

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: P308931

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA125-W2A-U-5700K**

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: P308931
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-5700K
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: 2405.0 lumens
Efficiency: N/A
Efficacy: 124.0 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

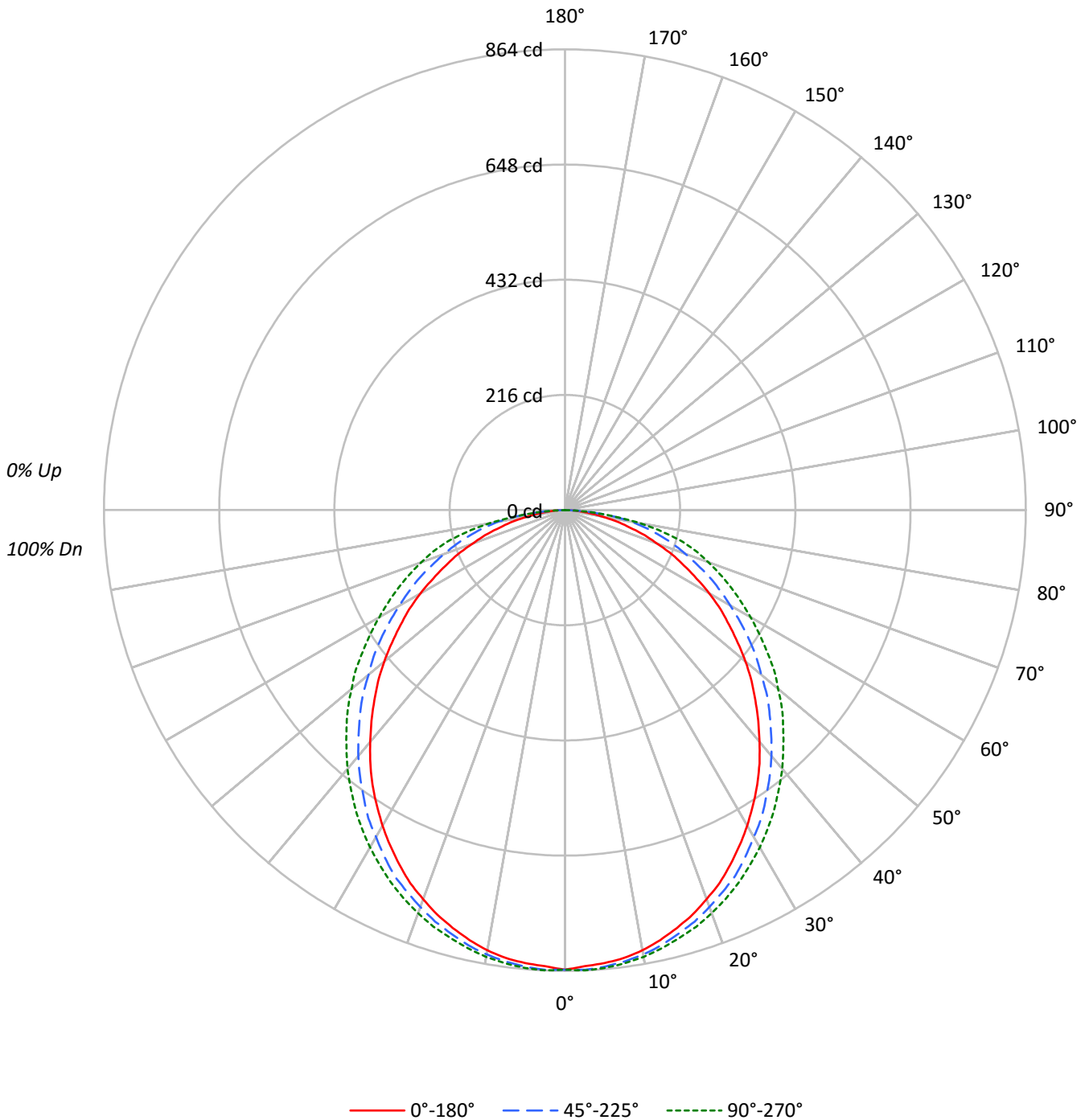
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2319	2319	2319
5°	2304	2322	2328
10°	2290	2312	2324
15°	2260	2291	2313
20°	2224	2269	2304
25°	2179	2246	2289
30°	2124	2200	2270
35°	2064	2160	2249
40°	1995	2117	2227
45°	1922	2067	2203
50°	1851	2011	2184
55°	1764	1974	2169
60°	1685	1927	2162
65°	1572	1915	2187
70°	1448	1899	2251
75°	1307	1925	2368
80°	1130	1982	2225
85°	936	1664	1664



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	3.4
10°-20°	231.9	9.6
20°-30°	347.0	14.4
30°-40°	411.0	17.1
40°-50°	418.8	17.4
50°-60°	375.4	15.6
60°-70°	293.9	12.2
70°-80°	189.5	7.9
80°-90°	56.0	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°	660.4	27.5
0°-40°	1071.4	44.5
0°-60°	1865.6	77.6
0°-90°	2405.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2405.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	853	855	860	861	862	81
15°	811	816	822	829	830	229
25°	734	741	756	766	771	338
35°	628	636	658	678	684	393
45°	505	516	543	571	579	390
55°	376	388	421	450	462	337
65°	247	262	301	330	343	245
75°	126	145	185	217	228	135
85°	30	42	54	54	54	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	861.8	861.8	861.8	861.8	861.8
2.5°	856.2	858.4	862.9	864.0	864.0
5°	852.8	855.1	859.5	860.7	861.8
7.5°	847.2	848.3	853.9	856.2	857.3
10°	838.2	840.5	846.1	849.4	850.6
12.5°	825.9	829.2	836.0	840.5	841.6
15°	811.3	815.8	822.5	829.2	830.4
17.5°	795.6	800.1	809.0	816.9	819.1
20°	776.5	782.1	792.2	801.2	804.6
22.5°	757.4	761.9	774.3	785.5	788.8
25°	733.9	740.6	756.3	766.4	770.9
27.5°	709.2	717.0	732.7	746.2	750.7
30°	683.4	691.2	708.1	724.9	730.5
32.5°	656.4	665.4	685.6	702.4	708.1
35°	628.4	636.2	657.6	677.8	684.5
37.5°	599.2	605.9	630.6	652.0	658.7
40°	567.8	576.8	602.6	627.3	634.0
42.5°	536.4	546.5	572.3	599.2	605.9
45°	505.0	516.2	543.1	571.2	579.0
47.5°	474.7	483.6	513.9	540.9	552.1
50°	442.1	451.1	480.3	510.6	521.8
52.5°	408.5	420.8	452.2	481.4	494.9
55°	375.9	388.3	420.8	450.0	462.3
57.5°	345.6	355.7	389.4	419.7	432.0
60°	313.1	322.0	358.0	390.5	401.7
62.5°	278.3	291.8	328.8	359.1	372.5
65°	246.9	261.5	300.7	329.9	343.4
67.5°	217.7	231.2	269.3	300.7	315.3
70°	184.0	202.0	241.3	272.7	286.1
72.5°	157.1	172.8	213.2	244.6	259.2
75°	125.7	144.8	185.1	216.6	227.8
77.5°	99.9	118.9	157.1	181.8	187.4
80°	72.9	92.0	127.9	140.3	143.6
82.5°	49.4	67.3	92.0	95.4	96.5
85°	30.3	41.5	53.9	53.9	53.9
87.5°	14.6	16.8	19.1	18.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)