

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: P309325

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CA08-W2A-U-5000K**

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: P309325  
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-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5000K 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: 2909.0 lumens  
Efficiency: N/A  
Efficacy: 93.5 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

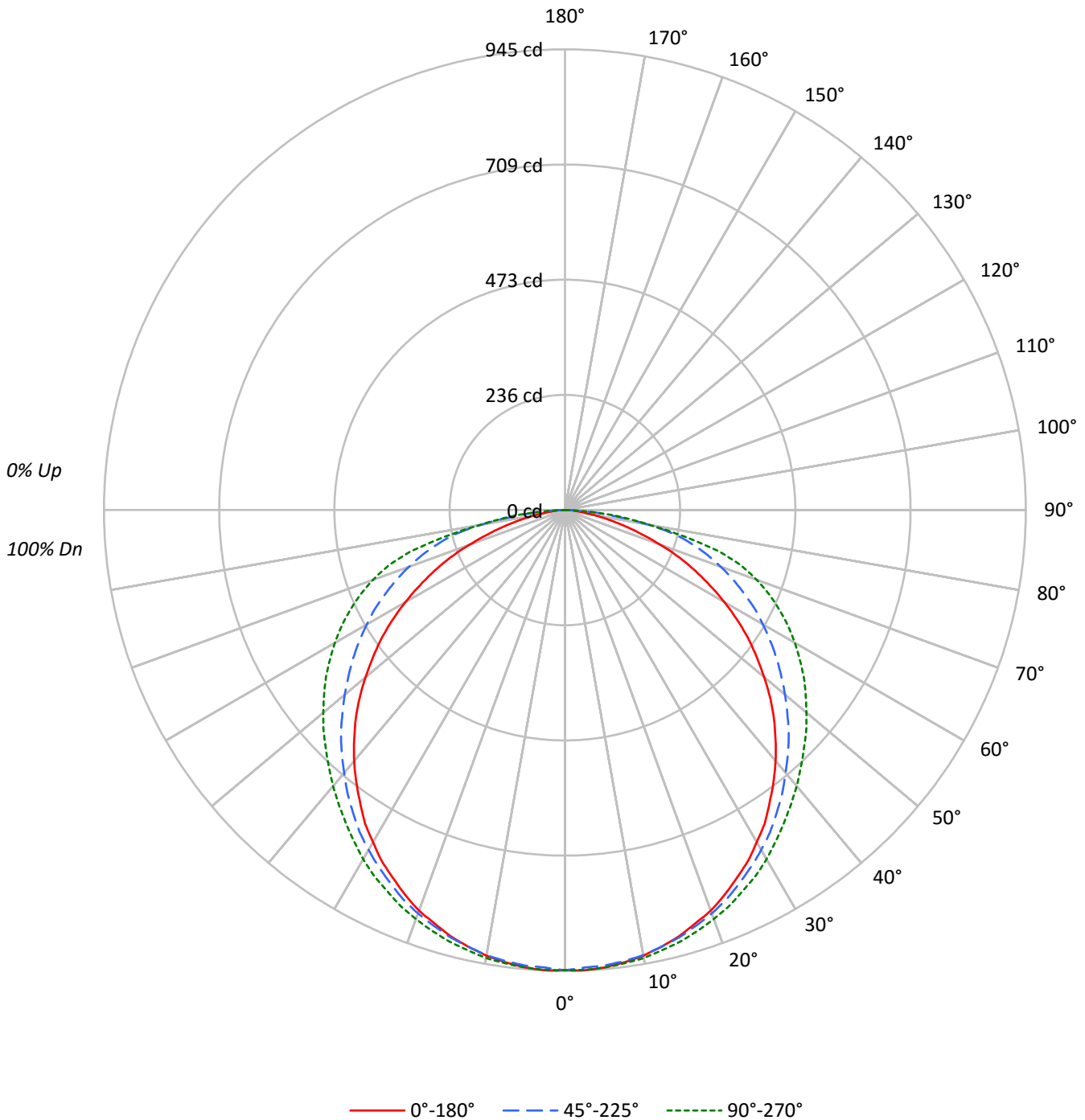
Input Watts (W): 31.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1270	1270	1270
5°	1271	1266	1271
10°	1268	1266	1275
15°	1260	1264	1276
20°	1252	1261	1278
25°	1237	1255	1280
30°	1222	1251	1285
35°	1202	1244	1286
40°	1181	1236	1298
45°	1154	1235	1319
50°	1117	1234	1354
55°	1077	1243	1403
60°	1016	1262	1465
65°	938	1291	1547
70°	819	1337	1648
75°	665	1406	1703
80°	490	1378	1378
85°	377	1016	1147



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.4	3.1
10°-20°	256.8	8.8
20°-30°	390.9	13.4
30°-40°	474.6	16.3
40°-50°	501.4	17.2
50°-60°	473.2	16.3
60°-70°	393.4	13.5
70°-80°	258.8	8.9
80°-90°	70.6	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°	737.0	25.3
0°-40°	1211.6	41.7
0°-60°	2186.2	75.2
0°-90°	2909.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2909.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	941	941	938	941	941	89
15°	905	906	907	916	916	255
25°	833	838	845	860	862	384
35°	732	740	758	777	783	458
45°	606	619	649	681	693	467
55°	459	479	530	580	598	409
65°	295	329	406	465	486	291
75°	128	186	270	320	328	138
85°	24	54	66	73	74	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	943.8	943.8	943.8	943.8	943.8
2.5°	945.0	943.8	939.0	943.8	943.8
5°	941.4	941.4	937.7	941.4	941.4
7.5°	935.3	935.3	932.9	937.7	937.7
10°	928.0	928.0	926.8	932.9	932.9
12.5°	917.0	918.3	917.0	924.3	924.3
15°	904.9	906.1	907.3	915.8	915.8
17.5°	889.0	891.5	893.9	903.6	904.9
20°	874.4	875.6	880.5	891.5	892.7
22.5°	854.9	858.6	864.7	875.6	879.3
25°	833.0	837.9	845.2	859.8	862.2
27.5°	812.3	816.0	825.7	841.5	846.4
30°	786.7	792.8	805.0	820.8	826.9
32.5°	762.4	768.5	783.1	800.1	805.0
35°	731.9	740.4	757.5	777.0	783.1
37.5°	702.7	711.2	731.9	753.8	761.2
40°	672.2	682.0	703.9	729.5	739.2
42.5°	639.4	652.8	677.1	705.1	716.1
45°	606.5	618.7	649.1	680.8	693.0
47.5°	571.2	585.8	618.7	656.4	671.0
50°	533.4	551.7	589.4	630.8	646.7
52.5°	495.7	516.4	559.0	605.3	622.3
55°	459.1	478.6	529.8	579.7	598.0
57.5°	418.9	443.3	499.3	552.9	571.2
60°	377.5	404.3	468.9	524.9	544.4
62.5°	336.1	366.6	439.6	495.7	516.4
65°	294.7	328.8	405.5	465.2	485.9
67.5°	254.5	292.3	373.9	433.6	454.3
70°	208.3	255.7	339.8	398.2	418.9
72.5°	165.6	220.4	306.9	361.7	380.0
75°	127.9	186.3	270.4	320.3	327.6
77.5°	93.8	152.2	232.6	249.7	250.9
80°	63.3	121.8	177.8	175.4	177.8
82.5°	41.4	91.3	112.0	125.4	126.7
85°	24.4	53.6	65.8	73.1	74.3
87.5°	12.2	18.3	23.1	24.4	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)