

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: P309355

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-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: P309355  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-40HE-UNV-L82765-HRP-CP187-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (336) 6500K 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: 2763.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

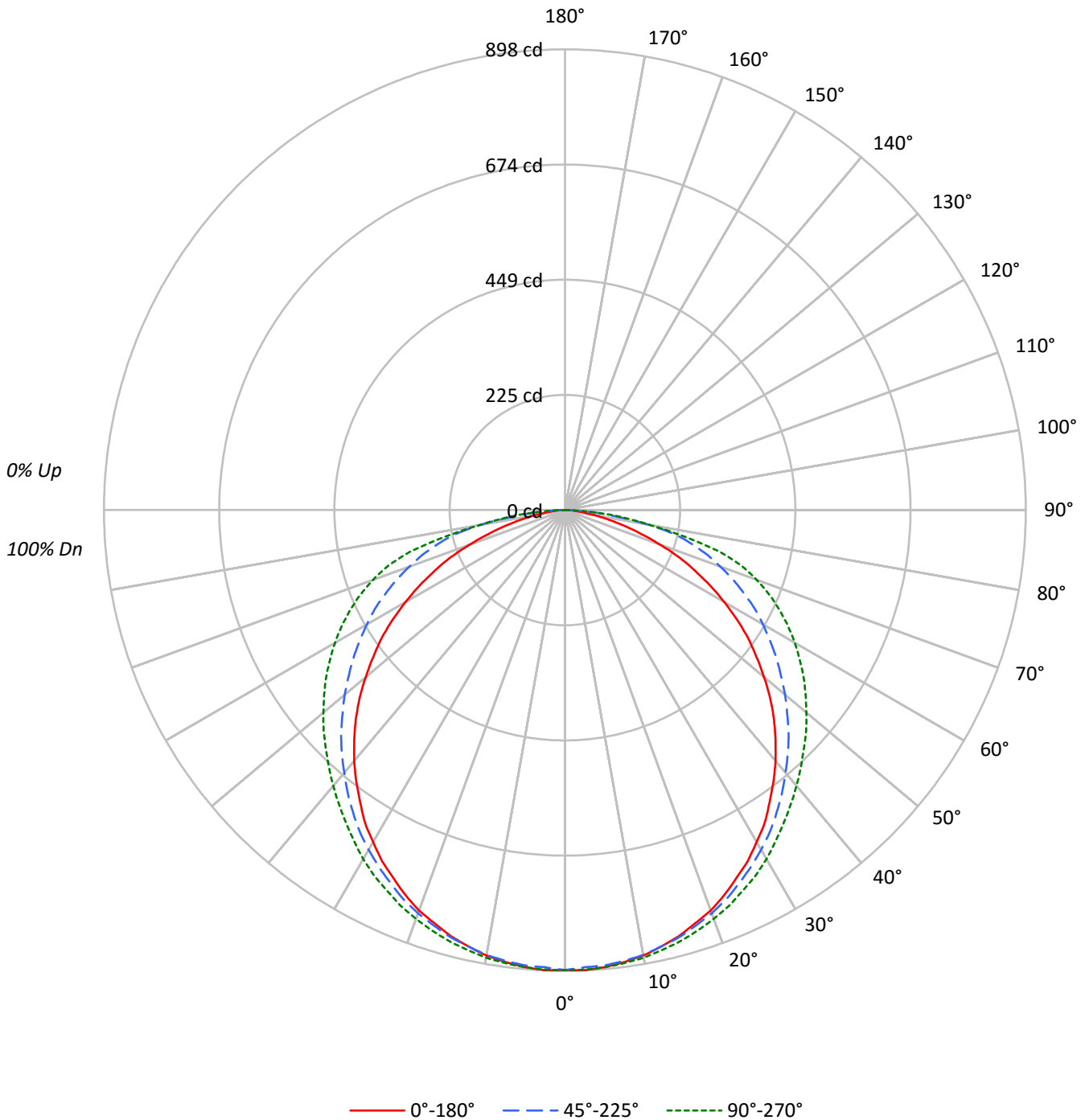
Input Watts (W): 31.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

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

	0°	45°	90°
0°	1206	1206	1206
5°	1208	1203	1208
10°	1204	1203	1210
15°	1197	1200	1212
20°	1189	1197	1214
25°	1175	1192	1216
30°	1161	1188	1220
35°	1142	1182	1222
40°	1121	1174	1233
45°	1096	1173	1252
50°	1060	1172	1286
55°	1023	1180	1332
60°	965	1198	1392
65°	891	1226	1469
70°	778	1269	1565
75°	632	1335	1618
80°	466	1309	1309
85°	357	965	1090



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.9	3.1
10°-20°	243.9	8.8
20°-30°	371.3	13.4
30°-40°	450.8	16.3
40°-50°	476.3	17.2
50°-60°	449.4	16.3
60°-70°	373.7	13.5
70°-80°	245.8	8.9
80°-90°	67.0	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°	700.0	25.3
0°-40°	1150.8	41.7
0°-60°	2076.5	75.2
0°-90°	2763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2763.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	894	894	891	894	894	85
15°	859	861	862	870	870	242
25°	791	796	803	817	819	365
35°	695	703	720	738	744	435
45°	576	588	616	647	658	444
55°	436	455	503	551	568	388
65°	280	312	385	442	462	277
75°	122	177	257	304	311	131
85°	23	51	62	69	71	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	896.5	896.5	896.5	896.5	896.5
2.5°	897.6	896.5	891.8	896.5	896.5
5°	894.1	894.1	890.7	894.1	894.1
7.5°	888.4	888.4	886.0	890.7	890.7
10°	881.4	881.4	880.3	886.0	886.0
12.5°	871.0	872.2	871.0	877.9	877.9
15°	859.4	860.6	861.8	869.9	869.9
17.5°	844.4	846.7	849.0	858.3	859.4
20°	830.5	831.7	836.3	846.7	847.9
22.5°	812.0	815.5	821.3	831.7	835.2
25°	791.2	795.8	802.8	816.6	819.0
27.5°	771.5	775.0	784.3	799.3	803.9
30°	747.2	753.0	764.6	779.6	785.4
32.5°	724.1	729.9	743.8	760.0	764.6
35°	695.2	703.3	719.5	738.0	743.8
37.5°	667.4	675.5	695.2	716.0	722.9
40°	638.5	647.8	668.6	692.9	702.1
42.5°	607.3	620.0	643.1	669.7	680.2
45°	576.0	587.6	616.5	646.6	658.2
47.5°	542.5	556.4	587.6	623.5	637.4
50°	506.6	524.0	559.9	599.2	614.2
52.5°	470.8	490.4	530.9	574.9	591.1
55°	436.1	454.6	503.2	550.6	567.9
57.5°	397.9	421.0	474.3	525.2	542.5
60°	358.6	384.0	445.3	498.5	517.1
62.5°	319.3	348.2	417.6	470.8	490.4
65°	279.9	312.3	385.2	441.9	461.5
67.5°	241.8	277.6	355.1	411.8	431.5
70°	197.8	242.9	322.7	378.2	397.9
72.5°	157.3	209.4	291.5	343.5	360.9
75°	121.5	177.0	256.8	304.2	311.2
77.5°	89.1	144.6	220.9	237.1	238.3
80°	60.1	115.7	168.9	166.6	168.9
82.5°	39.3	86.8	106.4	119.1	120.3
85°	23.1	50.9	62.5	69.4	70.6
87.5°	11.6	17.4	22.0	23.1	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)