

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: P307551

Luminaire Tested: **14FCZ2-20-UNV-L82765-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: P307551
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-L82765-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,RIBBED 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: 1909.0 lumens
Efficiency: N/A
Efficacy: 113.6 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

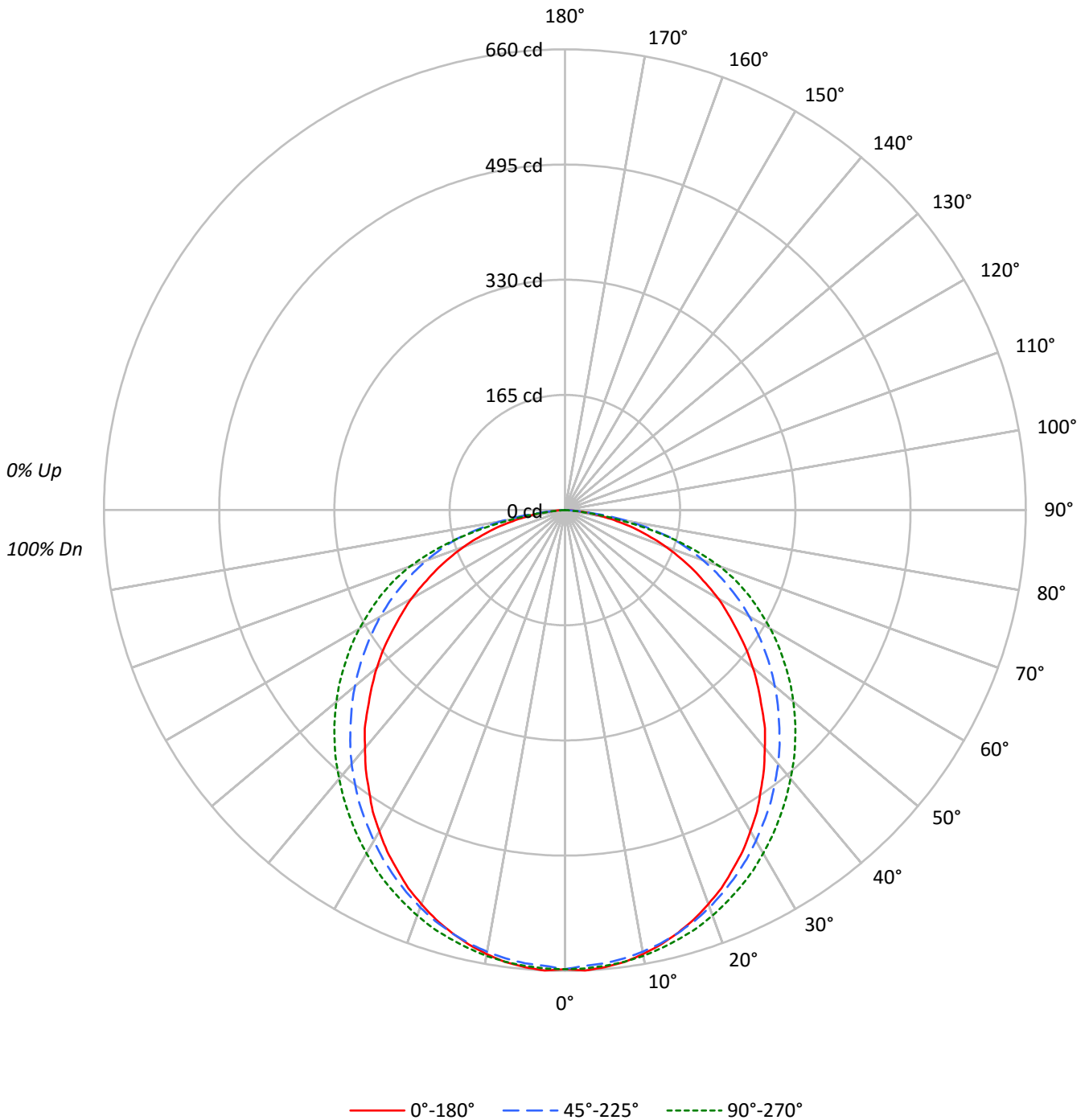
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1770	1770	1770
5°	1775	1760	1771
10°	1764	1755	1771
15°	1746	1747	1770
20°	1720	1735	1770
25°	1687	1718	1768
30°	1651	1700	1764
35°	1607	1685	1763
40°	1564	1669	1766
45°	1516	1651	1775
50°	1472	1643	1787
55°	1416	1637	1803
60°	1365	1640	1828
65°	1296	1645	1857
70°	1216	1658	1855
75°	1102	1673	1677
80°	903	1444	1193
85°	670	682	275



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.2	3.3
10°-20°	177.8	9.3
20°-30°	267.8	14.0
30°-40°	321.4	16.8
40°-50°	334.9	17.5
50°-60°	310.1	16.2
60°-70°	250.5	13.1
70°-80°	152.8	8.0
80°-90°	31.5	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°	507.8	26.6
0°-40°	829.2	43.4
0°-60°	1474.2	77.2
0°-90°	1909.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1909.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	658	658	658	658	658	
5°	657	656	652	656	656	62
15°	627	627	627	636	636	177
25°	568	572	578	593	596	262
35°	489	497	513	532	537	306
45°	398	410	434	458	466	308
55°	302	318	349	376	384	270
65°	204	224	258	284	292	201
75°	106	129	161	164	161	111
85°	22	32	22	12	9	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	657.7	657.7	657.7	657.7	657.7
2.5°	660.2	658.1	653.4	658.1	657.2
5°	657.2	655.5	651.7	656.4	655.5
7.5°	653.0	651.3	647.9	653.4	652.5
10°	645.7	644.9	642.3	648.7	648.3
12.5°	637.2	636.8	635.5	642.8	642.3
15°	626.6	627.0	627.0	635.5	635.5
17.5°	614.7	615.5	617.2	626.6	627.9
20°	600.6	602.3	605.7	616.4	618.1
22.5°	586.1	587.4	592.5	605.3	607.0
25°	568.3	571.7	578.5	593.0	595.5
27.5°	551.2	554.2	563.6	578.5	582.7
30°	531.2	535.9	547.0	563.2	567.8
32.5°	512.1	517.2	530.0	548.7	552.9
35°	489.1	496.8	512.9	531.7	536.8
37.5°	468.2	475.5	493.8	514.2	520.2
40°	445.2	454.2	475.0	496.8	502.7
42.5°	424.0	432.5	455.0	477.2	485.3
45°	398.4	410.3	433.8	458.0	466.5
47.5°	375.0	386.9	413.7	439.7	447.4
50°	351.6	364.4	392.5	419.3	426.9
52.5°	327.3	341.0	371.2	398.0	406.9
55°	301.8	317.5	349.0	376.3	384.4
57.5°	277.5	293.7	327.3	355.0	363.1
60°	253.7	270.3	304.8	331.2	339.7
62.5°	227.3	246.9	282.6	308.6	315.0
65°	203.5	223.5	258.4	284.3	291.6
67.5°	178.4	200.1	235.0	258.8	265.6
70°	154.5	177.1	210.7	232.8	235.8
72.5°	129.0	152.0	186.0	200.1	200.1
75°	106.0	129.4	160.9	163.5	161.3
77.5°	80.9	106.8	127.3	122.2	117.1
80°	58.3	83.9	93.2	83.9	77.0
82.5°	39.2	60.9	56.2	44.7	39.6
85°	21.7	32.4	22.1	12.3	8.9
87.5°	8.1	7.2	2.1	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)