

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: P312081

Luminaire Tested: **14FCZ2-35-UNV-L83050-RDP-CP187-W2A-U-3500K**

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: P312081
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-35-UNV-L83050-RDP-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 2023.0 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

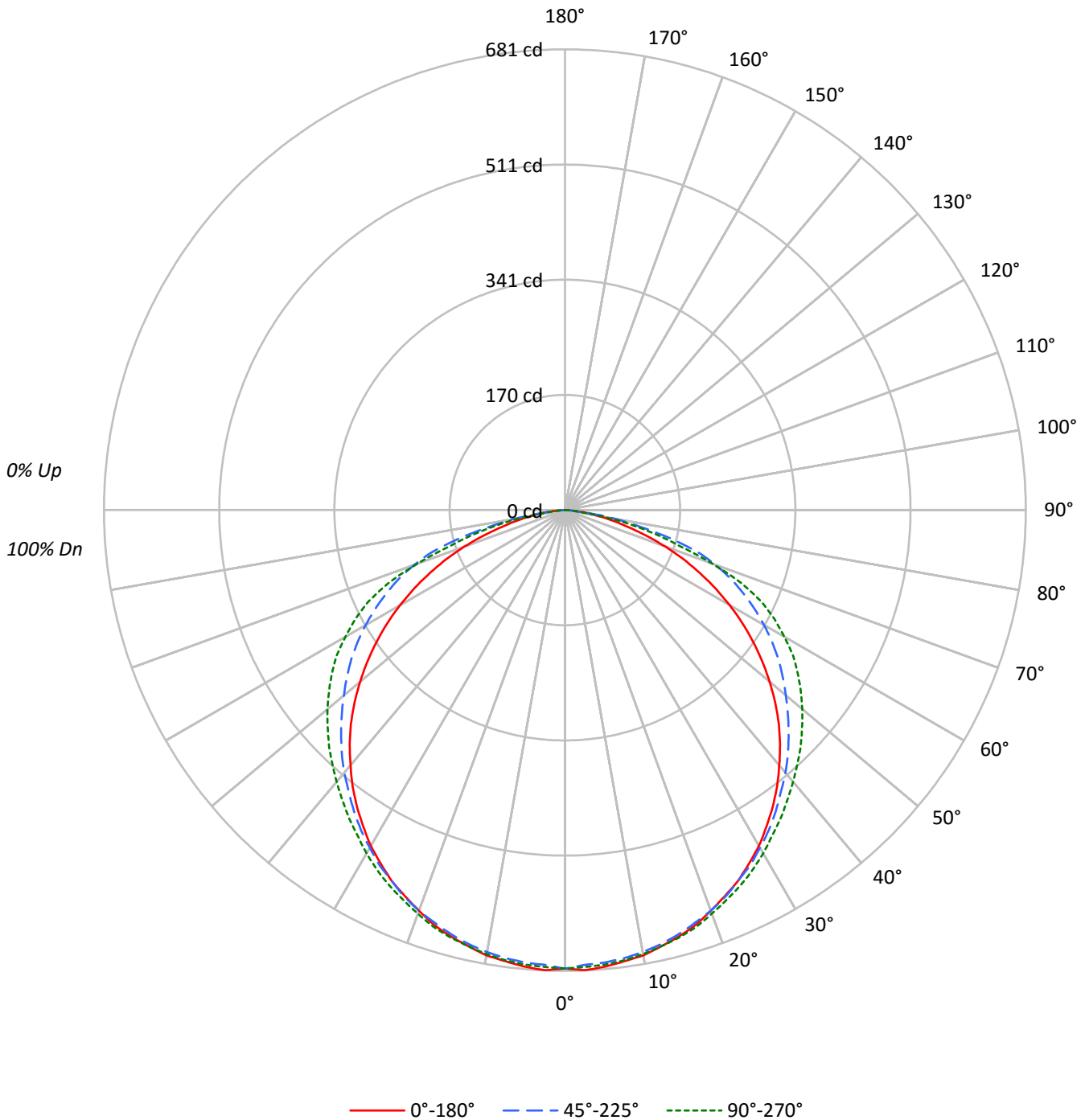
Input Watts (W): 29.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1823	1823	1823
5°	1830	1813	1822
10°	1826	1812	1821
15°	1817	1808	1822
20°	1805	1805	1818
25°	1796	1796	1820
30°	1781	1791	1821
35°	1759	1785	1826
40°	1731	1781	1842
45°	1701	1779	1875
50°	1653	1785	1917
55°	1593	1808	1971
60°	1513	1828	2014
65°	1398	1850	2041
70°	1242	1864	1827
75°	1001	1675	1462
80°	783	1175	955
85°	537	343	244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.1	3.2
10°-20°	184.0	9.1
20°-30°	280.2	13.8
30°-40°	341.2	16.9
40°-50°	362.0	17.9
50°-60°	341.7	16.9
60°-70°	275.9	13.6
70°-80°	149.6	7.4
80°-90°	24.2	1.2
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°	528.3	26.1
0°-40°	869.5	43.0
0°-60°	1573.3	77.8
0°-90°	2023.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2023.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	678	678	678	678	678	
5°	678	676	671	676	674	64
15°	652	651	649	654	654	184
25°	605	603	605	611	613	278
35°	535	539	543	554	556	335
45°	447	453	468	485	493	344
55°	340	354	385	411	420	303
65°	220	246	291	314	321	217
75°	96	141	161	145	141	105
85°	17	19	11	10	8	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	677.6	677.6	677.6	677.6	677.6
2.5°	680.7	677.6	672.8	677.6	676.0
5°	677.6	676.0	671.2	676.0	674.4
7.5°	672.8	672.8	668.1	671.2	671.2
10°	668.1	666.5	663.3	668.1	666.5
12.5°	660.2	658.6	657.0	661.8	660.2
15°	652.3	650.7	649.1	653.9	653.9
17.5°	642.8	641.2	639.6	646.0	646.0
20°	630.2	630.2	630.2	636.5	634.9
22.5°	617.5	617.5	619.1	625.4	623.9
25°	604.9	603.3	604.9	611.2	612.8
27.5°	589.1	590.7	592.3	598.6	600.2
30°	573.3	574.9	576.5	584.4	586.0
32.5°	554.4	557.5	560.7	570.2	570.2
35°	535.4	538.6	543.3	554.4	555.9
37.5°	514.9	518.0	524.4	537.0	540.1
40°	492.8	497.5	507.0	519.6	524.4
42.5°	470.7	477.0	488.0	502.2	508.6
45°	447.0	453.3	467.5	484.9	492.8
47.5°	421.7	429.6	447.0	469.1	475.4
50°	394.8	405.9	426.4	450.1	458.0
52.5°	368.0	380.6	405.9	431.2	439.1
55°	339.6	353.8	385.4	410.6	420.1
57.5°	311.1	326.9	363.3	390.1	399.6
60°	281.1	300.1	339.6	366.4	374.3
62.5°	251.1	273.2	315.9	342.7	349.0
65°	219.5	246.4	290.6	314.3	320.6
67.5°	189.5	221.1	265.3	282.7	282.7
70°	157.9	192.7	236.9	241.6	232.2
72.5°	126.4	165.8	205.3	187.9	180.0
75°	96.3	140.6	161.1	145.3	140.6
77.5°	72.7	113.7	113.7	104.2	101.1
80°	50.5	86.9	75.8	66.3	61.6
82.5°	33.2	49.0	39.5	31.6	26.8
85°	17.4	19.0	11.1	9.5	7.9
87.5°	6.3	3.2	1.6	3.2	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)