

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: P308950

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP187-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: P308950  
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-CP187-W2A-U-6500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

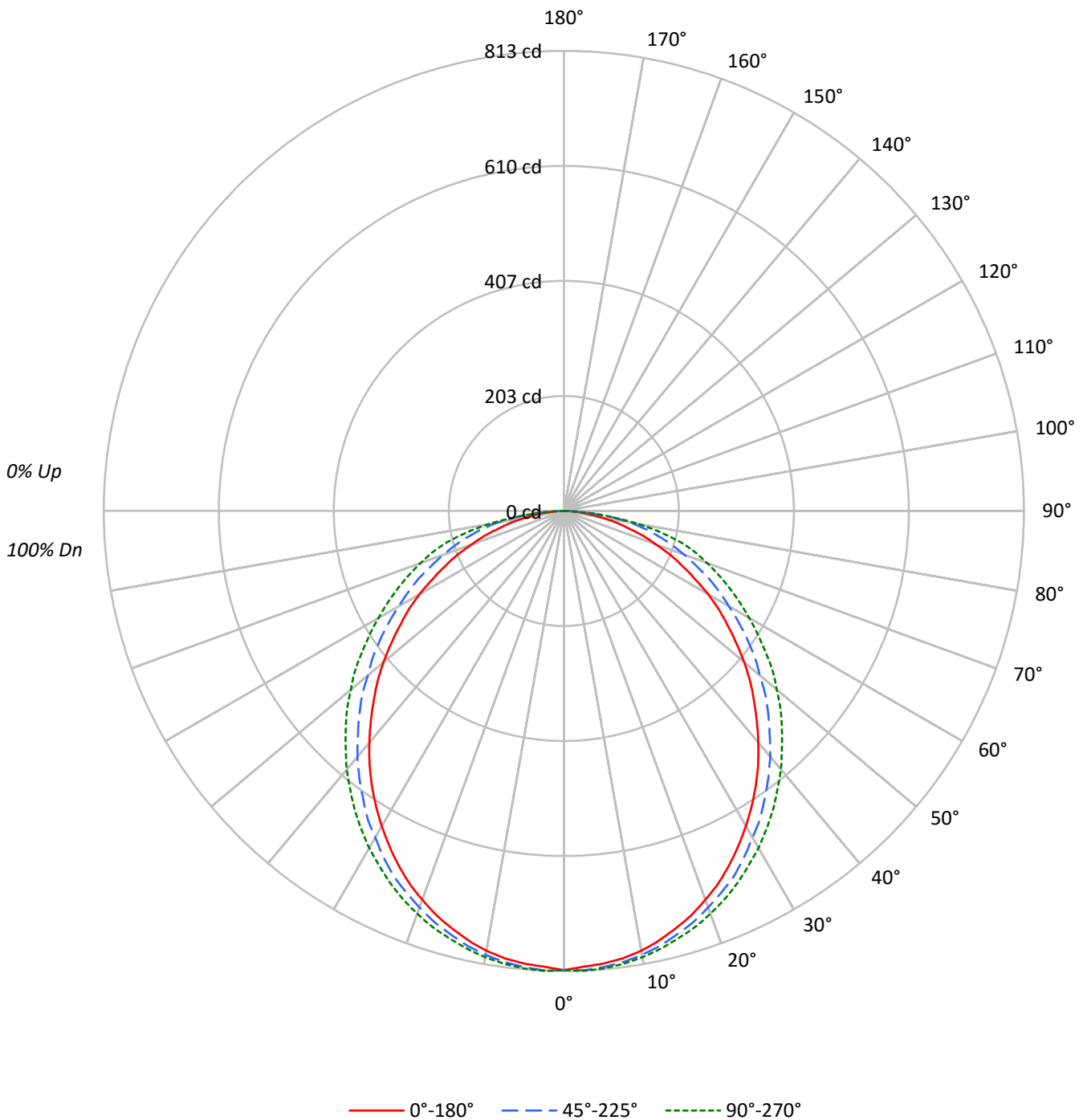
Lumens per Lamp: N/A  
Luminaire Lumens: 2264.0 lumens  
Efficiency: N/A  
Efficacy: 114.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2183	2183	2183
5°	2169	2186	2192
10°	2156	2176	2188
15°	2128	2157	2178
20°	2093	2136	2169
25°	2051	2114	2155
30°	1999	2071	2137
35°	1943	2033	2117
40°	1878	1992	2096
45°	1809	1946	2074
50°	1742	1893	2056
55°	1660	1858	2042
60°	1586	1814	2035
65°	1480	1803	2058
70°	1363	1787	2120
75°	1230	1812	2229
80°	1065	1866	2095
85°	880	1565	1565



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.7	3.4
10°-20°	218.3	9.6
20°-30°	326.7	14.4
30°-40°	386.9	17.1
40°-50°	394.3	17.4
50°-60°	353.4	15.6
60°-70°	276.7	12.2
70°-80°	178.4	7.9
80°-90°	52.7	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°	621.7	27.5
0°-40°	1008.6	44.5
0°-60°	1756.2	77.6
0°-90°	2264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2264.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	811	811	811	811	811	
5°	803	805	809	810	811	76
15°	764	768	774	781	782	215
25°	691	697	712	722	726	318
35°	592	599	619	638	644	370
45°	475	486	511	538	545	367
55°	354	366	396	424	435	317
65°	232	246	283	311	323	231
75°	118	136	174	204	214	127
85°	28	39	51	51	51	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	811.3	811.3	811.3	811.3	811.3
2.5°	806.0	808.1	812.3	813.4	813.4
5°	802.8	804.9	809.1	810.2	811.3
7.5°	797.5	798.6	803.9	806.0	807.0
10°	789.1	791.2	796.5	799.6	800.7
12.5°	777.5	780.6	787.0	791.2	792.2
15°	763.7	768.0	774.3	780.6	781.7
17.5°	748.9	753.2	761.6	769.0	771.1
20°	731.0	736.3	745.8	754.2	757.4
22.5°	713.0	717.2	728.9	739.4	742.6
25°	690.8	697.2	712.0	721.5	725.7
27.5°	667.6	675.0	689.8	702.5	706.7
30°	643.3	650.7	666.5	682.4	687.7
32.5°	618.0	626.4	645.4	661.3	666.5
35°	591.5	598.9	619.0	638.0	644.4
37.5°	564.1	570.4	593.7	613.7	620.1
40°	534.5	543.0	567.2	590.5	596.8
42.5°	504.9	514.4	538.7	564.1	570.4
45°	475.3	485.9	511.3	537.7	545.1
47.5°	446.8	455.3	483.8	509.2	519.7
50°	416.2	424.6	452.1	480.6	491.2
52.5°	384.5	396.1	425.7	453.2	465.8
55°	353.9	365.5	396.1	423.6	435.2
57.5°	325.3	334.9	366.5	395.1	406.7
60°	294.7	303.2	337.0	367.6	378.2
62.5°	262.0	274.6	309.5	338.0	350.7
65°	232.4	246.1	283.1	310.6	323.2
67.5°	204.9	217.6	253.5	283.1	296.8
70°	173.2	190.1	227.1	256.7	269.4
72.5°	147.9	162.7	200.7	230.3	244.0
75°	118.3	136.3	174.3	203.9	214.4
77.5°	94.0	112.0	147.9	171.1	176.4
80°	68.7	86.6	120.4	132.0	135.2
82.5°	46.5	63.4	86.6	89.8	90.8
85°	28.5	39.1	50.7	50.7	50.7
87.5°	13.7	15.8	18.0	16.9	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)