

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: P312082

Luminaire Tested: **14FCZ2-35-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: P312082
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-4000K
Description: 1'X4' 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: 2124.0 lumens
Efficiency: N/A
Efficacy: 70.3 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

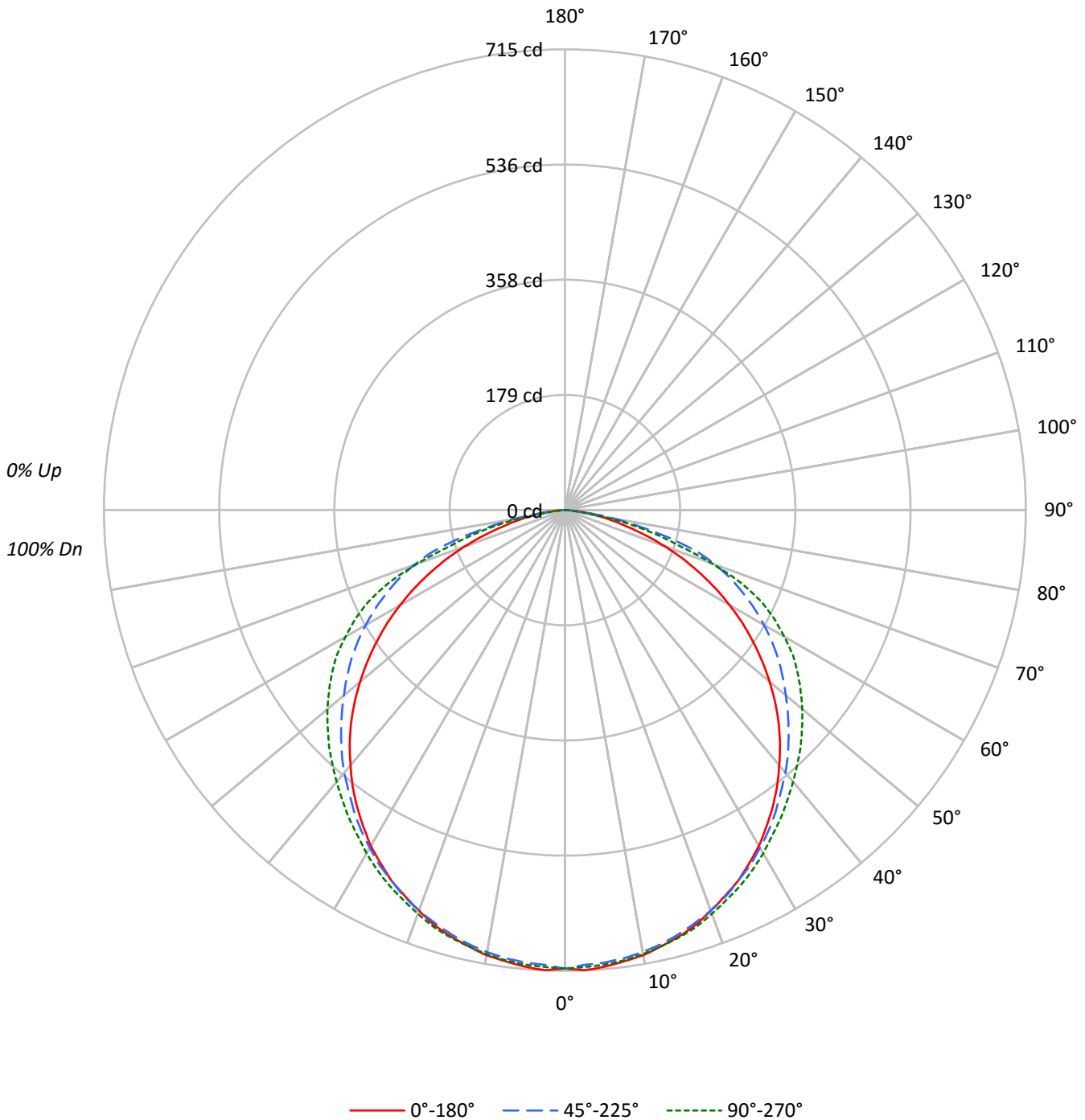
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1914	1914	1914
5°	1922	1904	1913
10°	1917	1903	1912
15°	1908	1899	1913
20°	1895	1895	1909
25°	1886	1886	1910
30°	1870	1881	1912
35°	1847	1874	1918
40°	1818	1870	1934
45°	1786	1868	1969
50°	1736	1874	2013
55°	1673	1898	2069
60°	1589	1919	2115
65°	1468	1943	2143
70°	1304	1957	1918
75°	1052	1758	1535
80°	823	1234	1003
85°	562	358	256



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	3.2
10°-20°	193.2	9.1
20°-30°	294.2	13.8
30°-40°	358.3	16.9
40°-50°	380.1	17.9
50°-60°	358.7	16.9
60°-70°	289.7	13.6
70°-80°	157.1	7.4
80°-90°	25.4	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°	554.7	26.1
0°-40°	912.9	43.0
0°-60°	1651.8	77.8
0°-90°	2124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	711	710	705	710	708	68
15°	685	683	682	686	686	193
25°	635	633	635	642	643	292
35°	562	566	570	582	584	351
45°	469	476	491	509	517	361
55°	356	371	405	431	441	318
65°	230	259	305	330	337	228
75°	101	148	169	153	148	111
85°	18	20	12	10	8	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	711.4	711.4	711.4	711.4	711.4
2.5°	714.7	711.4	706.4	711.4	709.7
5°	711.4	709.7	704.7	709.7	708.1
7.5°	706.4	706.4	701.4	704.7	704.7
10°	701.4	699.8	696.5	701.4	699.8
12.5°	693.1	691.5	689.8	694.8	693.1
15°	684.9	683.2	681.5	686.5	686.5
17.5°	674.9	673.2	671.6	678.2	678.2
20°	661.6	661.6	661.6	668.3	666.6
22.5°	648.4	648.4	650.0	656.7	655.0
25°	635.1	633.4	635.1	641.7	643.4
27.5°	618.5	620.2	621.8	628.5	630.1
30°	601.9	603.6	605.3	613.5	615.2
32.5°	582.0	585.4	588.7	598.6	598.6
35°	562.1	565.5	570.4	582.0	583.7
37.5°	540.6	543.9	550.5	563.8	567.1
40°	517.4	522.3	532.3	545.6	550.5
42.5°	494.2	500.8	512.4	527.3	534.0
45°	469.3	475.9	490.8	509.1	517.4
47.5°	442.7	451.0	469.3	492.5	499.1
50°	414.6	426.2	447.7	472.6	480.9
52.5°	386.4	399.6	426.2	452.7	461.0
55°	356.5	371.4	404.6	431.1	441.1
57.5°	326.7	343.3	381.4	409.6	419.5
60°	295.2	315.1	356.5	384.7	393.0
62.5°	263.7	286.9	331.6	359.8	366.5
65°	230.5	258.7	305.1	330.0	336.6
67.5°	199.0	232.2	278.6	296.8	296.8
70°	165.8	202.3	248.7	253.7	243.8
72.5°	132.7	174.1	215.6	197.3	189.0
75°	101.2	147.6	169.1	152.6	147.6
77.5°	76.3	119.4	119.4	109.4	106.1
80°	53.1	91.2	79.6	69.6	64.7
82.5°	34.8	51.4	41.5	33.2	28.2
85°	18.2	19.9	11.6	9.9	8.3
87.5°	6.6	3.3	1.7	3.3	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)