

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: P311908

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-CP187-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: P311908  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 14FCZ2-29-UNV-L83050-HRP-CP187-W2A-U-4500K  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB 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**

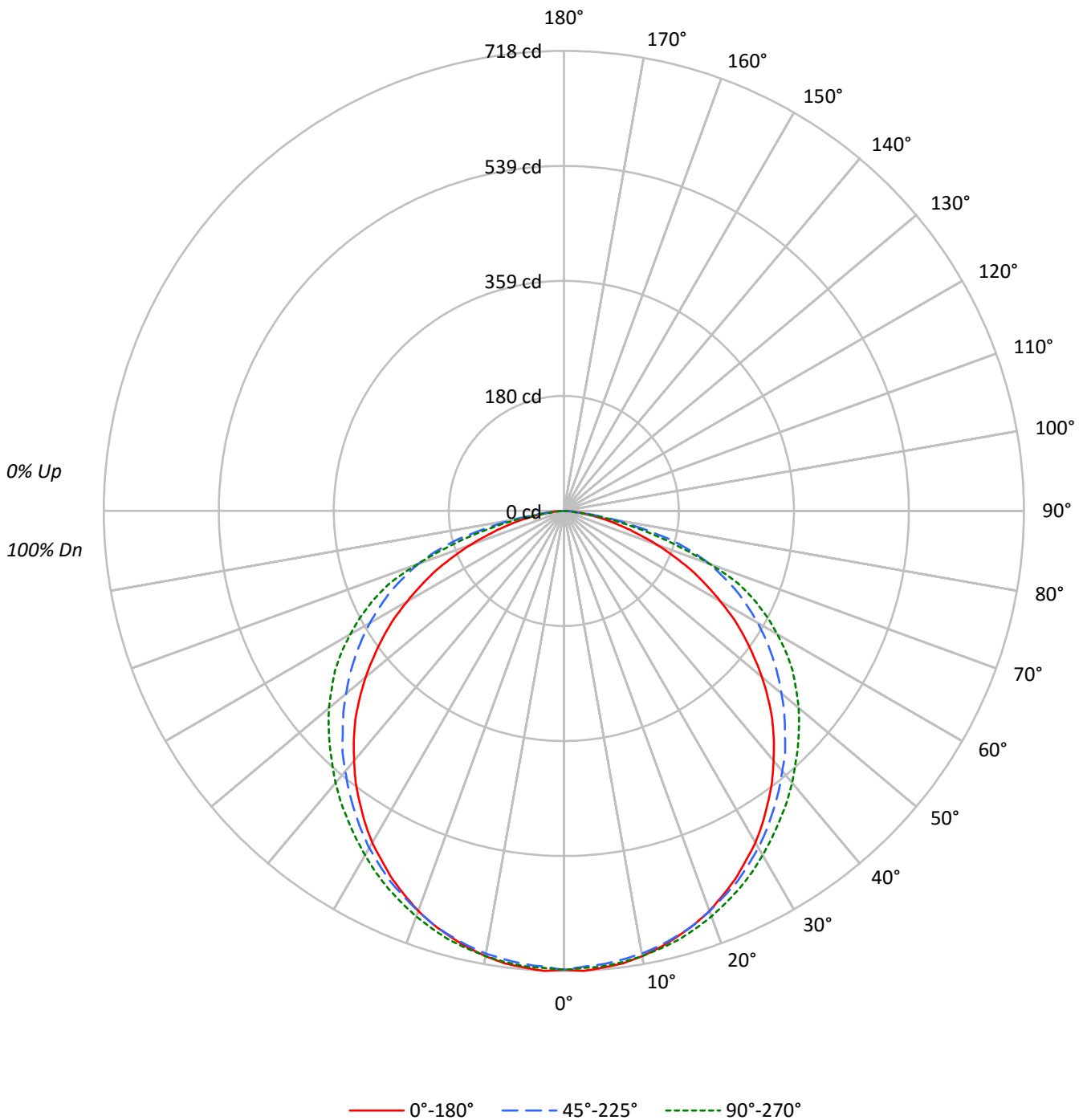
Lumens per Lamp: N/A  
Luminaire Lumens: 2108.0 lumens  
Efficiency: N/A  
Efficacy: 84.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	1926	1926	1926
5°	1932	1918	1927
10°	1927	1916	1927
15°	1915	1911	1930
20°	1902	1904	1929
25°	1882	1897	1929
30°	1858	1887	1928
35°	1825	1873	1932
40°	1788	1863	1946
45°	1751	1857	1968
50°	1690	1857	2004
55°	1617	1866	2046
60°	1520	1880	2073
65°	1401	1899	2085
70°	1220	1903	1919
75°	1006	1772	1550
80°	790	1274	1037
85°	614	491	247



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.8	3.2
10°-20°	194.5	9.2
20°-30°	295.3	14.0
30°-40°	357.8	17.0
40°-50°	377.1	17.9
50°-60°	352.0	16.7
60°-70°	281.3	13.3
70°-80°	154.8	7.3
80°-90°	27.3	1.3
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°	557.6	26.5
0°-40°	915.4	43.4
0°-60°	1644.6	78.0
0°-90°	2108.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2108.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	716	716	716	716	716	
5°	715	713	710	715	713	68
15°	687	687	686	693	693	194
25°	634	635	639	648	650	292
35°	556	561	570	585	588	348
45°	460	469	488	510	517	354
55°	345	362	398	426	436	308
65°	220	248	298	323	328	217
75°	97	138	170	153	149	104
85°	20	25	16	10	8	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	715.9	715.9	715.9	715.9	715.9
2.5°	718.5	716.6	711.9	715.9	713.9
5°	715.2	713.2	709.9	714.6	713.2
7.5°	711.9	709.3	705.9	711.2	709.9
10°	705.3	703.3	701.3	705.9	705.3
12.5°	697.3	696.7	694.7	700.0	699.3
15°	687.4	687.4	686.1	692.7	692.7
17.5°	676.8	676.1	676.8	684.1	683.4
20°	664.2	664.2	664.8	673.5	673.5
22.5°	648.9	649.6	651.6	662.2	661.5
25°	633.7	635.0	639.0	648.3	649.6
27.5°	615.1	618.4	623.1	634.4	635.7
30°	597.9	599.9	607.2	617.8	620.4
32.5°	577.4	581.3	589.3	601.2	604.5
35°	555.5	560.8	570.1	584.6	588.0
37.5°	533.6	538.2	550.8	566.1	572.0
40°	509.1	517.0	530.3	547.5	554.1
42.5°	485.2	493.2	511.1	529.0	534.9
45°	460.0	468.6	487.9	509.7	517.0
47.5°	432.2	442.1	466.7	489.9	497.8
50°	403.7	416.3	443.5	469.3	478.6
52.5°	373.9	389.8	420.9	448.1	456.7
55°	344.7	361.9	397.7	425.6	436.2
57.5°	314.9	333.4	373.9	405.7	411.6
60°	282.4	304.9	349.3	377.2	385.1
62.5°	250.6	276.4	324.1	350.7	357.3
65°	220.1	247.9	298.3	322.8	327.5
67.5°	186.9	220.1	269.8	292.3	293.6
70°	155.1	193.6	241.9	252.5	243.9
72.5°	124.0	165.1	209.5	200.8	193.6
75°	96.8	138.5	170.4	153.1	149.1
77.5°	71.6	113.3	122.0	112.7	105.4
80°	51.0	89.5	82.2	70.3	66.9
82.5°	35.1	56.3	45.1	35.1	30.5
85°	19.9	25.2	15.9	9.9	8.0
87.5°	8.6	6.0	3.3	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)