

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: P312766

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CA08-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: P312766
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" 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: 2195.0 lumens
Efficiency: N/A
Efficacy: 116.1 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

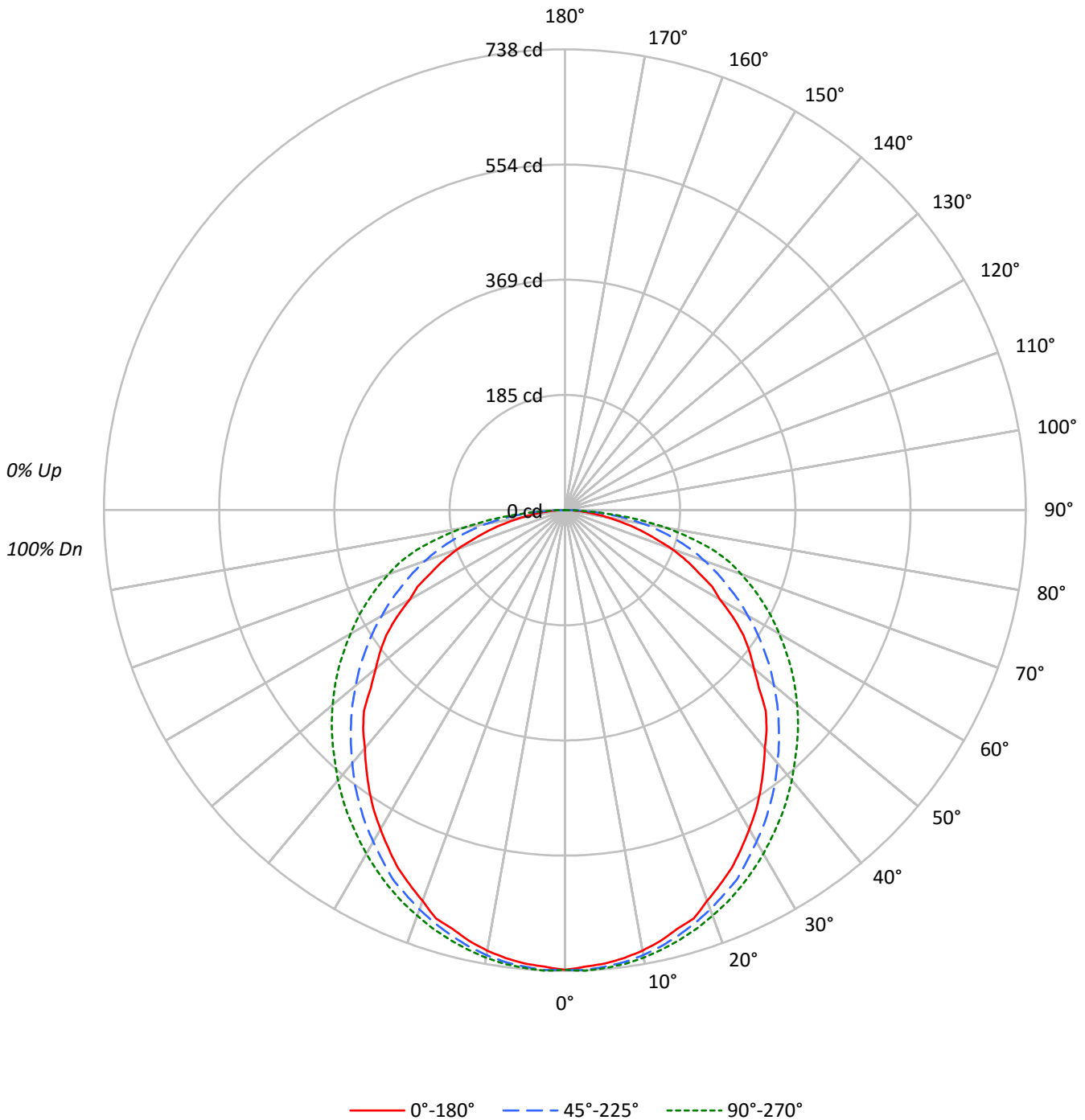
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1982	1982	1982
5°	1969	1984	1989
10°	1958	1978	1989
15°	1935	1964	1984
20°	1907	1950	1980
25°	1878	1937	1978
30°	1835	1906	1975
35°	1795	1884	1978
40°	1749	1860	1985
45°	1731	1843	2003
50°	1654	1829	2032
55°	1636	1824	2075
60°	1544	1821	2132
65°	1498	1833	2227
70°	1438	1876	2364
75°	1311	1933	2545
80°	1124	2002	2572
85°	908	1914	2205



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.7	3.2
10°-20°	198.8	9.1
20°-30°	299.2	13.6
30°-40°	359.1	16.4
40°-50°	375.3	17.1
50°-60°	349.8	15.9
60°-70°	286.9	13.1
70°-80°	193.3	8.8
80°-90°	63.0	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°	567.7	25.9
0°-40°	926.8	42.2
0°-60°	1651.9	75.3
0°-90°	2195.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2195.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	729	731	734	735	736	69
15°	694	699	705	711	712	196
25°	632	637	652	662	666	291
35°	546	554	574	594	602	342
45°	455	458	484	514	526	348
55°	349	355	389	426	442	309
65°	235	246	288	330	350	234
75°	126	140	186	228	245	133
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°	736.4	736.4	736.4	736.4	736.4
2.5°	732.2	734.3	737.5	738.5	738.5
5°	729.1	731.2	734.3	735.4	736.4
7.5°	723.8	725.9	730.1	732.2	733.3
10°	716.5	718.6	723.8	727.0	728.0
12.5°	707.0	709.1	715.4	719.6	720.7
15°	694.4	698.6	704.9	711.2	712.3
17.5°	686.0	685.0	693.4	700.7	702.8
20°	666.1	671.3	680.8	689.2	691.3
22.5°	649.2	653.4	666.1	675.5	679.7
25°	632.4	636.6	652.4	661.9	666.1
27.5°	611.4	617.7	632.4	646.1	651.3
30°	590.4	596.7	613.5	629.3	635.6
32.5°	569.4	576.8	594.6	611.4	618.8
35°	546.3	553.6	573.6	593.6	602.0
37.5°	522.1	531.6	552.6	574.7	584.1
40°	498.0	507.4	529.5	554.7	565.2
42.5°	478.0	482.2	507.4	534.7	545.2
45°	454.9	458.0	484.3	513.7	526.3
47.5°	421.3	432.8	461.2	493.8	506.4
50°	395.0	407.6	437.0	471.7	485.4
52.5°	372.9	381.4	413.9	448.6	464.3
55°	348.8	355.1	388.7	425.5	442.3
57.5°	319.4	330.9	364.5	402.4	419.2
60°	286.8	301.5	338.3	379.3	396.1
62.5°	265.8	274.2	314.1	355.1	374.0
65°	235.3	245.8	287.9	329.9	349.8
67.5°	210.1	220.6	263.7	305.7	325.7
70°	182.8	193.3	238.5	280.5	300.5
72.5°	151.3	166.0	213.3	255.3	276.3
75°	126.1	139.7	185.9	228.0	244.8
77.5°	97.7	115.6	158.6	193.3	205.9
80°	72.5	90.3	129.2	154.4	166.0
82.5°	49.4	67.2	96.7	115.6	121.9
85°	29.4	42.0	62.0	72.5	71.4
87.5°	13.7	17.9	25.2	25.2	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)