

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: P308928

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA125-W2A-U-4500K**

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: P308928
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-4500K
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: 2344.0 lumens
Efficiency: N/A
Efficacy: 121.5 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

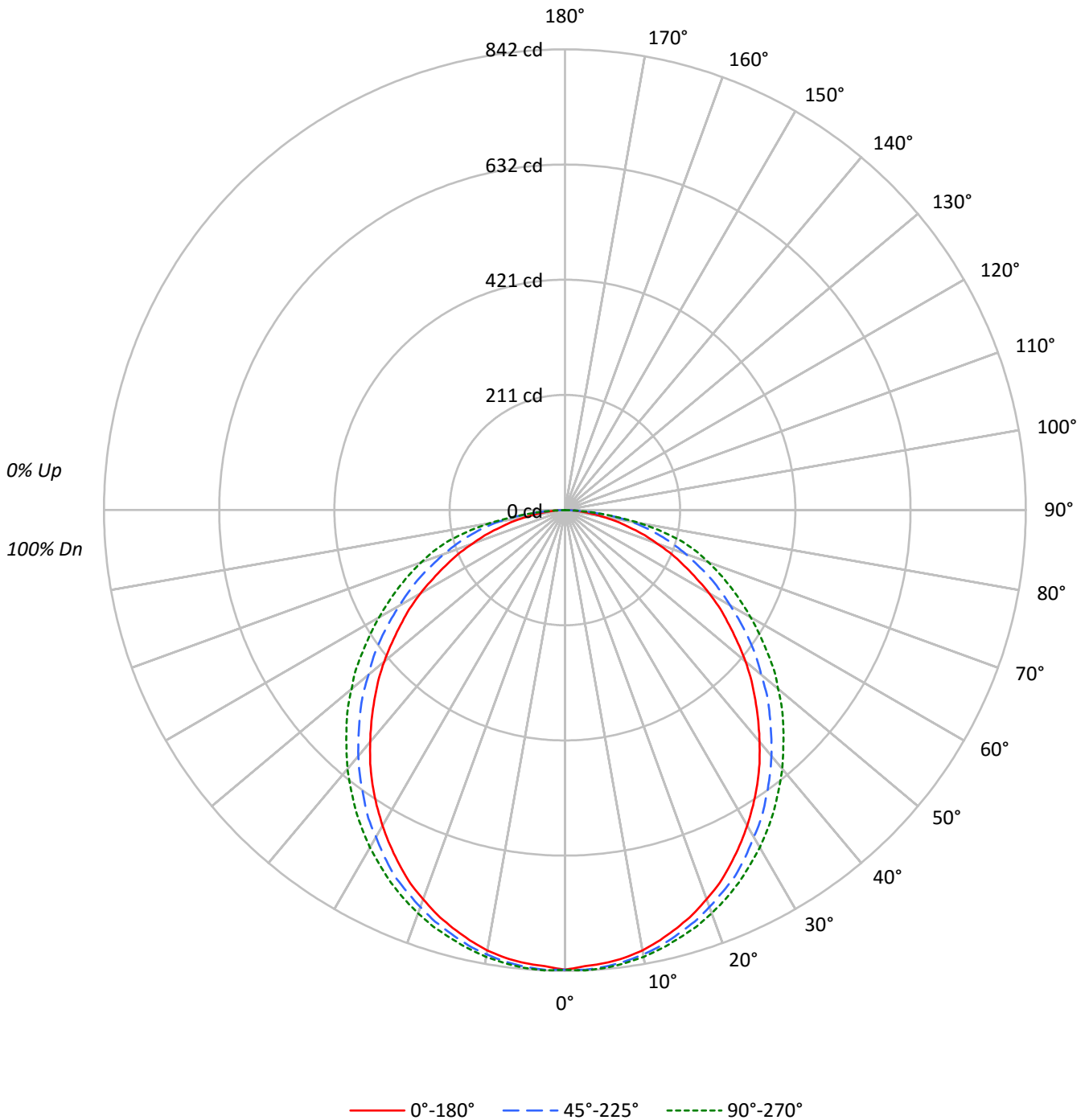
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2260	2260	2260
5°	2245	2263	2269
10°	2232	2253	2265
15°	2203	2233	2255
20°	2167	2211	2246
25°	2124	2189	2231
30°	2069	2144	2212
35°	2012	2105	2191
40°	1944	2063	2171
45°	1873	2014	2148
50°	1804	1960	2129
55°	1719	1924	2114
60°	1642	1878	2107
65°	1532	1866	2131
70°	1412	1850	2194
75°	1274	1877	2308
80°	1102	1932	2170
85°	911	1621	1621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	3.4
10°-20°	226.0	9.6
20°-30°	338.2	14.4
30°-40°	400.5	17.1
40°-50°	408.2	17.4
50°-60°	365.9	15.6
60°-70°	286.4	12.2
70°-80°	184.7	7.9
80°-90°	54.6	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°	643.7	27.5
0°-40°	1044.2	44.5
0°-60°	1818.3	77.6
0°-90°	2344.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2344.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	840	840	840	840	840	
5°	831	833	838	839	840	79
15°	791	795	802	808	809	223
25°	715	722	737	747	751	329
35°	612	620	641	661	667	383
45°	492	503	529	557	564	380
55°	366	378	410	439	451	328
65°	241	255	293	322	335	239
75°	122	141	180	211	222	131
85°	30	40	52	52	52	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	839.9	839.9	839.9	839.9	839.9
2.5°	834.5	836.6	841.0	842.1	842.1
5°	831.2	833.4	837.7	838.8	839.9
7.5°	825.7	826.8	832.3	834.5	835.6
10°	817.0	819.1	824.6	827.9	829.0
12.5°	804.9	808.2	814.8	819.1	820.2
15°	790.7	795.1	801.7	808.2	809.3
17.5°	775.4	779.8	788.5	796.2	798.4
20°	756.8	762.3	772.1	780.9	784.2
22.5°	738.2	742.6	754.6	765.6	768.8
25°	715.3	721.8	737.1	747.0	751.3
27.5°	691.2	698.8	714.2	727.3	731.7
30°	666.0	673.7	690.1	706.5	712.0
32.5°	639.8	648.5	668.2	684.6	690.1
35°	612.4	620.1	640.9	660.6	667.1
37.5°	584.0	590.6	614.6	635.4	642.0
40°	553.4	562.1	587.3	611.4	617.9
42.5°	522.8	532.6	557.8	584.0	590.6
45°	492.1	503.1	529.3	556.7	564.3
47.5°	462.6	471.4	500.9	527.1	538.1
50°	430.9	439.6	468.1	497.6	508.6
52.5°	398.1	410.1	440.7	469.2	482.3
55°	366.4	378.4	410.1	438.6	450.6
57.5°	336.8	346.7	379.5	409.0	421.1
60°	305.1	313.9	348.9	380.6	391.5
62.5°	271.2	284.4	320.4	350.0	363.1
65°	240.6	254.8	293.1	321.5	334.7
67.5°	212.2	225.3	262.5	293.1	307.3
70°	179.4	196.9	235.1	265.8	278.9
72.5°	153.1	168.4	207.8	238.4	252.6
75°	122.5	141.1	180.5	211.1	222.0
77.5°	97.3	115.9	153.1	177.2	182.6
80°	71.1	89.7	124.7	136.7	140.0
82.5°	48.1	65.6	89.7	93.0	94.1
85°	29.5	40.5	52.5	52.5	52.5
87.5°	14.2	16.4	18.6	17.5	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)