

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: P308133

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-3000K**

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: P308133  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
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-HRP-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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**

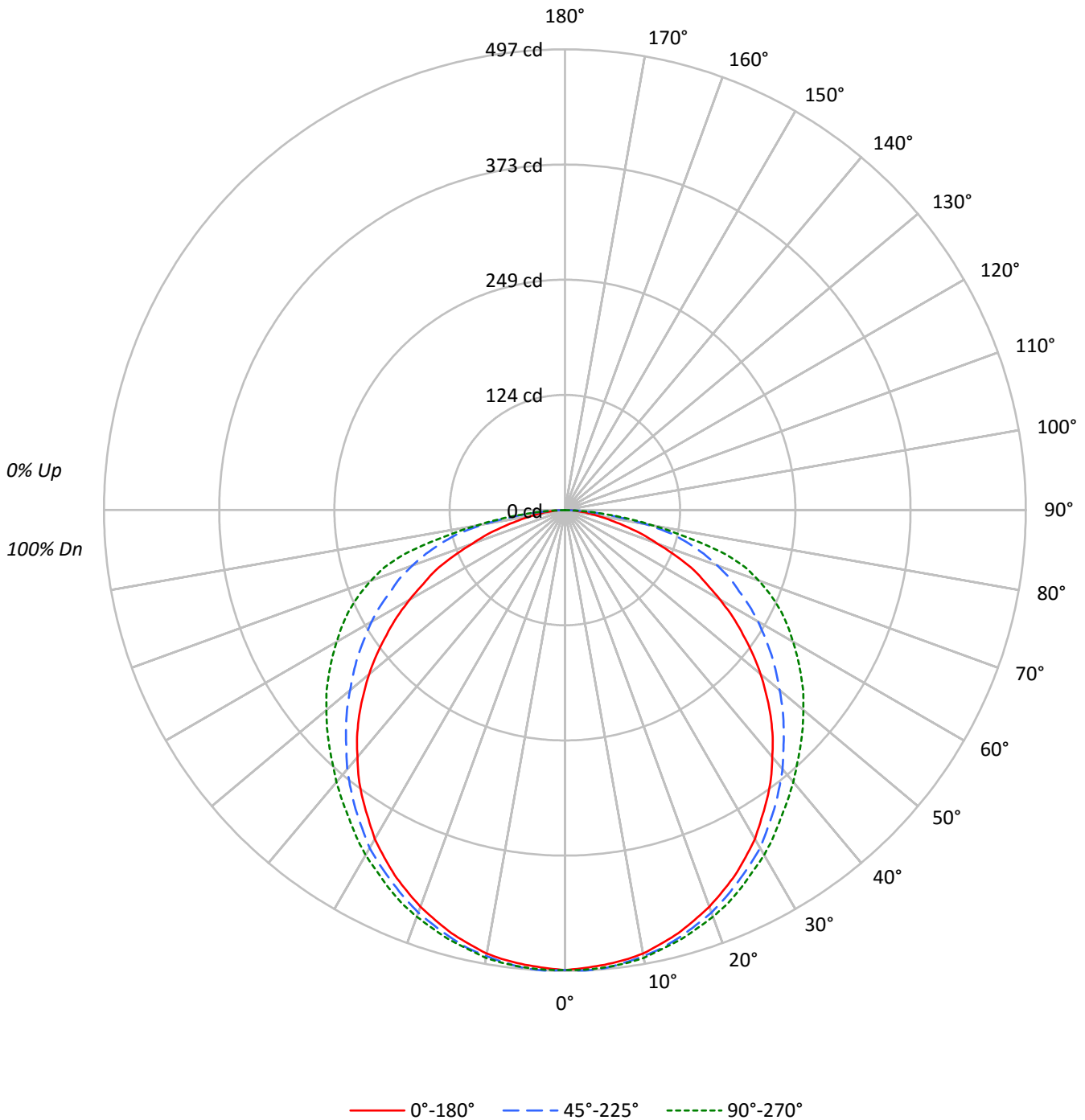
Lumens per Lamp: N/A  
Luminaire Lumens: 1507.0 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1335	1335	1335
5°	1330	1340	1338
10°	1327	1335	1340
15°	1316	1329	1338
20°	1304	1323	1337
25°	1290	1313	1335
30°	1273	1308	1335
35°	1249	1293	1333
40°	1222	1282	1346
45°	1194	1270	1367
50°	1154	1266	1405
55°	1102	1276	1459
60°	1039	1294	1530
65°	981	1319	1635
70°	838	1376	1751
75°	702	1433	1818
80°	575	1385	1517
85°	500	1028	1115



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.0	3.1
10°-20°	134.5	8.9
20°-30°	203.9	13.5
30°-40°	246.2	16.3
40°-50°	258.7	17.2
50°-60°	243.4	16.2
60°-70°	203.0	13.5
70°-80°	134.5	8.9
80°-90°	35.8	2.4
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°	385.4	25.6
0°-40°	631.6	41.9
0°-60°	1133.8	75.2
0°-90°	1507.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1507.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	496	496	496	496	496	
5°	492	493	496	496	495	47
15°	472	474	477	479	480	133
25°	434	437	442	448	450	200
35°	380	384	394	402	406	238
45°	314	318	334	351	359	242
55°	235	245	272	300	311	210
65°	154	167	207	242	257	150
75°	68	94	138	166	175	73
85°	16	25	33	36	36	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	496.2	496.2	496.2	496.2	496.2
2.5°	494.3	495.3	497.2	497.2	496.2
5°	492.4	493.4	496.2	496.2	495.3
7.5°	489.6	490.5	492.4	494.3	493.4
10°	485.8	486.7	488.6	490.5	490.5
12.5°	479.1	480.1	483.9	484.8	484.8
15°	472.5	474.4	477.2	479.1	480.1
17.5°	463.9	465.8	469.6	473.4	473.4
20°	455.4	457.3	462.0	465.8	466.8
22.5°	444.9	447.8	452.5	457.3	459.2
25°	434.4	437.3	442.1	447.8	449.7
27.5°	422.1	424.9	431.6	438.2	439.2
30°	409.7	412.6	421.1	426.8	429.7
32.5°	394.5	398.3	406.9	415.4	418.3
35°	380.3	384.1	393.6	402.1	405.9
37.5°	365.0	368.9	379.3	389.8	394.5
40°	347.9	352.7	365.0	376.5	383.1
42.5°	331.8	336.5	348.9	364.1	370.8
45°	313.7	318.5	333.7	350.8	359.3
47.5°	294.7	300.4	318.5	339.4	347.9
50°	275.7	282.3	302.3	326.1	335.6
52.5°	255.7	264.3	287.1	312.8	324.2
55°	234.8	245.3	271.9	299.5	310.9
57.5°	214.8	224.4	255.7	285.2	297.6
60°	193.0	205.3	240.5	270.9	284.2
62.5°	172.1	185.4	224.4	256.7	270.9
65°	154.0	167.3	207.2	241.5	256.7
67.5°	130.2	148.3	193.0	225.3	240.5
70°	106.5	131.2	174.9	208.2	222.5
72.5°	88.4	112.2	156.9	190.1	203.4
75°	67.5	94.1	137.8	166.4	174.9
77.5°	50.4	78.0	117.9	132.1	133.1
80°	37.1	59.9	89.4	94.1	97.9
82.5°	25.7	41.8	58.0	63.7	65.6
85°	16.2	24.7	33.3	36.1	36.1
87.5°	8.6	9.5	11.4	11.4	11.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)