

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: P308721

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP187-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: P308721  
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-4500K  
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**

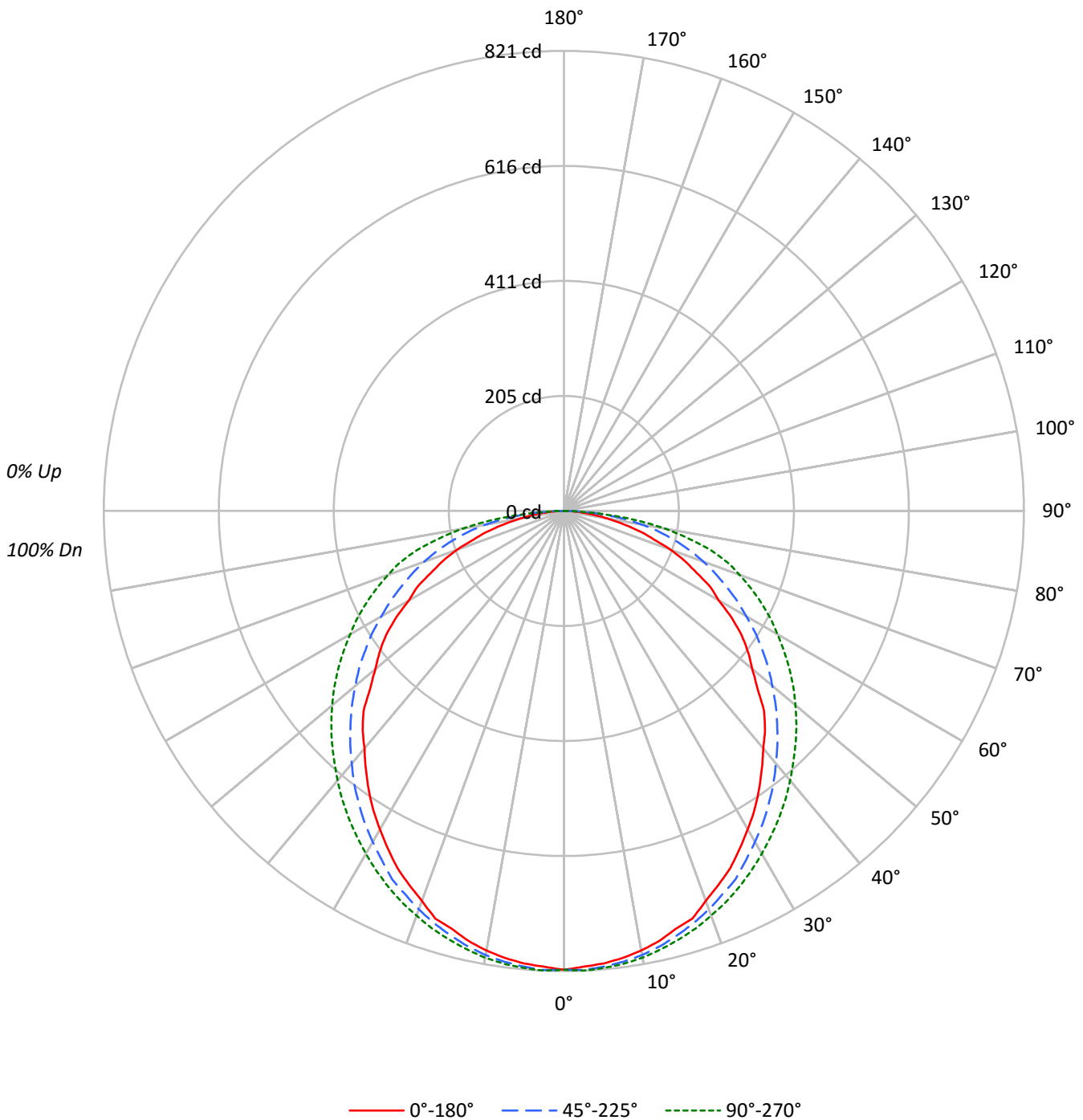
Lumens per Lamp: N/A  
Luminaire Lumens: 2440.0 lumens  
Efficiency: N/A  
Efficacy: 107.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2203	2203	2203
5°	2189	2205	2211
10°	2176	2199	2211
15°	2150	2183	2206
20°	2120	2167	2200
25°	2087	2153	2198
30°	2039	2119	2195
35°	1995	2095	2198
40°	1944	2068	2207
45°	1925	2049	2227
50°	1838	2034	2259
55°	1819	2027	2307
60°	1716	2024	2370
65°	1666	2038	2476
70°	1599	2086	2628
75°	1457	2149	2829
80°	1249	2225	2859
85°	1010	2127	2452



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.5	3.2
10°-20°	221.0	9.1
20°-30°	332.6	13.6
30°-40°	399.2	16.4
40°-50°	417.2	17.1
50°-60°	388.8	15.9
60°-70°	318.9	13.1
70°-80°	214.9	8.8
80°-90°	70.0	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°	631.0	25.9
0°-40°	1030.2	42.2
0°-60°	1836.2	75.3
0°-90°	2440.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2440.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	819	819	819	819	819	
5°	810	813	816	818	819	77
15°	772	777	784	791	792	218
25°	703	708	725	736	740	323
35°	607	615	638	660	669	380
45°	506	509	538	571	585	386
55°	388	395	432	473	492	344
65°	262	273	320	367	389	260
75°	140	155	207	253	272	147
85°	33	47	69	81	79	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	818.6	818.6	818.6	818.6	818.6
2.5°	814.0	816.3	819.8	821.0	821.0
5°	810.5	812.8	816.3	817.5	818.6
7.5°	804.6	807.0	811.6	814.0	815.1
10°	796.5	798.8	804.6	808.1	809.3
12.5°	785.9	788.3	795.3	800.0	801.1
15°	771.9	776.6	783.6	790.6	791.8
17.5°	762.6	761.4	770.8	778.9	781.3
20°	740.4	746.2	756.7	766.1	768.4
22.5°	721.7	726.4	740.4	750.9	755.6
25°	703.0	707.7	725.2	735.7	740.4
27.5°	679.7	686.7	703.0	718.2	724.0
30°	656.3	663.3	682.0	699.5	706.5
32.5°	633.0	641.1	661.0	679.7	687.8
35°	607.3	615.4	637.6	659.8	669.2
37.5°	580.4	590.9	614.3	638.8	649.3
40°	553.5	564.1	588.6	616.6	628.3
42.5°	531.4	536.0	564.1	594.4	606.1
45°	505.7	509.2	538.4	571.1	585.1
47.5°	468.3	481.1	512.7	548.9	562.9
50°	439.1	453.1	485.8	524.4	539.5
52.5°	414.6	423.9	460.1	498.7	516.2
55°	387.7	394.7	432.1	473.0	491.7
57.5°	355.0	367.9	405.2	447.3	466.0
60°	318.8	335.2	376.0	421.6	440.3
62.5°	295.5	304.8	349.2	394.7	415.7
65°	261.6	273.3	320.0	366.7	388.9
67.5°	233.6	245.2	293.1	339.8	362.0
70°	203.2	214.9	265.1	311.8	334.0
72.5°	168.2	184.5	237.1	283.8	307.1
75°	140.1	155.3	206.7	253.4	272.1
77.5°	108.6	128.5	176.3	214.9	228.9
80°	80.6	100.4	143.6	171.7	184.5
82.5°	54.9	74.7	107.4	128.5	135.5
85°	32.7	46.7	68.9	80.6	79.4
87.5°	15.2	19.9	28.0	28.0	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)