

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: P308659

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CA125-W2A-U-5000K**

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: P308659
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-L82765-CA125-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 2252.0 lumens
Efficiency: N/A
Efficacy: 116.7 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

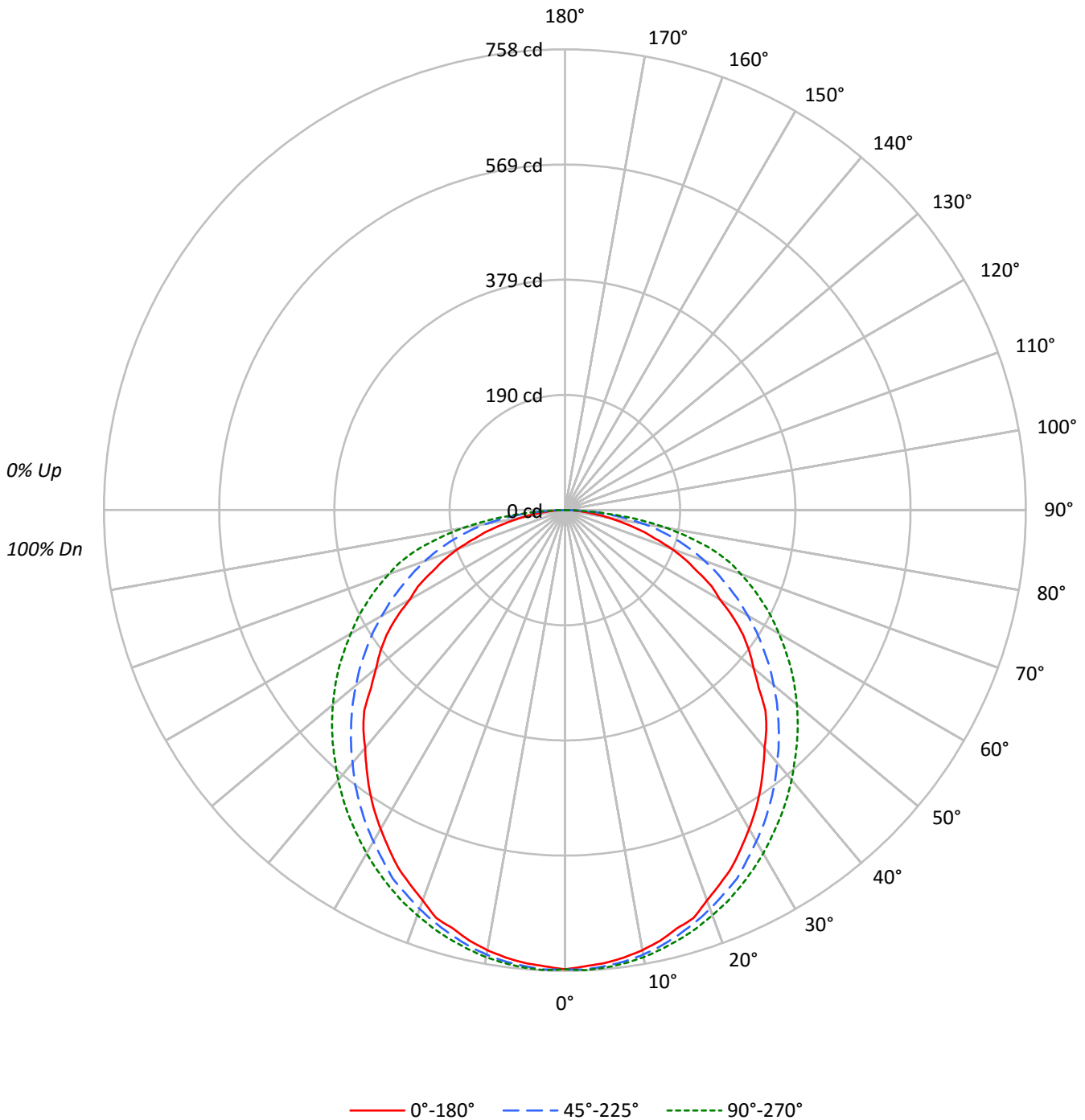
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2033	2033	2033
5°	2021	2035	2041
10°	2009	2029	2041
15°	1985	2015	2036
20°	1957	2000	2031
25°	1927	1987	2029
30°	1882	1956	2026
35°	1841	1933	2029
40°	1795	1908	2037
45°	1776	1891	2055
50°	1697	1877	2085
55°	1679	1871	2129
60°	1584	1868	2187
65°	1537	1880	2285
70°	1475	1925	2426
75°	1344	1984	2611
80°	1153	2055	2639
85°	932	1964	2263



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.5	3.2
10°-20°	204.0	9.1
20°-30°	307.0	13.6
30°-40°	368.4	16.4
40°-50°	385.1	17.1
50°-60°	358.9	15.9
60°-70°	294.3	13.1
70°-80°	198.3	8.8
80°-90°	64.6	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°	582.4	25.9
0°-40°	950.8	42.2
0°-60°	1694.8	75.3
0°-90°	2252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2252.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	748	750	753	754	756	71
15°	712	717	723	730	731	201
25°	649	653	669	679	683	298
35°	560	568	588	609	618	350
45°	467	470	497	527	540	357
55°	358	364	399	436	454	317
65°	241	252	295	338	359	240
75°	129	143	191	234	251	136
85°	30	43	64	74	73	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	755.6	755.6	755.6	755.6	755.6
2.5°	751.3	753.4	756.6	757.7	757.7
5°	748.0	750.2	753.4	754.5	755.6
7.5°	742.6	744.8	749.1	751.3	752.3
10°	735.1	737.2	742.6	745.9	746.9
12.5°	725.4	727.5	734.0	738.3	739.4
15°	712.5	716.8	723.2	729.7	730.8
17.5°	703.8	702.8	711.4	718.9	721.1
20°	683.3	688.7	698.4	707.1	709.2
22.5°	666.1	670.4	683.3	693.1	697.4
25°	648.9	653.2	669.3	679.0	683.3
27.5°	627.3	633.8	648.9	662.9	668.3
30°	605.7	612.2	629.5	645.6	652.1
32.5°	584.2	591.7	610.1	627.3	634.8
35°	560.5	568.0	588.5	609.0	617.6
37.5°	535.7	545.4	566.9	589.6	599.3
40°	510.9	520.6	543.2	569.1	579.9
42.5°	490.4	494.7	520.6	548.6	559.4
45°	466.7	469.9	496.9	527.1	540.0
47.5°	432.2	444.1	473.2	506.6	519.5
50°	405.3	418.2	448.4	483.9	498.0
52.5°	382.6	391.3	424.7	460.2	476.4
55°	357.8	364.3	398.8	436.5	453.8
57.5°	327.7	339.5	374.0	412.8	430.1
60°	294.3	309.3	347.1	389.1	406.3
62.5°	272.7	281.3	322.3	364.3	383.7
65°	241.4	252.2	295.3	338.4	358.9
67.5°	215.6	226.3	270.5	313.7	334.1
70°	187.5	198.3	244.7	287.8	308.3
72.5°	155.2	170.3	218.8	261.9	283.5
75°	129.3	143.4	190.8	233.9	251.1
77.5°	100.2	118.6	162.8	198.3	211.3
80°	74.4	92.7	132.6	158.4	170.3
82.5°	50.7	69.0	99.2	118.6	125.0
85°	30.2	43.1	63.6	74.4	73.3
87.5°	14.0	18.3	25.9	25.9	24.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)