

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: P312771

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CA125-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: P312771
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-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 2187.0 lumens
Efficiency: N/A
Efficacy: 115.7 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

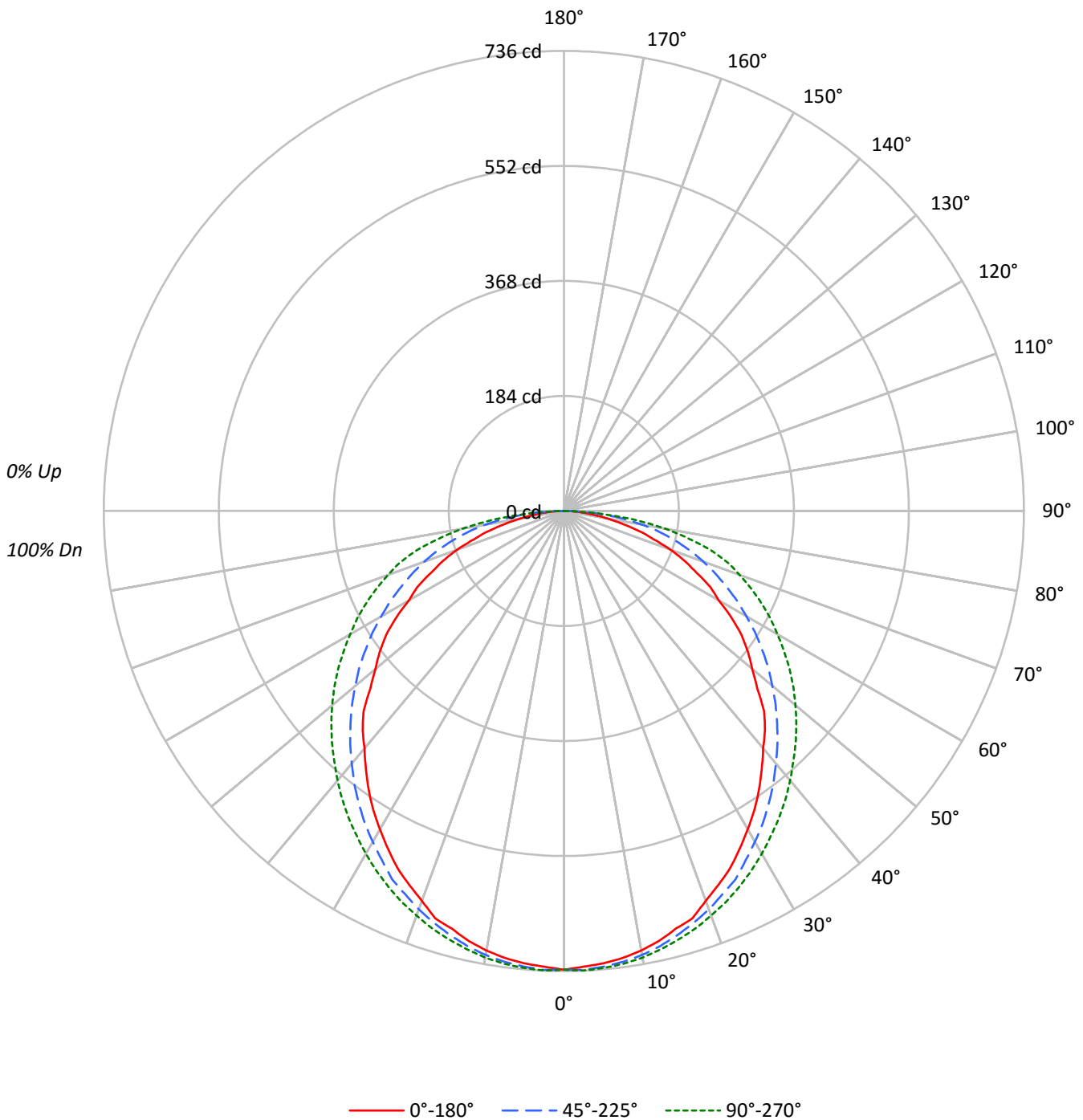
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1975	1975	1975
5°	1962	1977	1982
10°	1951	1971	1982
15°	1928	1957	1977
20°	1900	1942	1972
25°	1871	1930	1970
30°	1828	1899	1968
35°	1788	1877	1970
40°	1743	1853	1978
45°	1725	1836	1996
50°	1648	1823	2025
55°	1630	1817	2068
60°	1538	1814	2124
65°	1493	1826	2220
70°	1433	1869	2356
75°	1306	1927	2536
80°	1119	1994	2563
85°	905	1908	2198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.4	3.2
10°-20°	198.1	9.1
20°-30°	298.1	13.6
30°-40°	357.8	16.4
40°-50°	374.0	17.1
50°-60°	348.5	15.9
60°-70°	285.8	13.1
70°-80°	192.6	8.8
80°-90°	62.7	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°	565.6	25.9
0°-40°	923.4	42.2
0°-60°	1645.8	75.3
0°-90°	2187.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2187.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	726	728	732	733	734	69
15°	692	696	702	709	710	196
25°	630	634	650	659	664	290
35°	544	552	572	591	600	340
45°	453	456	482	512	524	346
55°	348	354	387	424	441	308
65°	234	245	287	329	349	233
75°	126	139	185	227	244	132
85°	29	42	62	72	71	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	733.8	733.8	733.8	733.8	733.8
2.5°	729.6	731.7	734.8	735.9	735.9
5°	726.4	728.5	731.7	732.7	733.8
7.5°	721.2	723.3	727.5	729.6	730.6
10°	713.9	716.0	721.2	724.3	725.4
12.5°	704.4	706.5	712.8	717.0	718.1
15°	691.9	696.1	702.4	708.6	709.7
17.5°	683.5	682.5	690.8	698.2	700.3
20°	663.6	668.9	678.3	686.7	688.7
22.5°	646.9	651.1	663.6	673.0	677.2
25°	630.1	634.3	650.0	659.4	663.6
27.5°	609.2	615.5	630.1	643.7	649.0
30°	588.3	594.5	611.3	627.0	633.3
32.5°	567.3	574.7	592.4	609.2	616.5
35°	544.3	551.6	571.5	591.4	599.8
37.5°	520.2	529.6	550.6	572.6	582.0
40°	496.1	505.6	527.6	552.7	563.1
42.5°	476.3	480.4	505.6	532.8	543.3
45°	453.2	456.4	482.5	511.9	524.4
47.5°	419.7	431.3	459.5	492.0	504.5
50°	393.6	406.1	435.4	470.0	483.6
52.5°	371.6	380.0	412.4	447.0	462.7
55°	347.5	353.8	387.3	423.9	440.7
57.5°	318.2	329.7	363.2	400.9	417.6
60°	285.8	300.4	337.0	377.9	394.6
62.5°	264.8	273.2	313.0	353.8	372.6
65°	234.5	244.9	286.8	328.7	348.6
67.5°	209.3	219.8	262.7	304.6	324.5
70°	182.1	192.6	237.6	279.5	299.4
72.5°	150.7	165.4	212.5	254.4	275.3
75°	125.6	139.2	185.3	227.1	243.9
77.5°	97.3	115.1	158.1	192.6	205.2
80°	72.2	90.0	128.7	153.9	165.4
82.5°	49.2	67.0	96.3	115.1	121.4
85°	29.3	41.9	61.8	72.2	71.2
87.5°	13.6	17.8	25.1	25.1	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)