

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: P308676

Luminaire Tested: **22FCZ2-24HE-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: P308676
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-L82765-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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: 2087.0 lumens
Efficiency: N/A
Efficacy: 108.1 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

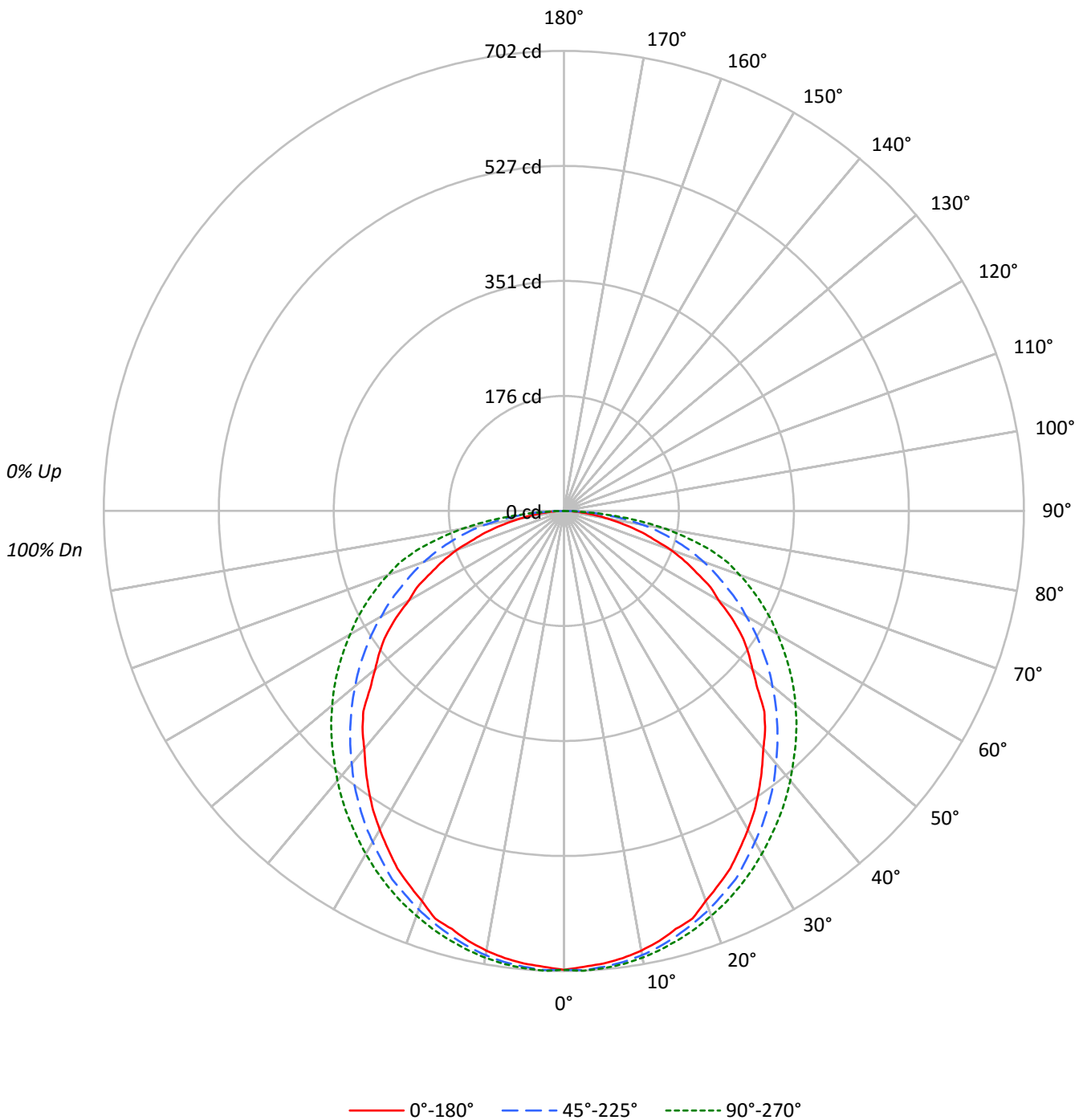
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1884	1884	1884
5°	1873	1886	1891
10°	1861	1881	1891
15°	1840	1867	1887
20°	1814	1854	1882
25°	1785	1842	1880
30°	1744	1812	1878
35°	1706	1792	1880
40°	1663	1768	1888
45°	1646	1752	1904
50°	1572	1739	1932
55°	1556	1734	1973
60°	1468	1731	2027
65°	1424	1743	2118
70°	1367	1784	2248
75°	1247	1838	2419
80°	1068	1905	2445
85°	865	1819	2096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	3.2
10°-20°	189.0	9.1
20°-30°	284.5	13.6
30°-40°	341.4	16.4
40°-50°	356.9	17.1
50°-60°	332.6	15.9
60°-70°	272.8	13.1
70°-80°	183.8	8.8
80°-90°	59.9	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°	539.7	25.9
0°-40°	881.2	42.2
0°-60°	1570.6	75.3
0°-90°	2087.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2087.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	700	700	700	700	700	
5°	693	695	698	699	700	66
15°	660	664	670	676	677	187
25°	601	605	620	629	633	276
35°	519	526	545	564	572	325
45°	432	436	460	488	500	330
55°	332	338	370	404	420	294
65°	224	234	274	314	333	223
75°	120	133	177	217	233	126
85°	28	40	59	69	68	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	700.2	700.2	700.2	700.2	700.2
2.5°	696.2	698.2	701.2	702.2	702.2
5°	693.2	695.2	698.2	699.2	700.2
7.5°	688.2	690.2	694.2	696.2	697.2
10°	681.2	683.2	688.2	691.2	692.2
12.5°	672.2	674.2	680.2	684.2	685.2
15°	660.3	664.2	670.2	676.2	677.2
17.5°	652.3	651.3	659.3	666.2	668.2
20°	633.3	638.3	647.3	655.3	657.3
22.5°	617.3	621.3	633.3	642.3	646.3
25°	601.3	605.3	620.3	629.3	633.3
27.5°	581.3	587.3	601.3	614.3	619.3
30°	561.4	567.4	583.3	598.3	604.3
32.5°	541.4	548.4	565.4	581.3	588.3
35°	519.4	526.4	545.4	564.4	572.4
37.5°	496.4	505.4	525.4	546.4	555.4
40°	473.5	482.5	503.4	527.4	537.4
42.5°	454.5	458.5	482.5	508.4	518.4
45°	432.5	435.5	460.5	488.4	500.4
47.5°	400.5	411.5	438.5	469.5	481.5
50°	375.6	387.6	415.5	448.5	461.5
52.5°	354.6	362.6	393.6	426.5	441.5
55°	331.6	337.6	369.6	404.5	420.5
57.5°	303.7	314.6	346.6	382.6	398.5
60°	272.7	286.7	321.6	360.6	376.6
62.5°	252.7	260.7	298.7	337.6	355.6
65°	223.7	233.7	273.7	313.6	332.6
67.5°	199.8	209.8	250.7	290.7	309.6
70°	173.8	183.8	226.7	266.7	285.7
72.5°	143.8	157.8	202.8	242.7	262.7
75°	119.9	132.8	176.8	216.8	232.7
77.5°	92.9	109.9	150.8	183.8	195.8
80°	68.9	85.9	122.9	146.8	157.8
82.5°	46.9	63.9	91.9	109.9	115.9
85°	28.0	40.0	58.9	68.9	67.9
87.5°	13.0	17.0	24.0	24.0	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)