

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: P307101

Luminaire Tested: **14FCZ2-29-UNV-L82765-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: P307101
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-L82765-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: 2020.0 lumens
Efficiency: N/A
Efficacy: 83.5 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

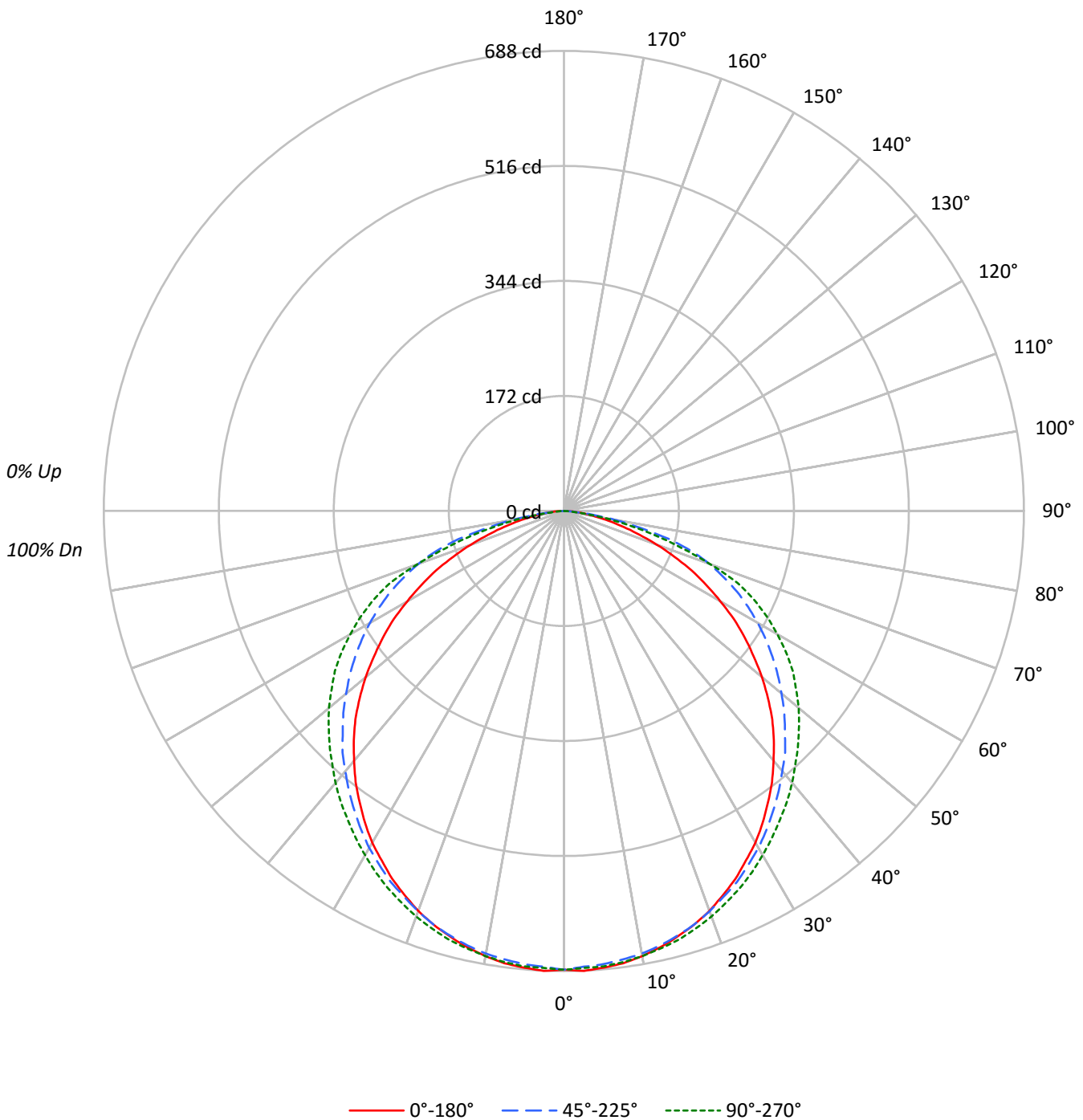
Input Watts (W): 24.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1846	1846	1846
5°	1851	1838	1846
10°	1847	1836	1847
15°	1835	1831	1849
20°	1823	1824	1848
25°	1803	1818	1848
30°	1780	1808	1847
35°	1749	1795	1851
40°	1714	1785	1865
45°	1678	1779	1885
50°	1619	1779	1920
55°	1550	1788	1961
60°	1456	1801	1986
65°	1343	1820	1998
70°	1169	1824	1839
75°	964	1697	1486
80°	758	1221	995
85°	590	469	235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.9	3.2
10°-20°	186.4	9.2
20°-30°	283.0	14.0
30°-40°	342.9	17.0
40°-50°	361.3	17.9
50°-60°	337.3	16.7
60°-70°	269.6	13.3
70°-80°	148.3	7.3
80°-90°	26.2	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°	534.3	26.5
0°-40°	877.2	43.4
0°-60°	1575.9	78.0
0°-90°	2020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2020.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	685	684	680	685	684	65
15°	659	659	657	664	664	186
25°	607	608	612	621	622	280
35°	532	537	546	560	563	333
45°	441	449	468	488	495	339
55°	330	347	381	408	418	295
65°	211	238	286	309	314	208
75°	93	133	163	147	143	100
85°	19	24	15	10	8	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.0	686.0	686.0	686.0	686.0
2.5°	688.5	686.6	682.2	686.0	684.1
5°	685.4	683.5	680.3	684.7	683.5
7.5°	682.2	679.7	676.5	681.6	680.3
10°	675.8	673.9	672.0	676.5	675.8
12.5°	668.2	667.6	665.7	670.8	670.1
15°	658.7	658.7	657.4	663.8	663.8
17.5°	648.5	647.9	648.5	655.5	654.9
20°	636.5	636.5	637.1	645.4	645.4
22.5°	621.8	622.5	624.4	634.6	633.9
25°	607.2	608.5	612.3	621.2	622.5
27.5°	589.5	592.6	597.1	607.9	609.1
30°	572.9	574.8	581.8	592.0	594.5
32.5°	553.2	557.1	564.7	576.1	579.3
35°	532.3	537.4	546.3	560.2	563.4
37.5°	511.3	515.8	527.8	542.4	548.2
40°	487.8	495.4	508.1	524.7	531.0
42.5°	465.0	472.6	489.7	506.9	512.6
45°	440.8	449.1	467.5	488.5	495.4
47.5°	414.1	423.7	447.2	469.4	477.0
50°	386.8	398.9	424.9	449.7	458.6
52.5°	358.2	373.5	403.3	429.4	437.6
55°	330.3	346.8	381.1	407.8	418.0
57.5°	301.7	319.5	358.2	388.7	394.5
60°	270.6	292.2	334.7	361.4	369.0
62.5°	240.1	264.9	310.6	336.0	342.4
65°	210.9	237.6	285.8	309.3	313.8
67.5°	179.1	210.9	258.5	280.1	281.4
70°	148.6	185.5	231.8	242.0	233.7
72.5°	118.8	158.2	200.7	192.5	185.5
75°	92.7	132.8	163.2	146.7	142.9
77.5°	68.6	108.6	116.9	108.0	101.0
80°	48.9	85.8	78.8	67.3	64.2
82.5°	33.7	54.0	43.2	33.7	29.2
85°	19.1	24.1	15.2	9.5	7.6
87.5°	8.3	5.7	3.2	2.5	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)