

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: P310495

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-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: P310495  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30HE-UNV-L82765-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED 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

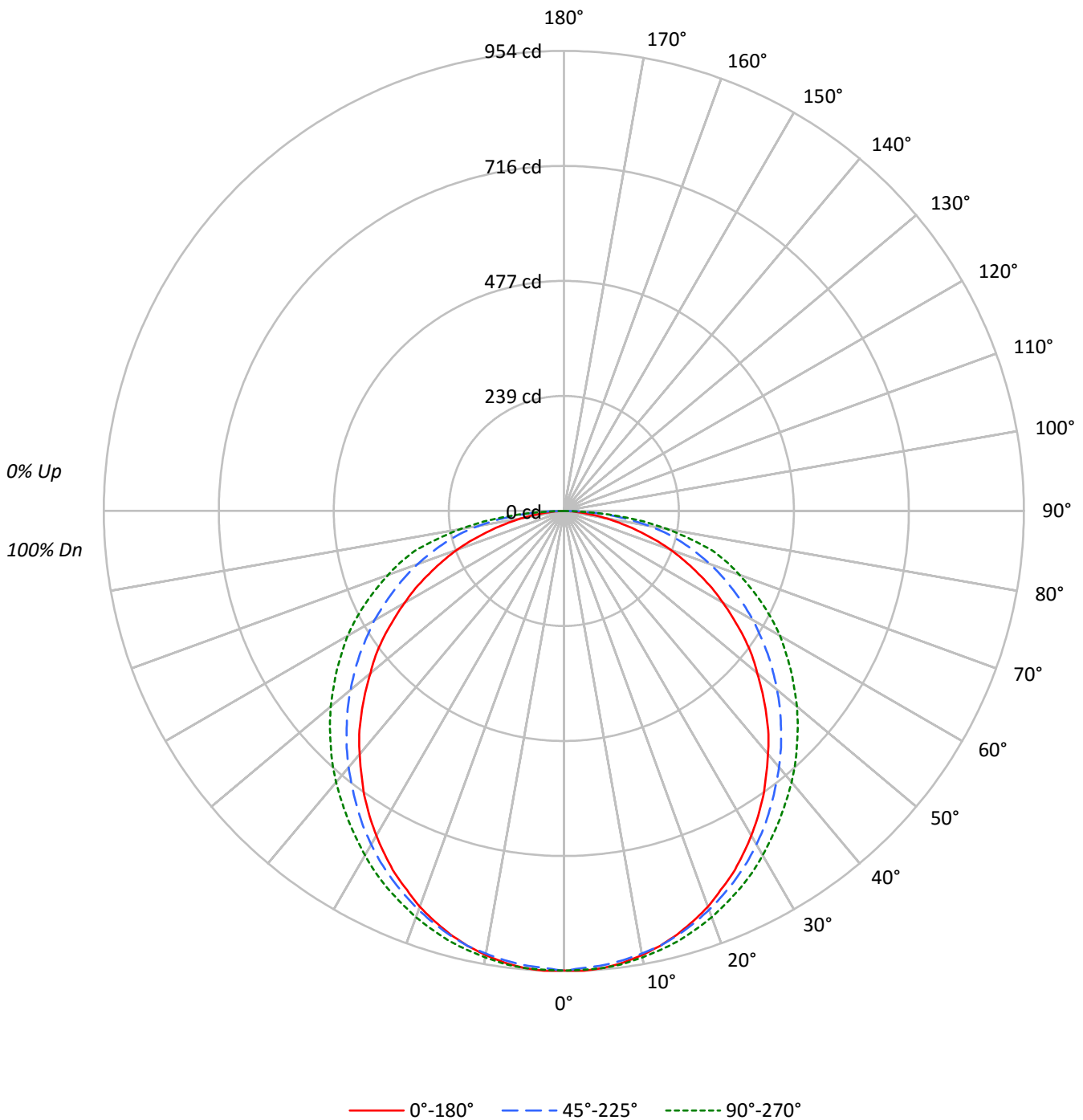
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2890.0 lumens  
Efficiency: N/A  
Efficacy: 133.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

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

	0°	45°	90°
0°	1282	1282	1282
5°	1285	1277	1285
10°	1277	1273	1284
15°	1266	1269	1285
20°	1251	1260	1284
25°	1231	1251	1283
30°	1208	1241	1281
35°	1184	1228	1282
40°	1157	1219	1290
45°	1129	1212	1301
50°	1096	1208	1321
55°	1069	1210	1347
60°	1027	1220	1393
65°	980	1233	1444
70°	928	1271	1524
75°	828	1326	1665
80°	706	1404	1702
85°	503	1391	1629



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.2	3.1
10°-20°	257.9	8.9
20°-30°	389.5	13.5
30°-40°	469.5	16.2
40°-50°	492.9	17.1
50°-60°	461.1	16.0
60°-70°	380.8	13.2
70°-80°	259.5	9.0
80°-90°	88.5	3.1
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°	737.7	25.5
0°-40°	1207.2	41.8
0°-60°	2161.2	74.8
0°-90°	2890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2890.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	953	953	953	953	953	
5°	951	950	945	951	951	90
15°	909	910	911	920	922	256
25°	829	833	843	859	864	382
35°	721	729	748	773	780	451
45°	594	606	637	671	684	458
55°	456	474	516	558	574	407
65°	308	334	387	436	454	305
75°	159	196	255	303	320	170
85°	33	64	90	102	106	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	953.1	953.1	953.1	953.1	953.1
2.5°	954.1	953.1	948.3	953.1	952.1
5°	951.2	950.2	945.4	951.2	951.2
7.5°	944.5	944.5	939.7	946.4	947.3
10°	934.9	934.9	932.0	939.7	939.7
12.5°	923.4	923.4	923.4	931.0	932.0
15°	909.0	909.9	910.9	920.5	922.4
17.5°	891.7	893.6	896.5	908.0	909.9
20°	873.5	875.4	880.2	893.6	896.5
22.5°	850.5	855.3	862.0	877.3	880.2
25°	829.4	833.2	842.8	859.1	863.9
27.5°	803.5	809.3	821.7	839.0	845.7
30°	777.6	783.4	798.7	818.9	824.6
32.5°	749.8	758.5	774.8	795.8	802.6
35°	721.1	728.7	747.9	772.8	780.5
37.5°	689.4	700.0	721.1	747.9	757.5
40°	658.7	670.2	694.2	723.0	734.5
42.5°	628.0	639.6	666.4	699.0	710.5
45°	593.5	606.0	636.7	671.2	683.7
47.5°	559.0	574.4	607.9	644.3	657.8
50°	523.5	540.8	577.2	615.6	630.9
52.5°	491.9	508.2	546.5	587.8	602.2
55°	455.5	473.7	515.9	558.1	574.4
57.5°	418.1	438.2	483.3	529.3	545.6
60°	381.6	403.7	453.5	499.6	517.8
62.5°	346.1	368.2	420.0	467.9	486.1
65°	307.8	333.7	387.4	436.3	453.5
67.5°	271.4	299.2	355.7	403.7	420.9
70°	235.9	262.7	323.1	370.1	387.4
72.5°	197.5	228.2	288.6	337.5	355.7
75°	159.2	195.6	255.1	303.0	320.3
77.5°	123.7	161.1	220.5	259.8	268.5
80°	91.1	129.4	181.2	209.0	219.6
82.5°	58.5	96.8	138.1	158.2	166.8
85°	32.6	64.2	90.1	101.6	105.5
87.5°	13.4	27.8	36.4	41.2	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)