

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: P308921

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA08-W2A-U-5500K**

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: P308921  
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-CA08-W2A-U-5500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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**

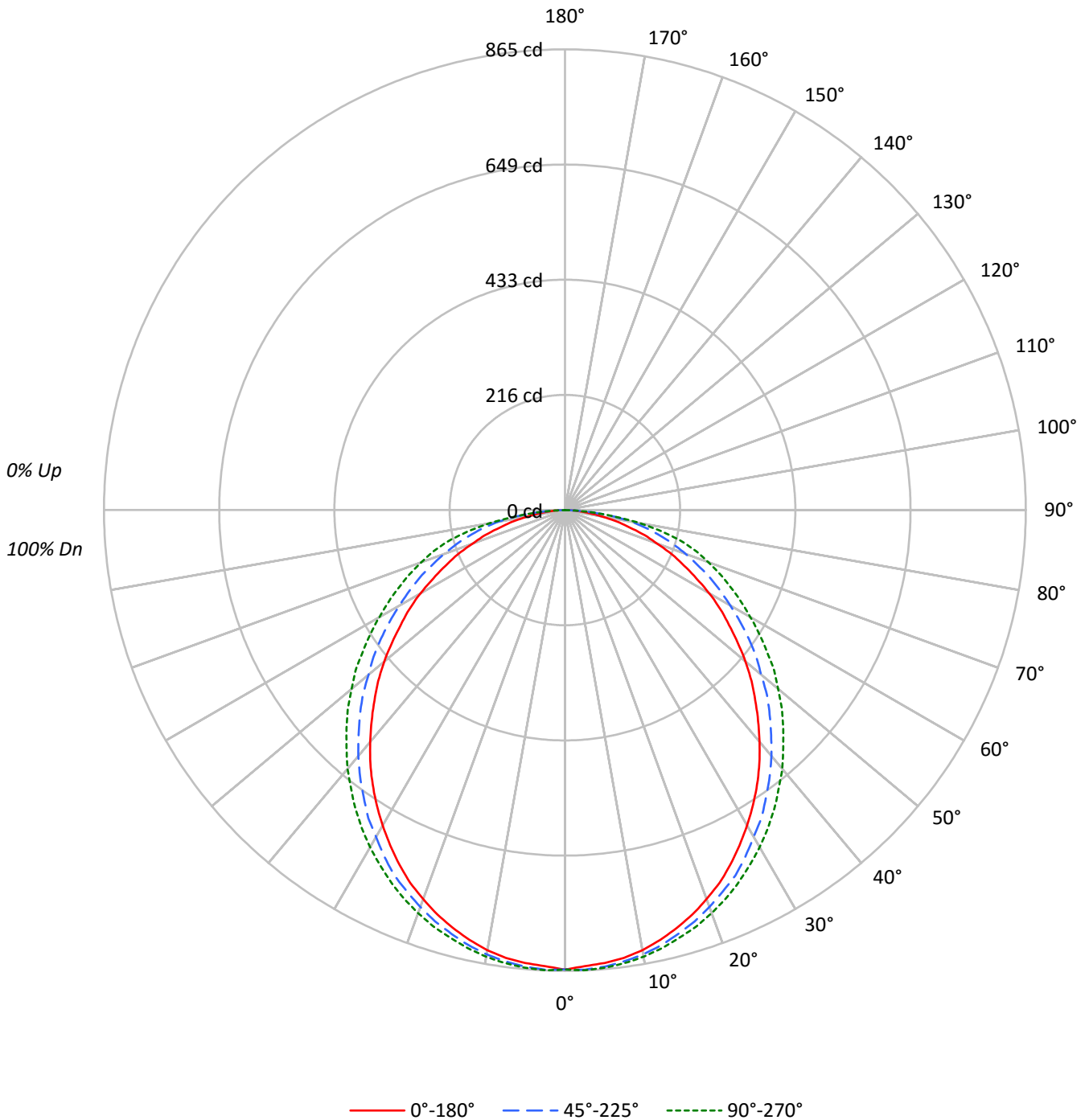
Lumens per Lamp: N/A  
Luminaire Lumens: 2407.0 lumens  
Efficiency: N/A  
Efficacy: 124.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2321	2321	2321
5°	2306	2324	2330
10°	2292	2314	2326
15°	2262	2293	2315
20°	2226	2271	2306
25°	2181	2247	2291
30°	2125	2202	2272
35°	2066	2162	2251
40°	1996	2119	2229
45°	1923	2069	2205
50°	1852	2012	2186
55°	1765	1976	2171
60°	1686	1928	2164
65°	1573	1917	2188
70°	1449	1900	2253
75°	1308	1927	2371
80°	1131	1984	2228
85°	936	1664	1664



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.6	3.4
10°-20°	232.1	9.6
20°-30°	347.3	14.4
30°-40°	411.3	17.1
40°-50°	419.2	17.4
50°-60°	375.7	15.6
60°-70°	294.1	12.2
70°-80°	189.7	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°	661.0	27.5
0°-40°	1072.3	44.5
0°-60°	1867.2	77.6
0°-90°	2407.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2407.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	854	856	860	861	862	81
15°	812	816	823	830	831	229
25°	734	741	757	767	772	338
35°	629	637	658	678	685	393
45°	505	517	544	572	580	390
55°	376	389	421	450	463	337
65°	247	262	301	330	344	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°	862.5	862.5	862.5	862.5	862.5
2.5°	856.9	859.1	863.6	864.7	864.7
5°	853.5	855.8	860.3	861.4	862.5
7.5°	847.9	849.0	854.6	856.9	858.0
10°	838.9	841.2	846.8	850.1	851.3
12.5°	826.6	829.9	836.7	841.2	842.3
15°	812.0	816.5	823.2	829.9	831.1
17.5°	796.2	800.7	809.7	817.6	819.8
20°	777.2	782.8	792.9	801.9	805.2
22.5°	758.1	762.6	774.9	786.1	789.5
25°	734.5	741.2	756.9	767.0	771.5
27.5°	709.8	717.6	733.4	746.8	751.3
30°	683.9	691.8	708.6	725.5	731.1
32.5°	657.0	666.0	686.2	703.0	708.6
35°	628.9	636.8	658.1	678.3	685.1
37.5°	599.7	606.4	631.2	652.5	659.2
40°	568.3	577.2	603.1	627.8	634.5
42.5°	536.8	546.9	572.8	599.7	606.4
45°	505.4	516.6	543.6	571.6	579.5
47.5°	475.1	484.0	514.4	541.3	552.5
50°	442.5	451.5	480.7	511.0	522.2
52.5°	408.8	421.1	452.6	481.8	495.3
55°	376.2	388.6	421.1	450.3	462.7
57.5°	345.9	356.0	389.7	420.0	432.4
60°	313.3	322.3	358.3	390.8	402.1
62.5°	278.5	292.0	329.1	359.4	372.9
65°	247.1	261.7	301.0	330.2	343.7
67.5°	217.9	231.3	269.5	301.0	315.6
70°	184.2	202.1	241.5	272.9	286.4
72.5°	157.2	172.9	213.4	244.8	259.4
75°	125.8	144.9	185.3	216.7	228.0
77.5°	100.0	119.0	157.2	181.9	187.5
80°	73.0	92.1	128.0	140.4	143.8
82.5°	49.4	67.4	92.1	95.5	96.6
85°	30.3	41.6	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)