

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: P308933

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP125-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: P308933
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-CP125-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2075.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

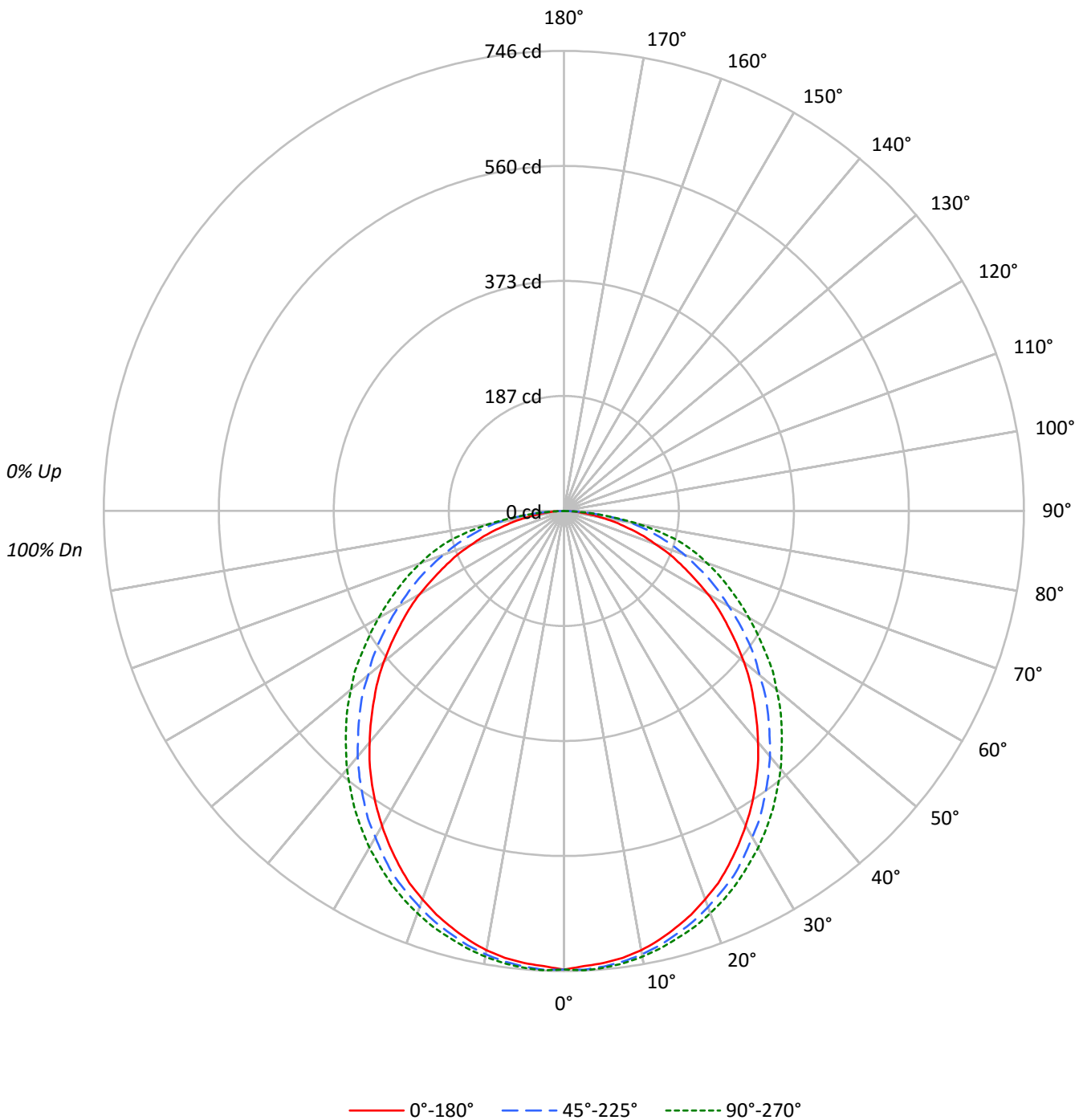
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2001	2001	2001
5°	1988	2003	2008
10°	1976	1995	2005
15°	1950	1977	1996
20°	1919	1957	1988
25°	1880	1937	1975
30°	1832	1898	1959
35°	1781	1864	1940
40°	1721	1826	1922
45°	1658	1783	1901
50°	1597	1735	1885
55°	1521	1704	1871
60°	1454	1662	1865
65°	1356	1652	1887
70°	1249	1638	1943
75°	1127	1660	2043
80°	975	1711	1920
85°	806	1436	1436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.3	3.4
10°-20°	200.1	9.6
20°-30°	299.4	14.4
30°-40°	354.6	17.1
40°-50°	361.4	17.4
50°-60°	323.9	15.6
60°-70°	253.6	12.2
70°-80°	163.5	7.9
80°-90°	48.3	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°	569.8	27.5
0°-40°	924.4	44.5
0°-60°	1609.6	77.6
0°-90°	2075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2075.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	744	744	744	744	744	
5°	736	738	742	743	744	70
15°	700	704	710	716	716	197
25°	633	639	652	661	665	291
35°	542	549	567	585	591	339
45°	436	445	469	493	500	336
55°	324	335	363	388	399	291
65°	213	226	260	285	296	212
75°	108	125	160	187	196	116
85°	26	36	46	46	46	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	743.5	743.5	743.5	743.5	743.5
2.5°	738.7	740.6	744.5	745.5	745.5
5°	735.8	737.7	741.6	742.6	743.5
7.5°	731.0	731.9	736.8	738.7	739.7
10°	723.2	725.1	730.0	732.9	733.9
12.5°	712.6	715.5	721.3	725.1	726.1
15°	700.0	703.8	709.7	715.5	716.4
17.5°	686.4	690.3	698.0	704.8	706.7
20°	670.0	674.8	683.5	691.3	694.2
22.5°	653.5	657.4	668.0	677.7	680.6
25°	633.2	639.0	652.5	661.2	665.1
27.5°	611.9	618.6	632.2	643.8	647.7
30°	589.6	596.4	610.9	625.4	630.3
32.5°	566.4	574.1	591.5	606.1	610.9
35°	542.2	548.9	567.3	584.8	590.6
37.5°	517.0	522.8	544.1	562.5	568.3
40°	489.9	497.6	519.9	541.2	547.0
42.5°	462.8	471.5	493.8	517.0	522.8
45°	435.7	445.3	468.6	492.8	499.6
47.5°	409.5	417.3	443.4	466.6	476.3
50°	381.5	389.2	414.4	440.5	450.2
52.5°	352.4	363.1	390.2	415.3	427.0
55°	324.3	335.0	363.1	388.2	398.9
57.5°	298.2	306.9	335.9	362.1	372.7
60°	270.1	277.9	308.8	336.9	346.6
62.5°	240.1	251.7	283.7	309.8	321.4
65°	213.0	225.6	259.5	284.6	296.3
67.5°	187.8	199.4	232.4	259.5	272.0
70°	158.8	174.3	208.2	235.3	246.9
72.5°	135.5	149.1	183.9	211.1	223.6
75°	108.4	124.9	159.7	186.9	196.5
77.5°	86.2	102.6	135.5	156.8	161.7
80°	62.9	79.4	110.4	121.0	123.9
82.5°	42.6	58.1	79.4	82.3	83.3
85°	26.1	35.8	46.5	46.5	46.5
87.5°	12.6	14.5	16.5	15.5	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)