

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: P308932

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA125-W2A-U-6500K**

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: P308932
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-6500K
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: 2411.0 lumens
Efficiency: N/A
Efficacy: 122.4 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

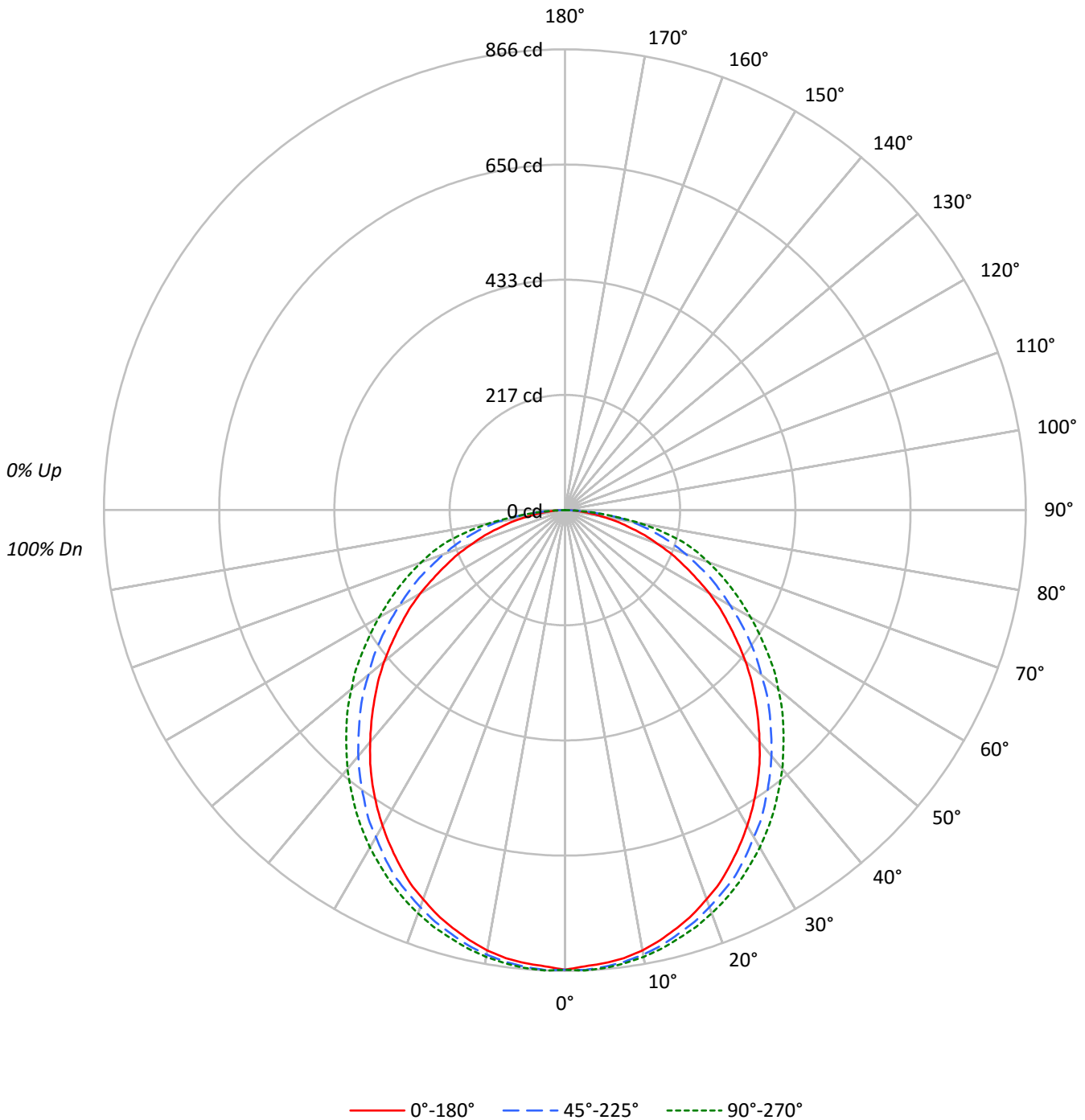
Input Watts (W): 19.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2325	2325	2325
5°	2309	2328	2334
10°	2296	2318	2330
15°	2266	2297	2319
20°	2229	2274	2310
25°	2184	2251	2295
30°	2129	2206	2275
35°	2070	2166	2254
40°	1999	2122	2233
45°	1926	2072	2209
50°	1855	2016	2190
55°	1768	1979	2175
60°	1689	1931	2167
65°	1576	1920	2192
70°	1452	1903	2257
75°	1310	1930	2375
80°	1133	1987	2232
85°	939	1667	1667



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	3.4
10°-20°	232.5	9.6
20°-30°	347.9	14.4
30°-40°	412.0	17.1
40°-50°	419.9	17.4
50°-60°	376.3	15.6
60°-70°	294.6	12.2
70°-80°	190.0	7.9
80°-90°	56.1	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°	662.1	27.5
0°-40°	1074.1	44.5
0°-60°	1870.3	77.6
0°-90°	2411.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2411.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	855	857	862	863	864	81
15°	813	818	825	831	832	229
25°	736	742	758	768	773	339
35°	630	638	659	680	686	394
45°	506	518	544	573	580	391
55°	377	389	422	451	464	338
65°	248	262	302	331	344	246
75°	126	145	186	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°	863.9	863.9	863.9	863.9	863.9
2.5°	858.3	860.6	865.1	866.2	866.2
5°	854.9	857.2	861.7	862.8	863.9
7.5°	849.3	850.4	856.1	858.3	859.4
10°	840.3	842.6	848.2	851.6	852.7
12.5°	827.9	831.3	838.1	842.6	843.7
15°	813.3	817.8	824.6	831.3	832.4
17.5°	797.6	802.1	811.1	818.9	821.2
20°	778.4	784.1	794.2	803.2	806.6
22.5°	759.3	763.8	776.2	787.4	790.8
25°	735.7	742.4	758.2	768.3	772.8
27.5°	710.9	718.8	734.6	748.1	752.6
30°	685.1	692.9	709.8	726.7	732.3
32.5°	658.1	667.1	687.3	704.2	709.8
35°	630.0	637.8	659.2	679.5	686.2
37.5°	600.7	607.5	632.2	653.6	660.3
40°	569.2	578.2	604.1	628.8	635.6
42.5°	537.7	547.8	573.7	600.7	607.5
45°	506.2	517.5	544.5	572.6	580.5
47.5°	475.8	484.8	515.2	542.2	553.5
50°	443.2	452.2	481.5	511.8	523.1
52.5°	409.5	421.8	453.3	482.6	496.1
55°	376.8	389.2	421.8	451.1	463.5
57.5°	346.5	356.6	390.3	420.7	433.1
60°	313.9	322.9	358.8	391.5	402.7
62.5°	279.0	292.5	329.6	360.0	373.5
65°	247.5	262.1	301.5	330.7	344.2
67.5°	218.2	231.7	270.0	301.5	316.1
70°	184.5	202.5	241.9	273.4	286.9
72.5°	157.5	173.2	213.7	245.2	259.9
75°	126.0	145.1	185.6	217.1	228.4
77.5°	100.1	119.2	157.5	182.2	187.9
80°	73.1	92.2	128.2	140.6	144.0
82.5°	49.5	67.5	92.2	95.6	96.7
85°	30.4	41.6	54.0	54.0	54.0
87.5°	14.6	16.9	19.1	18.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)