

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: P308680

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CP187-W2A-U-6500K**

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: P308680
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-6500K
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: 2147.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

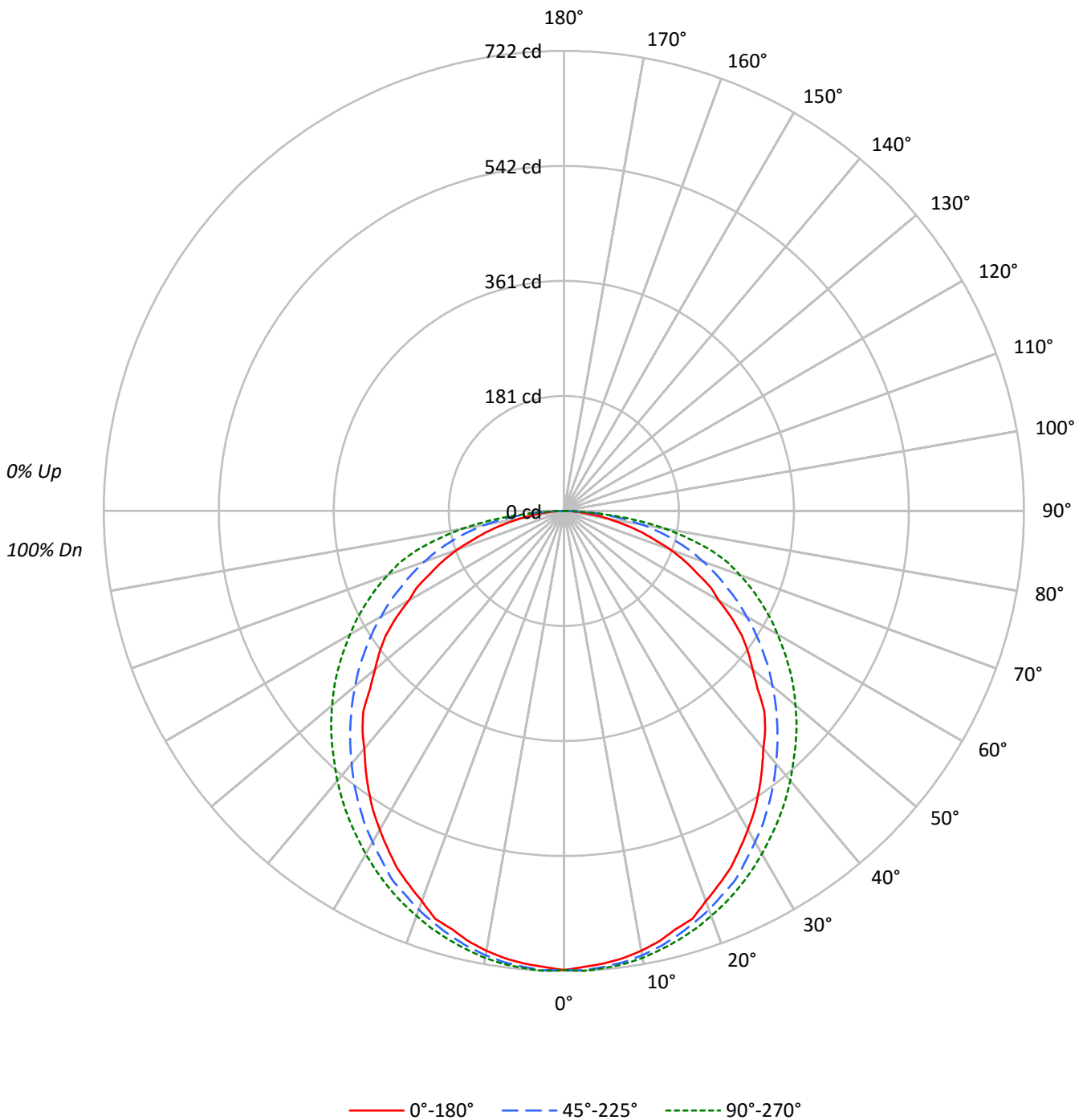
Input Watts (W): 19.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-24HE-UNV-L82765-CP187-W2A-U-6500K

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°	1938	1938	1938
5°	1926	1940	1946
10°	1915	1935	1946
15°	1892	1921	1941
20°	1866	1907	1936
25°	1837	1895	1934
30°	1794	1865	1932
35°	1755	1843	1934
40°	1711	1819	1942
45°	1693	1803	1959
50°	1618	1790	1987
55°	1601	1784	2030
60°	1510	1781	2085
65°	1466	1793	2179
70°	1407	1836	2312
75°	1282	1891	2489
80°	1099	1959	2517
85°	889	1871	2158



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	3.2
10°-20°	194.4	9.1
20°-30°	292.7	13.6
30°-40°	351.2	16.4
40°-50°	367.1	17.1
50°-60°	342.1	15.9
60°-70°	280.6	13.1
70°-80°	189.1	8.8
80°-90°	61.6	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°	555.3	25.9
0°-40°	906.5	42.2
0°-60°	1615.7	75.3
0°-90°	2147.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2147.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	713	715	718	719	720	68
15°	679	683	690	696	697	192
25°	619	623	638	647	652	284
35°	534	542	561	581	589	334
45°	445	448	474	502	515	340
55°	341	347	380	416	433	302
65°	230	240	282	323	342	229
75°	123	137	182	223	239	130
85°	29	41	61	71	70	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	720.3	720.3	720.3	720.3	720.3
2.5°	716.2	718.3	721.4	722.4	722.4
5°	713.1	715.2	718.3	719.3	720.3
7.5°	708.0	710.1	714.2	716.2	717.3
10°	700.8	702.9	708.0	711.1	712.1
12.5°	691.6	693.6	699.8	703.9	704.9
15°	679.2	683.3	689.5	695.7	696.7
17.5°	671.0	670.0	678.2	685.4	687.5
20°	651.5	656.6	665.9	674.1	676.2
22.5°	635.0	639.2	651.5	660.7	664.8
25°	618.6	622.7	638.1	647.4	651.5
27.5°	598.1	604.2	618.6	632.0	637.1
30°	577.5	583.7	600.1	615.5	621.7
32.5°	557.0	564.1	581.6	598.1	605.2
35°	534.3	541.5	561.1	580.6	588.8
37.5°	510.7	520.0	540.5	562.1	571.3
40°	487.1	496.3	517.9	542.6	552.8
42.5°	467.6	471.7	496.3	523.0	533.3
45°	444.9	448.0	473.7	502.5	514.8
47.5°	412.1	423.4	451.1	483.0	495.3
50°	386.4	398.7	427.5	461.4	474.7
52.5°	364.8	373.0	404.9	438.8	454.2
55°	341.2	347.3	380.2	416.2	432.6
57.5°	312.4	323.7	356.6	393.6	410.0
60°	280.5	294.9	330.9	371.0	387.4
62.5°	260.0	268.2	307.2	347.3	365.8
65°	230.2	240.5	281.6	322.7	342.2
67.5°	205.5	215.8	257.9	299.0	318.6
70°	178.8	189.1	233.3	274.4	293.9
72.5°	148.0	162.4	208.6	249.7	270.3
75°	123.3	136.7	181.9	223.0	239.4
77.5°	95.6	113.0	155.2	189.1	201.4
80°	70.9	88.4	126.4	151.1	162.4
82.5°	48.3	65.8	94.5	113.0	119.2
85°	28.8	41.1	60.6	70.9	69.9
87.5°	13.4	17.5	24.7	24.7	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)