

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: P312159

Luminaire Tested: **14FCZ2-20-UNV-L83050-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: P312159
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-CP187-W2A-U-5000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 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: 1992.0 lumens
Efficiency: N/A
Efficacy: 115.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

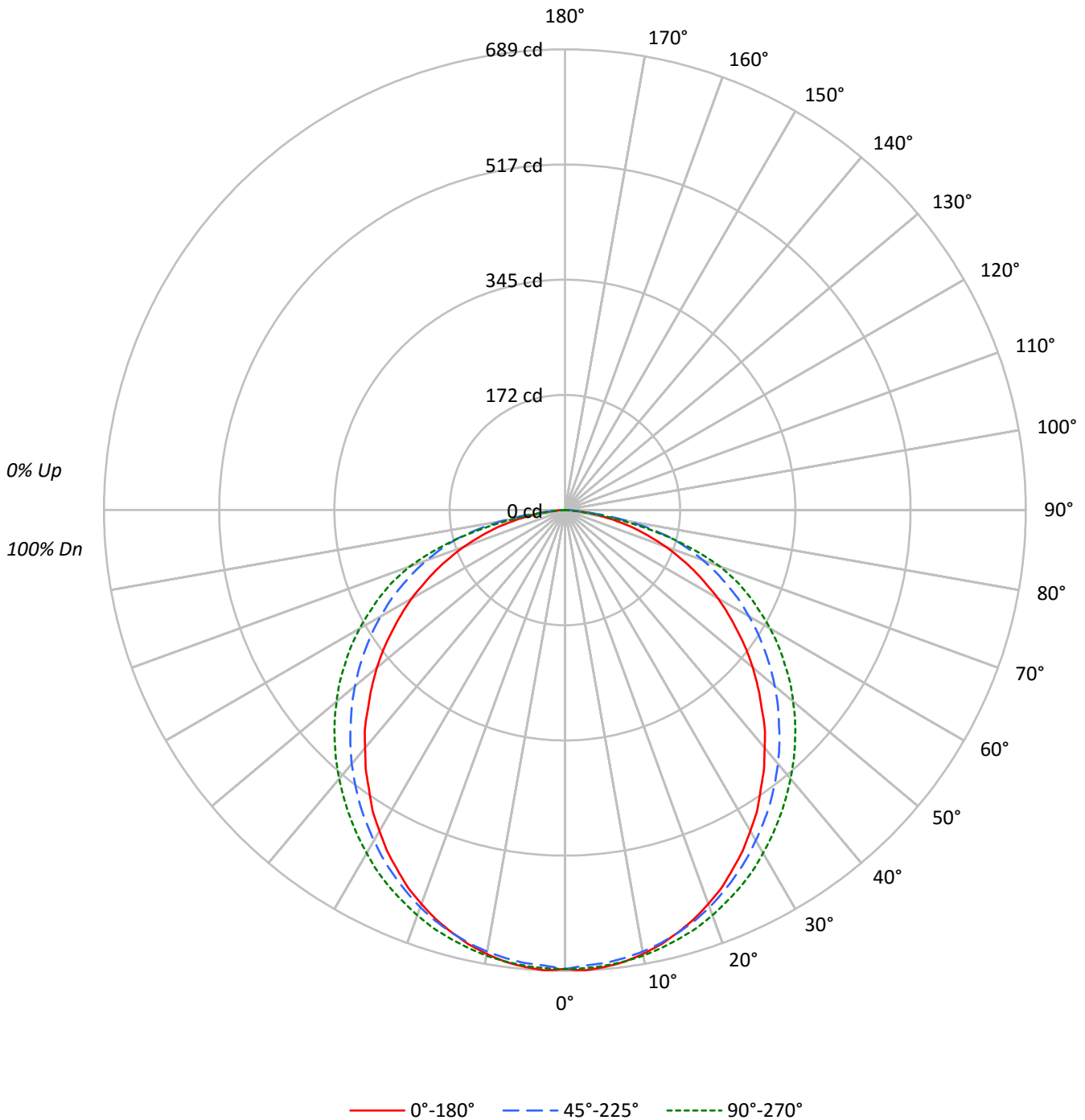
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	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	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	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	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1847	1847	1847
5°	1853	1837	1848
10°	1841	1832	1849
15°	1821	1823	1848
20°	1795	1810	1847
25°	1761	1792	1845
30°	1722	1774	1841
35°	1677	1758	1840
40°	1632	1741	1843
45°	1582	1722	1853
50°	1536	1714	1865
55°	1477	1709	1882
60°	1425	1711	1908
65°	1352	1717	1938
70°	1268	1730	1936
75°	1150	1746	1750
80°	944	1508	1246
85°	701	713	287



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.9	3.3
10°-20°	185.5	9.3
20°-30°	279.4	14.0
30°-40°	335.3	16.8
40°-50°	349.5	17.5
50°-60°	323.6	16.2
60°-70°	261.4	13.1
70°-80°	159.4	8.0
80°-90°	32.9	1.7
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°	529.9	26.6
0°-40°	865.2	43.4
0°-60°	1538.3	77.2
0°-90°	1992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	686	684	680	685	684	65
15°	654	654	654	663	663	184
25°	593	596	604	619	621	273
35°	510	518	535	555	560	320
45°	416	428	453	478	487	321
55°	315	331	364	393	401	282
65°	212	233	270	297	304	210
75°	111	135	168	171	168	116
85°	23	34	23	13	9	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.3	686.3	686.3	686.3	686.3
2.5°	688.9	686.7	681.8	686.7	685.8
5°	685.8	684.0	680.0	684.9	684.0
7.5°	681.4	679.6	676.0	681.8	680.9
10°	673.8	672.9	670.3	676.9	676.5
12.5°	664.9	664.5	663.2	670.7	670.3
15°	653.8	654.3	654.3	663.2	663.2
17.5°	641.4	642.3	644.1	653.8	655.2
20°	626.7	628.5	632.1	643.2	644.9
22.5°	611.6	613.0	618.3	631.6	633.4
25°	593.0	596.5	603.6	618.7	621.4
27.5°	575.2	578.3	588.1	603.6	608.1
30°	554.3	559.2	570.8	587.6	592.5
32.5°	534.3	539.7	553.0	572.5	577.0
35°	510.4	518.4	535.2	554.8	560.1
37.5°	488.6	496.1	515.2	536.6	542.8
40°	464.6	473.9	495.7	518.4	524.6
42.5°	442.4	451.3	474.8	497.9	506.4
45°	415.7	428.2	452.6	477.9	486.8
47.5°	391.3	403.8	431.7	458.8	466.8
50°	366.9	380.2	409.5	437.5	445.5
52.5°	341.6	355.8	387.3	415.3	424.6
55°	314.9	331.4	364.2	392.7	401.1
57.5°	289.6	306.5	341.6	370.4	378.9
60°	264.7	282.1	318.0	345.6	354.5
62.5°	237.2	257.6	294.9	322.0	328.7
65°	212.3	233.2	269.6	296.7	304.3
67.5°	186.1	208.8	245.2	270.1	277.2
70°	161.2	184.8	219.9	243.0	246.1
72.5°	134.6	158.6	194.1	208.8	208.8
75°	110.6	135.0	167.9	170.6	168.3
77.5°	84.4	111.5	132.8	127.5	122.1
80°	60.9	87.5	97.3	87.5	80.4
82.5°	40.9	63.5	58.6	46.6	41.3
85°	22.7	33.8	23.1	12.9	9.3
87.5°	8.4	7.6	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)