

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: P312781

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-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: P312781
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-CP187-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 2054.0 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

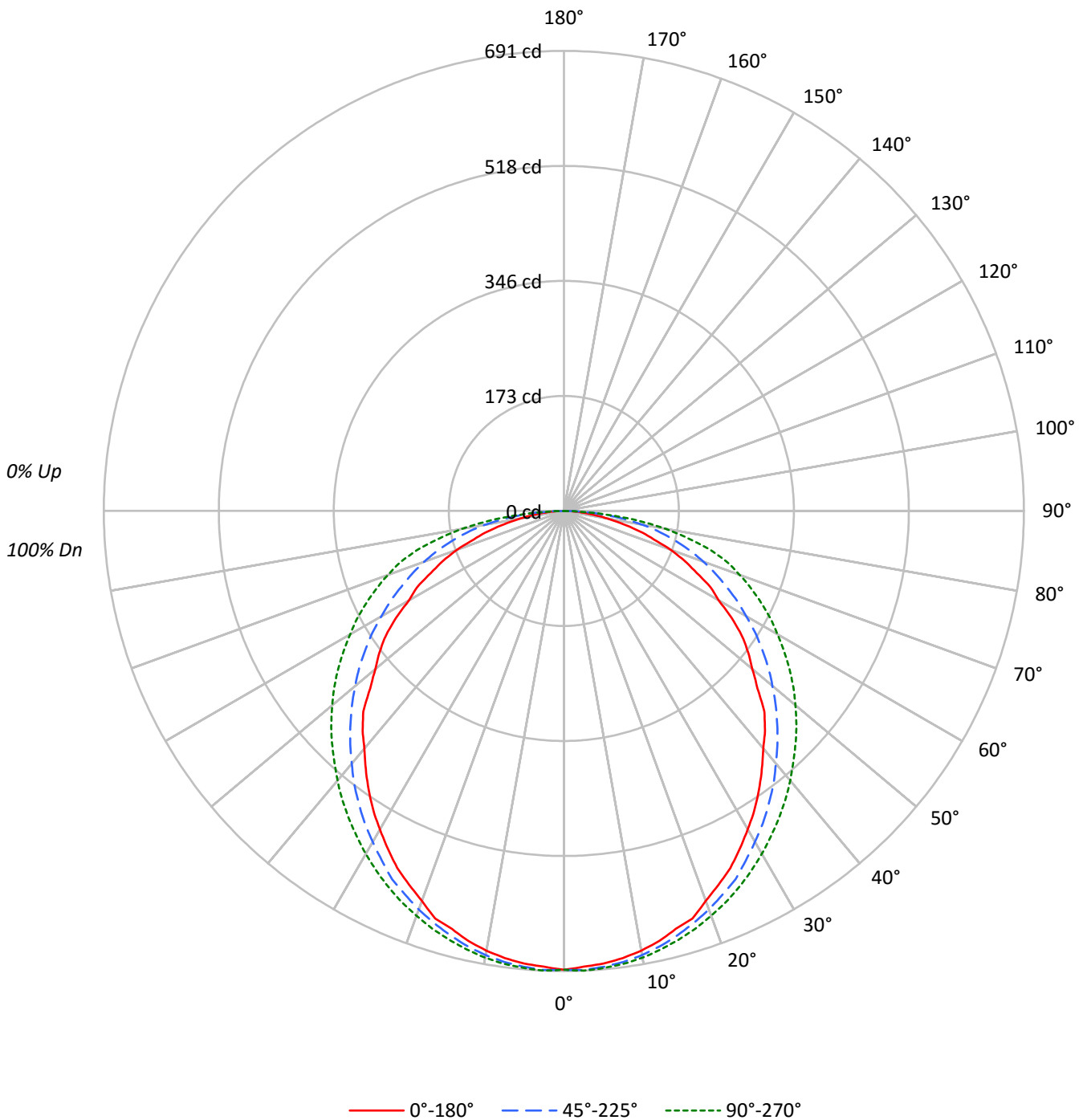
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1854	1854	1854
5°	1843	1856	1861
10°	1832	1851	1862
15°	1810	1838	1857
20°	1785	1824	1853
25°	1757	1813	1851
30°	1717	1784	1848
35°	1679	1763	1850
40°	1637	1741	1858
45°	1620	1725	1874
50°	1547	1712	1901
55°	1531	1706	1942
60°	1445	1703	1995
65°	1402	1715	2085
70°	1346	1756	2212
75°	1227	1809	2382
80°	1051	1874	2407
85°	849	1791	2062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.2	3.2
10°-20°	186.0	9.1
20°-30°	280.0	13.6
30°-40°	336.0	16.4
40°-50°	351.2	17.1
50°-60°	327.3	15.9
60°-70°	268.5	13.1
70°-80°	180.9	8.8
80°-90°	58.9	2.9
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°	531.2	25.9
0°-40°	867.2	42.2
0°-60°	1545.7	75.3
0°-90°	2054.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2054.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	689	689	689	689	689	
5°	682	684	687	688	689	65
15°	650	654	660	666	666	184
25°	592	596	610	619	623	272
35°	511	518	537	555	563	320
45°	426	429	453	481	492	325
55°	326	332	364	398	414	289
65°	220	230	269	309	327	219
75°	118	131	174	213	229	124
85°	28	39	58	68	67	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	689.1	689.1	689.1	689.1	689.1
2.5°	685.2	687.2	690.1	691.1	691.1
5°	682.3	684.2	687.2	688.2	689.1
7.5°	677.3	679.3	683.2	685.2	686.2
10°	670.5	672.4	677.3	680.3	681.3
12.5°	661.6	663.6	669.5	673.4	674.4
15°	649.8	653.7	659.6	665.5	666.5
17.5°	641.9	641.0	648.8	655.7	657.7
20°	623.3	628.2	637.0	644.9	646.9
22.5°	607.5	611.5	623.3	632.1	636.0
25°	591.8	595.7	610.5	619.3	623.3
27.5°	572.1	578.0	591.8	604.6	609.5
30°	552.5	558.4	574.1	588.9	594.8
32.5°	532.8	539.7	556.4	572.1	579.0
35°	511.2	518.1	536.8	555.4	563.3
37.5°	488.6	497.4	517.1	537.7	546.6
40°	466.0	474.8	495.5	519.1	528.9
42.5°	447.3	451.2	474.8	500.4	510.2
45°	425.7	428.6	453.2	480.7	492.5
47.5°	394.2	405.0	431.6	462.0	473.8
50°	369.6	381.4	409.0	441.4	454.2
52.5°	349.0	356.9	387.3	419.8	434.5
55°	326.4	332.3	363.7	398.1	413.9
57.5°	298.9	309.7	341.1	376.5	392.2
60°	268.4	282.1	316.5	354.9	370.6
62.5°	248.7	256.6	293.9	332.3	350.0
65°	220.2	230.0	269.4	308.7	327.4
67.5°	196.6	206.4	246.8	286.1	304.8
70°	171.1	180.9	223.2	262.5	281.2
72.5°	141.6	155.3	199.6	238.9	258.5
75°	118.0	130.7	174.0	213.3	229.1
77.5°	91.4	108.1	148.4	180.9	192.7
80°	67.8	84.5	120.9	144.5	155.3
82.5°	46.2	62.9	90.4	108.1	114.0
85°	27.5	39.3	58.0	67.8	66.8
87.5°	12.8	16.7	23.6	23.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)