

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: P311906

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-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: P311906
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-3500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1989.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

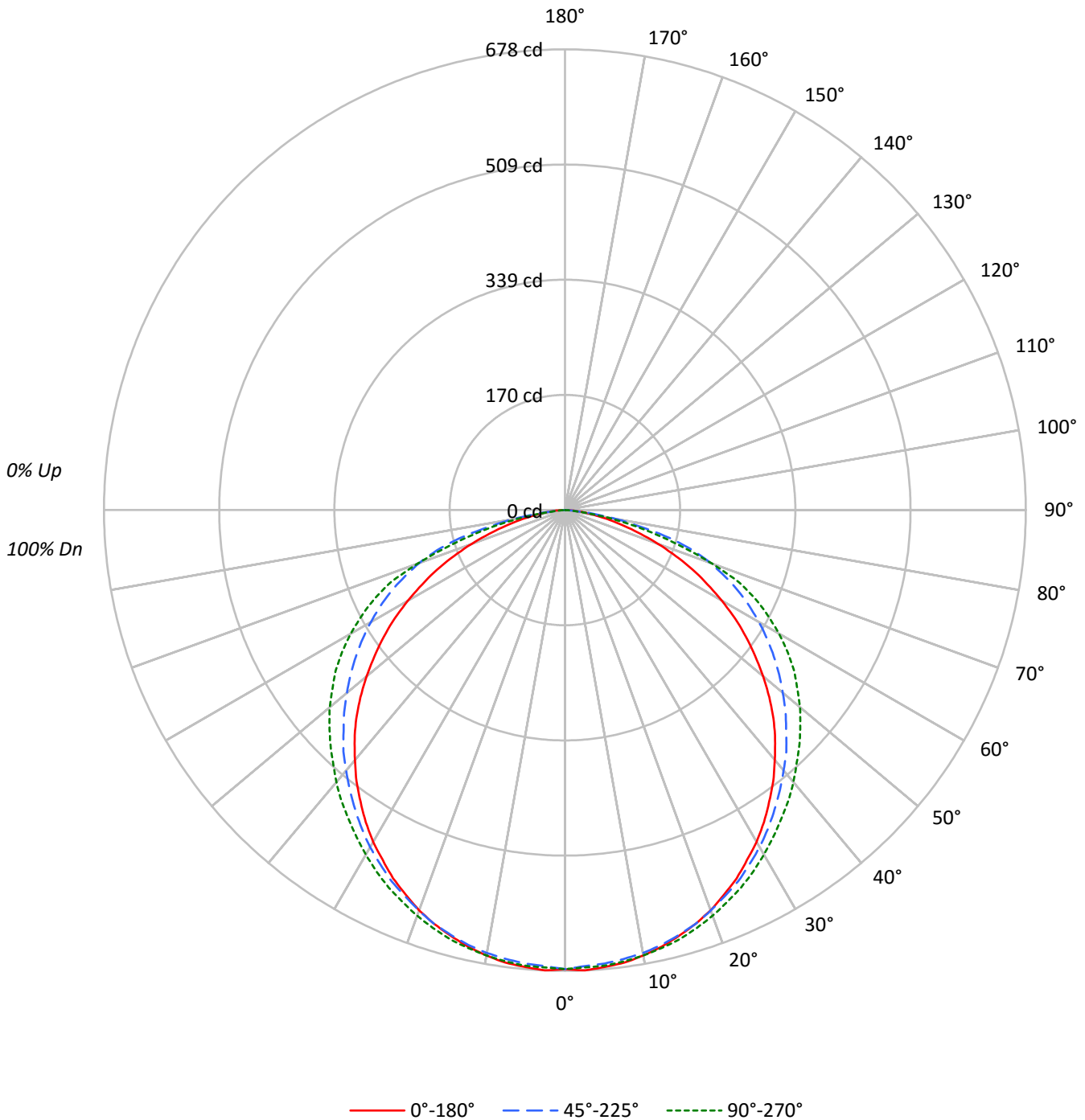
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1818	1818	1818
5°	1823	1809	1818
10°	1818	1808	1818
15°	1807	1803	1821
20°	1795	1796	1820
25°	1775	1790	1820
30°	1753	1780	1819
35°	1722	1767	1823
40°	1687	1758	1837
45°	1652	1752	1856
50°	1595	1752	1891
55°	1526	1761	1931
60°	1434	1774	1956
65°	1322	1792	1968
70°	1152	1796	1811
75°	949	1671	1463
80°	747	1203	979
85°	580	463	232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.9	3.2
10°-20°	183.5	9.2
20°-30°	278.7	14.0
30°-40°	337.6	17.0
40°-50°	355.8	17.9
50°-60°	332.2	16.7
60°-70°	265.4	13.3
70°-80°	146.1	7.3
80°-90°	25.8	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°	526.1	26.5
0°-40°	863.7	43.4
0°-60°	1551.7	78.0
0°-90°	1989.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1989.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	675	673	670	674	673	64
15°	649	649	647	654	654	183
25°	598	599	603	612	613	275
35°	524	529	538	552	555	328
45°	434	442	460	481	488	334
55°	325	342	375	402	412	290
65°	208	234	281	305	309	204
75°	91	131	161	144	141	98
85°	19	24	15	9	8	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	675.5	675.5	675.5	675.5	675.5
2.5°	678.0	676.1	671.7	675.5	673.6
5°	674.8	673.0	669.8	674.2	673.0
7.5°	671.7	669.2	666.1	671.1	669.8
10°	665.5	663.6	661.7	666.1	665.5
12.5°	658.0	657.3	655.5	660.5	659.8
15°	648.6	648.6	647.3	653.6	653.6
17.5°	638.6	637.9	638.6	645.5	644.8
20°	626.7	626.7	627.3	635.4	635.4
22.5°	612.3	612.9	614.8	624.8	624.2
25°	597.9	599.2	602.9	611.7	612.9
27.5°	580.4	583.5	587.9	598.5	599.8
30°	564.1	566.0	572.9	582.9	585.4
32.5°	544.8	548.5	556.0	567.3	570.4
35°	524.1	529.1	537.9	551.6	554.8
37.5°	503.5	507.9	519.7	534.1	539.8
40°	480.3	487.8	500.4	516.6	522.9
42.5°	457.8	465.3	482.2	499.1	504.7
45°	434.1	442.2	460.3	481.0	487.8
47.5°	407.8	417.2	440.3	462.2	469.7
50°	380.9	392.8	418.4	442.8	451.6
52.5°	352.7	367.8	397.2	422.8	430.9
55°	325.2	341.5	375.3	401.5	411.5
57.5°	297.1	314.6	352.7	382.8	388.4
60°	266.4	287.7	329.6	355.9	363.4
62.5°	236.4	260.8	305.8	330.9	337.1
65°	207.6	233.9	281.4	304.6	309.0
67.5°	176.4	207.6	254.6	275.8	277.1
70°	146.4	182.6	228.3	238.3	230.2
72.5°	117.0	155.7	197.6	189.5	182.6
75°	91.3	130.7	160.7	144.5	140.7
77.5°	67.5	107.0	115.1	106.3	99.4
80°	48.2	84.4	77.6	66.3	63.2
82.5°	33.1	53.2	42.5	33.1	28.8
85°	18.8	23.8	15.0	9.4	7.5
87.5°	8.1	5.6	3.1	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)