

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: P308134

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-3500K**

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: P308134  
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-3500K  
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**

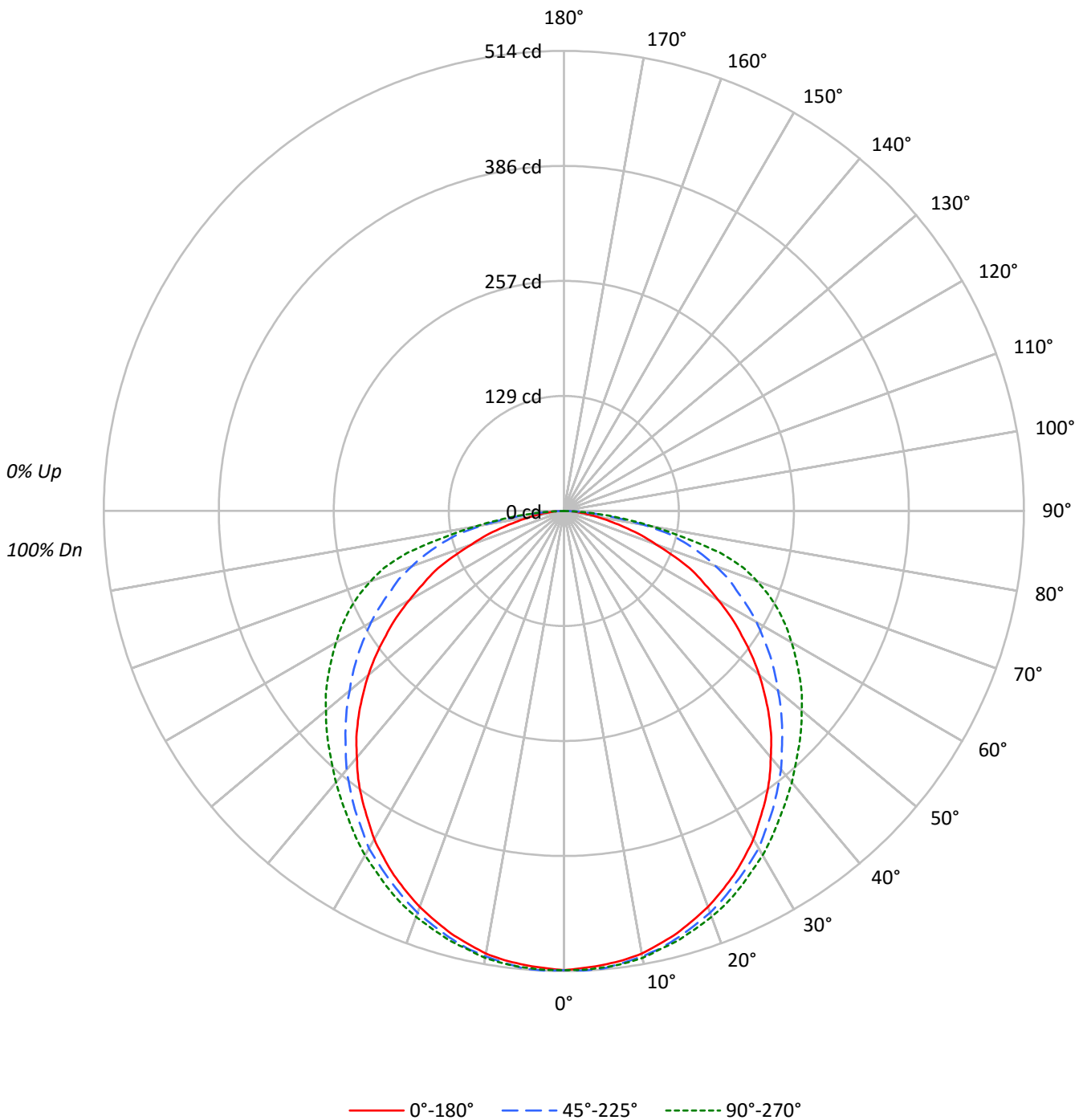
Lumens per Lamp: N/A  
Luminaire Lumens: 1558.0 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1380	1380	1380
5°	1375	1386	1383
10°	1372	1380	1386
15°	1361	1375	1383
20°	1348	1368	1382
25°	1333	1357	1380
30°	1316	1353	1380
35°	1291	1337	1379
40°	1264	1326	1391
45°	1234	1313	1414
50°	1193	1308	1452
55°	1139	1319	1508
60°	1074	1338	1582
65°	1014	1365	1690
70°	866	1423	1810
75°	726	1482	1880
80°	594	1432	1568
85°	516	1062	1152



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.6	3.1
10°-20°	139.1	8.9
20°-30°	210.8	13.5
30°-40°	254.5	16.3
40°-50°	267.4	17.2
50°-60°	251.6	16.2
60°-70°	209.8	13.5
70°-80°	139.0	8.9
80°-90°	37.0	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°	398.5	25.6
0°-40°	653.0	41.9
0°-60°	1172.1	75.2
0°-90°	1558.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1558.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	513	513	513	513	513	
5°	509	510	513	513	512	48
15°	488	490	493	495	496	138
25°	449	452	457	463	465	207
35°	393	397	407	416	420	246
45°	324	329	345	363	372	250
55°	243	254	281	310	321	217
65°	159	173	214	250	265	155
75°	70	97	142	172	181	76
85°	17	26	34	37	37	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	513.0	513.0	513.0	513.0	513.0
2.5°	511.1	512.0	514.0	514.0	513.0
5°	509.1	510.1	513.0	513.0	512.0
7.5°	506.2	507.1	509.1	511.1	510.1
10°	502.2	503.2	505.2	507.1	507.1
12.5°	495.3	496.3	500.3	501.2	501.2
15°	488.5	490.4	493.4	495.3	496.3
17.5°	479.6	481.6	485.5	489.4	489.4
20°	470.8	472.7	477.7	481.6	482.6
22.5°	460.0	462.9	467.8	472.7	474.7
25°	449.1	452.1	457.0	462.9	464.9
27.5°	436.4	439.3	446.2	453.1	454.1
30°	423.6	426.5	435.4	441.3	444.2
32.5°	407.9	411.8	420.6	429.5	432.4
35°	393.1	397.1	406.9	415.7	419.7
37.5°	377.4	381.3	392.1	403.0	407.9
40°	359.7	364.6	377.4	389.2	396.1
42.5°	343.0	347.9	360.7	376.4	383.3
45°	324.3	329.2	345.0	362.7	371.5
47.5°	304.7	310.6	329.2	350.9	359.7
50°	285.0	291.9	312.5	337.1	346.9
52.5°	264.4	273.2	296.8	323.3	335.1
55°	242.8	253.6	281.1	309.6	321.4
57.5°	222.1	231.9	264.4	294.8	307.6
60°	199.5	212.3	248.7	280.1	293.9
62.5°	177.9	191.6	231.9	265.4	280.1
65°	159.2	173.0	214.3	249.6	265.4
67.5°	134.6	153.3	199.5	232.9	248.7
70°	110.1	135.6	180.8	215.2	230.0
72.5°	91.4	116.0	162.2	196.6	210.3
75°	69.8	97.3	142.5	172.0	180.8
77.5°	52.1	80.6	121.9	136.6	137.6
80°	38.3	61.9	92.4	97.3	101.2
82.5°	26.5	43.2	60.0	65.8	67.8
85°	16.7	25.6	34.4	37.3	37.3
87.5°	8.8	9.8	11.8	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)