

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: P308924

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA125-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: P308924
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-CA125-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2117.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

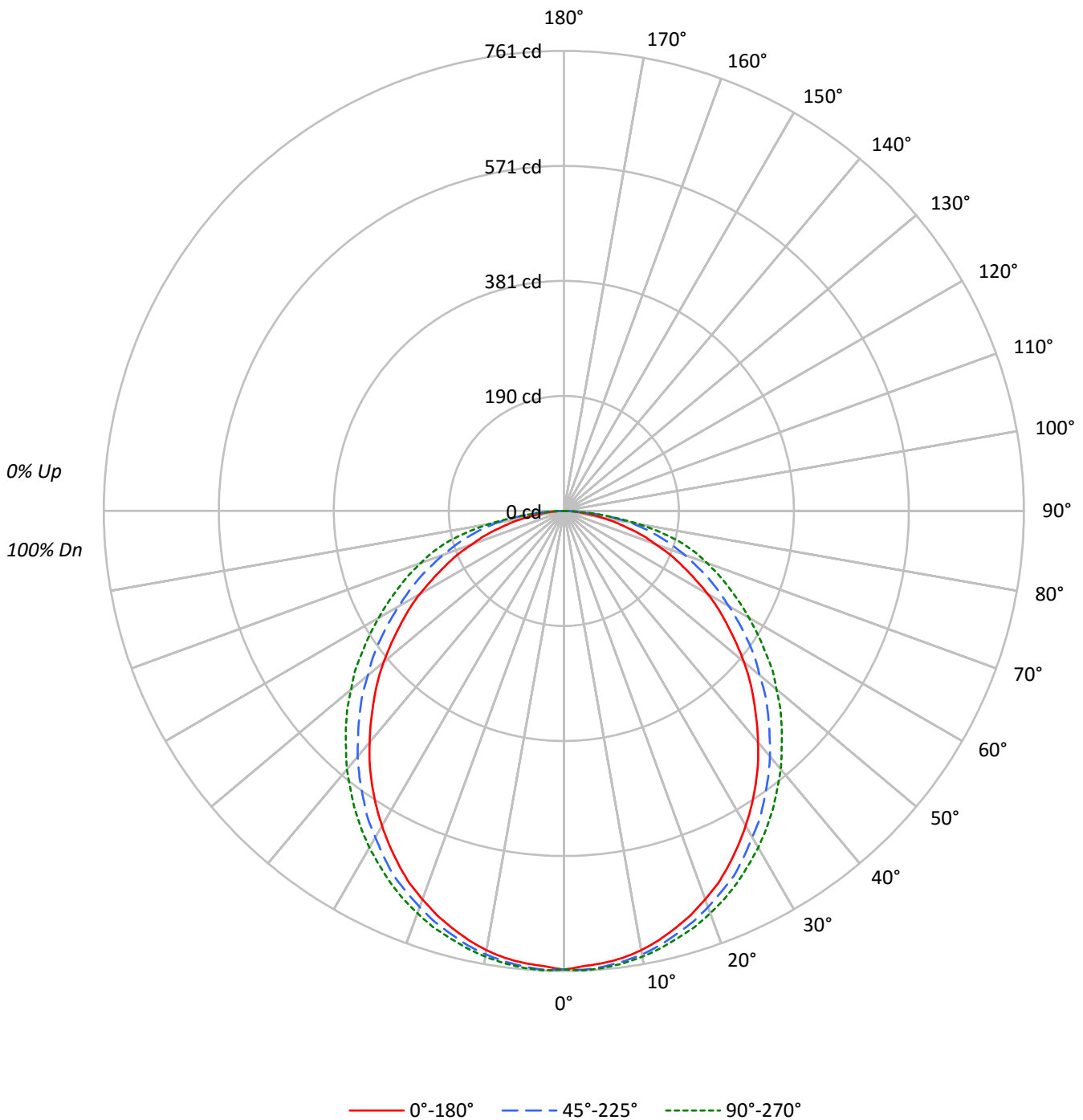
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2041	2041	2041
5°	2028	2044	2049
10°	2016	2035	2046
15°	1989	2017	2036
20°	1957	1997	2028
25°	1918	1977	2015
30°	1869	1937	1998
35°	1817	1901	1979
40°	1756	1863	1961
45°	1692	1819	1940
50°	1629	1770	1923
55°	1552	1738	1909
60°	1483	1696	1903
65°	1384	1685	1924
70°	1275	1671	1982
75°	1150	1695	2085
80°	995	1745	1959
85°	824	1463	1463



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.7	3.4
10°-20°	204.2	9.6
20°-30°	305.5	14.4
30°-40°	361.8	17.1
40°-50°	368.7	17.4
50°-60°	330.4	15.6
60°-70°	258.7	12.2
70°-80°	166.8	7.9
80°-90°	49.3	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°	581.4	27.5
0°-40°	943.1	44.5
0°-60°	1642.2	77.6
0°-90°	2117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2117.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	751	753	757	758	759	71
15°	714	718	724	730	731	201
25°	646	652	666	675	679	297
35°	553	560	579	597	602	346
45°	444	454	478	503	510	343
55°	331	342	370	396	407	297
65°	217	230	265	290	302	216
75°	111	127	163	191	200	119
85°	27	36	47	47	47	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	758.6	758.6	758.6	758.6	758.6
2.5°	753.6	755.6	759.6	760.6	760.6
5°	750.7	752.7	756.6	757.6	758.6
7.5°	745.7	746.7	751.7	753.6	754.6
10°	737.8	739.8	744.8	747.7	748.7
12.5°	727.0	729.9	735.9	739.8	740.8
15°	714.1	718.1	724.0	729.9	730.9
17.5°	700.3	704.3	712.2	719.1	721.1
20°	683.5	688.5	697.3	705.2	708.2
22.5°	666.7	670.7	681.5	691.4	694.4
25°	646.0	651.9	665.7	674.6	678.6
27.5°	624.3	631.2	645.0	656.8	660.8
30°	601.5	608.5	623.3	638.1	643.0
32.5°	577.8	585.7	603.5	618.3	623.3
35°	553.1	560.1	578.8	596.6	602.5
37.5°	527.5	533.4	555.1	573.9	579.8
40°	499.8	507.7	530.4	552.1	558.1
42.5°	472.1	481.0	503.7	527.5	533.4
45°	444.5	454.4	478.1	502.8	509.7
47.5°	417.8	425.7	452.4	476.1	486.0
50°	389.2	397.1	422.8	449.4	459.3
52.5°	359.5	370.4	398.1	423.7	435.6
55°	330.9	341.8	370.4	396.1	407.0
57.5°	304.2	313.1	342.7	369.4	380.3
60°	275.6	283.5	315.1	343.7	353.6
62.5°	245.0	256.8	289.4	316.1	327.9
65°	217.3	230.1	264.7	290.4	302.2
67.5°	191.6	203.5	237.1	264.7	277.6
70°	162.0	177.8	212.4	240.0	251.9
72.5°	138.3	152.1	187.7	215.3	228.2
75°	110.6	127.4	163.0	190.6	200.5
77.5°	87.9	104.7	138.3	160.0	165.0
80°	64.2	81.0	112.6	123.5	126.4
82.5°	43.5	59.3	81.0	84.0	84.9
85°	26.7	36.5	47.4	47.4	47.4
87.5°	12.8	14.8	16.8	15.8	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)