

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: P308724

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP187-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: P308724  
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: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-5700K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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: 2504.0 lumens  
Efficiency: N/A  
Efficacy: 108.9 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

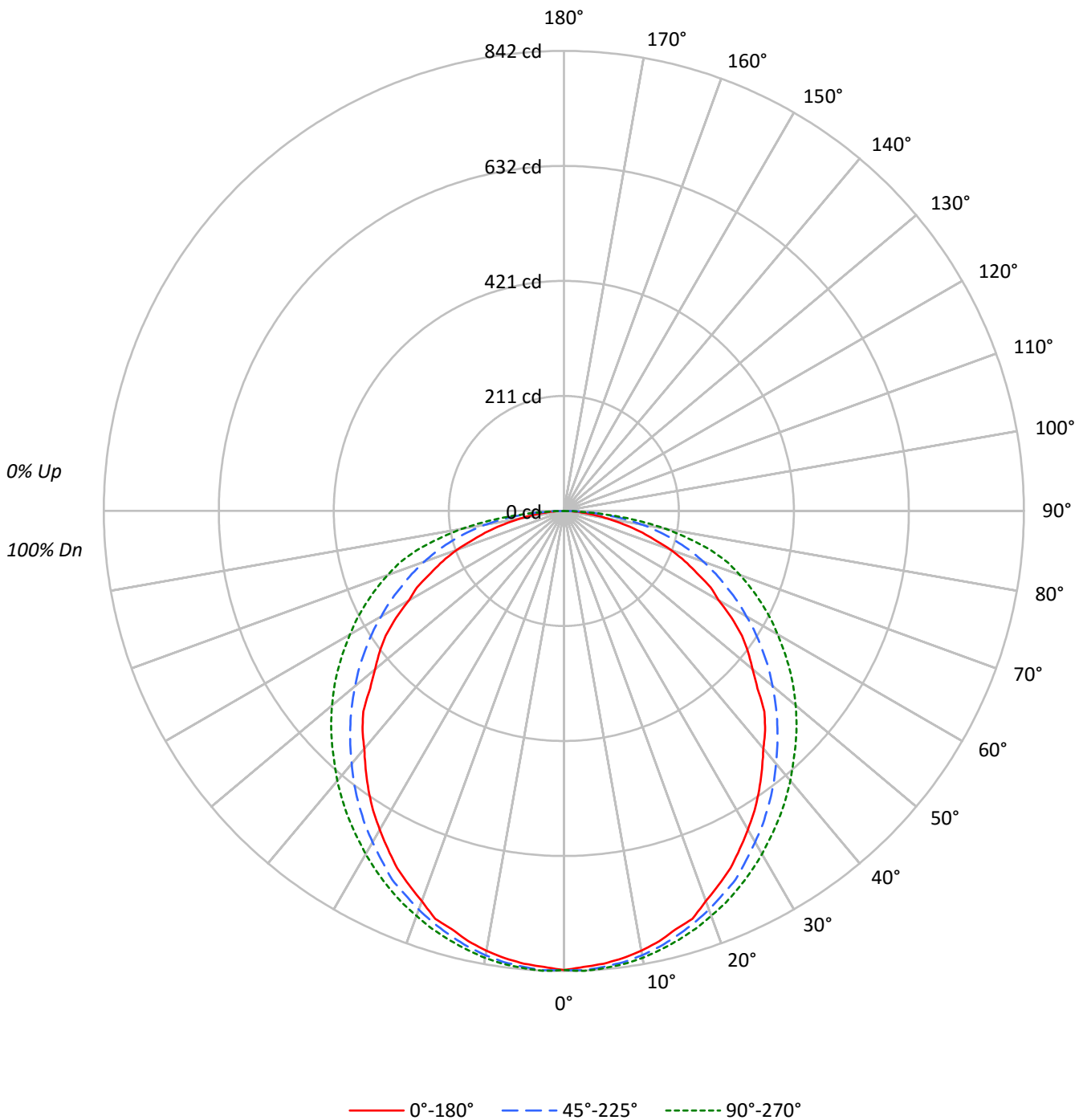
Input Watts (W): 23  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2261	2261	2261
5°	2247	2263	2269
10°	2233	2256	2269
15°	2207	2240	2264
20°	2176	2224	2258
25°	2142	2210	2256
30°	2093	2175	2253
35°	2047	2150	2256
40°	1996	2122	2265
45°	1975	2103	2285
50°	1886	2087	2318
55°	1867	2080	2367
60°	1761	2077	2432
65°	1710	2091	2541
70°	1640	2140	2697
75°	1495	2205	2903
80°	1282	2284	2935
85°	1037	2183	2516



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.5	3.2
10°-20°	226.8	9.1
20°-30°	341.3	13.6
30°-40°	409.6	16.4
40°-50°	428.2	17.1
50°-60°	399.0	15.9
60°-70°	327.3	13.1
70°-80°	220.5	8.8
80°-90°	71.8	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°	647.6	25.9
0°-40°	1057.2	42.2
0°-60°	1884.4	75.3
0°-90°	2504.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2504.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	840	840	840	840	840	
5°	832	834	838	839	840	79
15°	792	797	804	811	812	224
25°	722	726	744	755	760	332
35°	623	632	654	677	687	390
45°	519	522	552	586	600	396
55°	398	405	443	485	504	353
65°	268	280	328	376	399	267
75°	144	159	212	260	279	151
85°	34	48	71	83	82	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	840.1	840.1	840.1	840.1	840.1
2.5°	835.3	837.7	841.3	842.5	842.5
5°	831.7	834.1	837.7	838.9	840.1
7.5°	825.7	828.1	832.9	835.3	836.5
10°	817.3	819.7	825.7	829.3	830.5
12.5°	806.6	809.0	816.1	820.9	822.1
15°	792.2	797.0	804.2	811.4	812.5
17.5°	782.6	781.4	791.0	799.4	801.8
20°	759.8	765.8	776.6	786.2	788.6
22.5°	740.6	745.4	759.8	770.6	775.4
25°	721.5	726.3	744.2	755.0	759.8
27.5°	697.5	704.7	721.5	737.0	743.0
30°	673.5	680.7	699.9	717.9	725.1
32.5°	649.6	657.9	678.3	697.5	705.9
35°	623.2	631.6	654.4	677.1	686.7
37.5°	595.6	606.4	630.4	655.6	666.3
40°	568.1	578.9	604.0	632.8	644.8
42.5°	545.3	550.1	578.9	610.0	622.0
45°	518.9	522.5	552.5	586.0	600.4
47.5°	480.6	493.8	526.1	563.3	577.7
50°	450.6	465.0	498.6	538.1	553.7
52.5°	425.4	435.0	472.2	511.7	529.7
55°	397.9	405.1	443.4	485.4	504.5
57.5°	364.3	377.5	415.9	459.0	478.2
60°	327.2	344.0	385.9	432.6	451.8
62.5°	303.2	312.8	358.3	405.1	426.6
65°	268.5	280.4	328.4	376.3	399.1
67.5°	239.7	251.7	300.8	348.7	371.5
70°	208.5	220.5	272.0	320.0	342.8
72.5°	172.6	189.4	243.3	291.2	315.2
75°	143.8	159.4	212.1	260.1	279.2
77.5°	111.5	131.8	181.0	220.5	234.9
80°	82.7	103.1	147.4	176.2	189.4
82.5°	56.3	76.7	110.3	131.8	139.0
85°	33.6	47.9	70.7	82.7	81.5
87.5°	15.6	20.4	28.8	28.8	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)