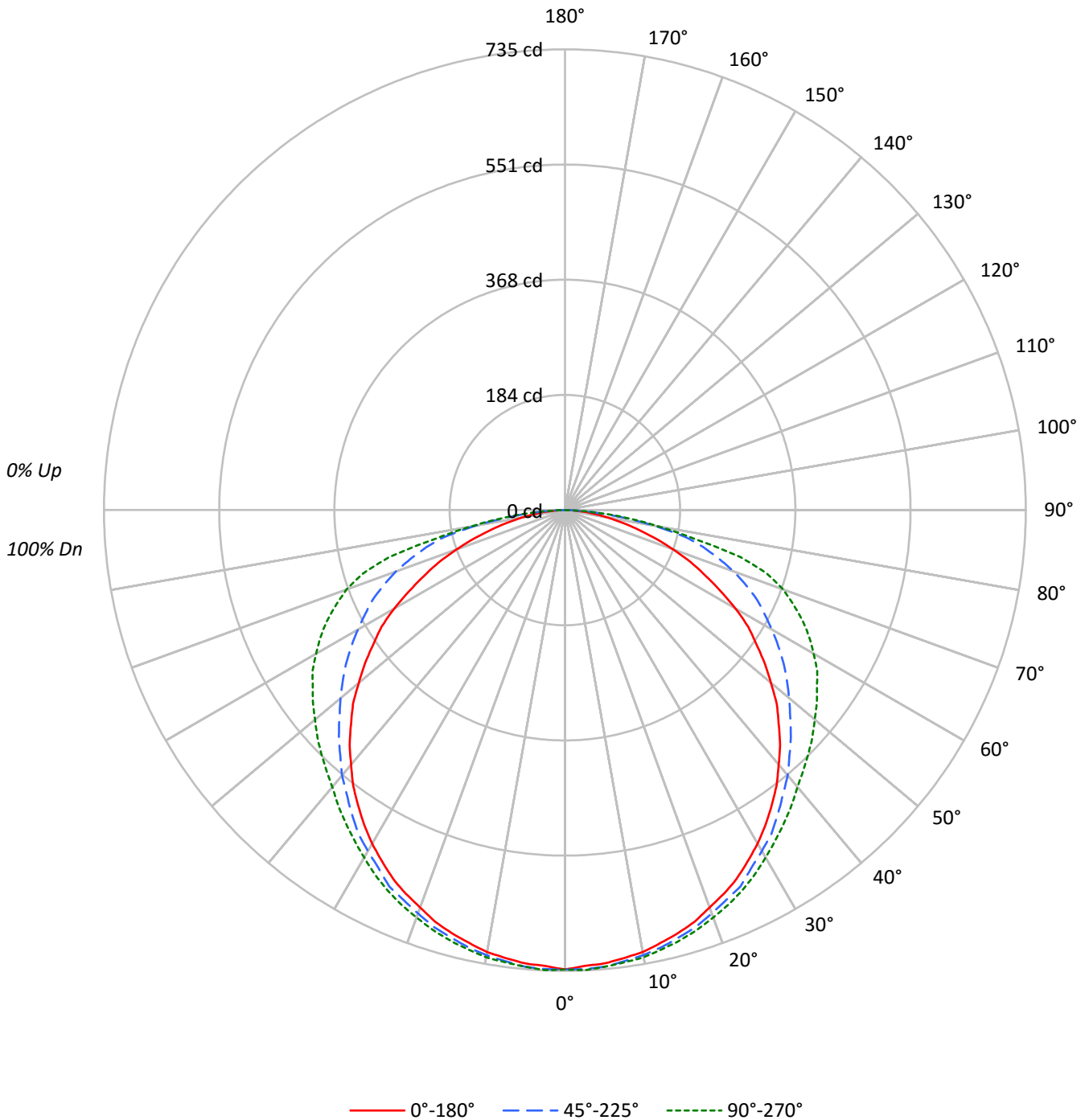
Lumens per Lamp: N/A  
Luminaire Lumens: 2333.0 lumens  
Efficiency: N/A  
Efficacy: 70.5 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1972	1972	1972
5°	1961	1975	1975
10°	1956	1970	1979
15°	1946	1965	1979
20°	1932	1961	1981
25°	1926	1967	1987
30°	1909	1952	1989
35°	1889	1945	2002
40°	1863	1941	2026
45°	1835	1940	2090
50°	1796	1954	2177
55°	1747	1997	2303
60°	1690	2051	2466
65°	1573	2153	2667
70°	1445	2255	2917
75°	1267	2374	3015
80°	1091	2261	2366
85°	954	1643	1803



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.3	3.0
10°-20°	199.0	8.5
20°-30°	303.7	13.0
30°-40°	370.8	15.9
40°-50°	396.4	17.0
50°-60°	382.7	16.4
60°-70°	329.4	14.1
70°-80°	222.9	9.6
80°-90°	58.8	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°	572.0	24.5
0°-40°	942.8	40.4
0°-60°	1721.9	73.8
0°-90°	2333.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2333.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	733	733	733	733	733	
5°	726	728	731	731	731	69
15°	698	700	705	709	710	197
25°	649	652	662	666	669	299
35°	575	580	592	604	609	360
45°	482	491	510	536	549	372
55°	372	384	426	468	491	334
65°	247	271	338	391	419	246
75°	122	161	228	275	290	131
85°	31	43	53	55	58	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	732.8	732.8	732.8	732.8	732.8
2.5°	727.7	729.4	732.8	732.8	734.6
5°	726.0	727.7	731.1	731.1	731.1
7.5°	720.8	722.5	726.0	727.7	727.7
10°	715.7	717.4	720.8	722.5	724.3
12.5°	707.1	708.8	714.0	717.4	717.4
15°	698.5	700.2	705.4	708.8	710.5
17.5°	688.2	691.6	696.8	700.2	701.9
20°	674.5	677.9	684.8	689.9	691.6
22.5°	662.5	665.9	672.8	677.9	681.3
25°	648.7	652.2	662.5	665.9	669.3
27.5°	631.6	635.0	643.6	650.5	655.6
30°	614.4	617.8	628.1	636.7	640.2
32.5°	595.5	600.7	612.7	619.6	624.7
35°	574.9	580.1	592.1	604.1	609.3
37.5°	554.3	559.5	571.5	587.0	593.8
40°	530.3	537.2	552.6	573.2	576.7
42.5°	508.0	516.6	530.3	554.3	562.9
45°	482.3	490.8	509.7	535.5	549.2
47.5°	458.2	466.8	487.4	518.3	535.5
50°	429.1	441.1	466.8	502.9	520.0
52.5°	401.6	411.9	446.2	485.7	506.3
55°	372.4	384.4	425.6	468.5	490.8
57.5°	346.7	357.0	403.3	451.4	477.1
60°	314.1	327.8	381.0	432.5	458.2
62.5°	279.7	300.3	358.7	411.9	439.4
65°	247.1	271.2	338.1	391.3	418.8
67.5°	218.0	243.7	312.4	369.0	394.7
70°	183.6	216.2	286.6	341.5	370.7
72.5°	152.7	188.8	257.4	312.4	338.1
75°	121.9	161.3	228.3	274.6	290.0
77.5°	94.4	132.2	195.7	209.4	211.1
80°	70.4	104.7	145.9	147.6	152.7
82.5°	48.1	73.8	94.4	103.0	104.7
85°	30.9	42.9	53.2	54.9	58.4
87.5°	13.7	15.4	18.9	17.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)