

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: P308915

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA08-W2A-U-2700K**

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: P308915
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CA08-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 2124.0 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

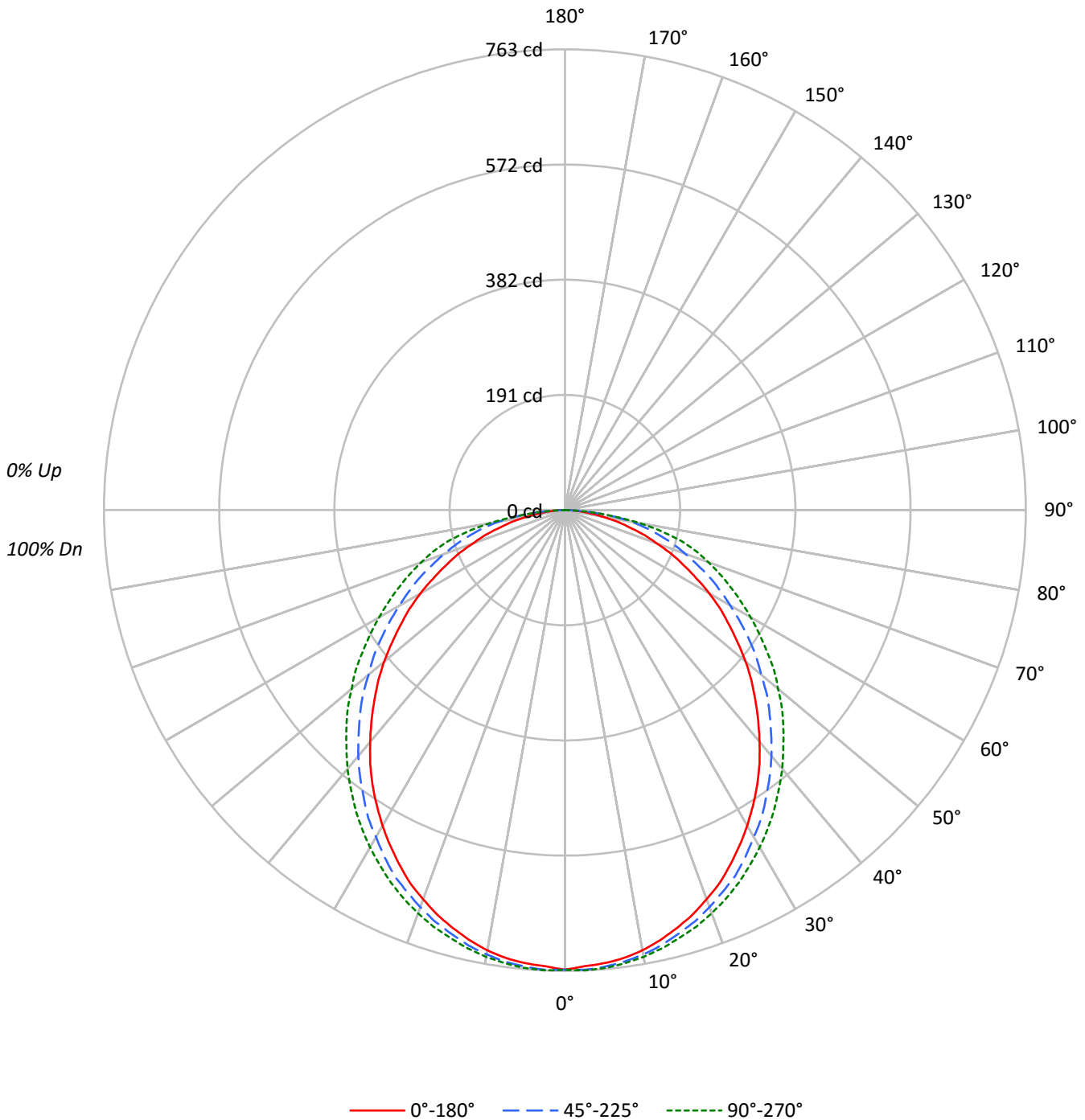
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2048	2048	2048
5°	2035	2051	2056
10°	2023	2042	2053
15°	1996	2024	2043
20°	1964	2004	2035
25°	1924	1983	2021
30°	1875	1943	2005
35°	1823	1908	1986
40°	1762	1870	1967
45°	1697	1825	1946
50°	1635	1776	1929
55°	1558	1743	1916
60°	1488	1701	1910
65°	1388	1691	1931
70°	1279	1677	1988
75°	1154	1700	2092
80°	998	1751	1965
85°	827	1470	1470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	3.4
10°-20°	204.8	9.6
20°-30°	306.5	14.4
30°-40°	362.9	17.1
40°-50°	369.9	17.4
50°-60°	331.5	15.6
60°-70°	259.6	12.2
70°-80°	167.4	7.9
80°-90°	49.5	2.3
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°	583.3	27.5
0°-40°	946.2	44.5
0°-60°	1647.6	77.6
0°-90°	2124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2124.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	753	755	759	760	761	72
15°	716	720	726	732	733	202
25°	648	654	668	677	681	298
35°	555	562	581	599	604	347
45°	446	456	480	504	511	344
55°	332	343	372	397	408	298
65°	218	231	266	291	303	217
75°	111	128	164	191	201	119
85°	27	37	48	48	48	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	761.1	761.1	761.1	761.1	761.1
2.5°	756.1	758.1	762.1	763.1	763.1
5°	753.2	755.1	759.1	760.1	761.1
7.5°	748.2	749.2	754.2	756.1	757.1
10°	740.3	742.3	747.2	750.2	751.2
12.5°	729.4	732.4	738.3	742.3	743.3
15°	716.5	720.5	726.4	732.4	733.3
17.5°	702.6	706.6	714.5	721.5	723.4
20°	685.8	690.7	699.7	707.6	710.6
22.5°	668.9	672.9	683.8	693.7	696.7
25°	648.1	654.1	667.9	676.9	680.8
27.5°	626.3	633.3	647.1	659.0	663.0
30°	603.5	610.5	625.3	640.2	645.1
32.5°	579.7	587.7	605.5	620.4	625.3
35°	555.0	561.9	580.7	598.6	604.5
37.5°	529.2	535.1	556.9	575.8	581.7
40°	501.5	509.4	532.2	554.0	559.9
42.5°	473.7	482.6	505.4	529.2	535.1
45°	446.0	455.9	479.6	504.4	511.4
47.5°	419.2	427.1	453.9	477.7	487.6
50°	390.5	398.4	424.2	450.9	460.8
52.5°	360.7	371.6	399.4	425.1	437.0
55°	332.0	342.9	371.6	397.4	408.3
57.5°	305.2	314.2	343.9	370.6	381.5
60°	276.5	284.4	316.1	344.9	354.8
62.5°	245.8	257.7	290.4	317.1	329.0
65°	218.0	230.9	265.6	291.4	303.2
67.5°	192.3	204.1	237.8	265.6	278.5
70°	162.5	178.4	213.1	240.8	252.7
72.5°	138.7	152.6	188.3	216.0	228.9
75°	111.0	127.8	163.5	191.3	201.2
77.5°	88.2	105.0	138.7	160.5	165.5
80°	64.4	81.3	113.0	123.9	126.8
82.5°	43.6	59.5	81.3	84.2	85.2
85°	26.8	36.7	47.6	47.6	47.6
87.5°	12.9	14.9	16.8	15.9	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)