

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: P310540

Luminaire Tested: **24FCZ2-30-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: P310540  
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: 24FCZ2-30-UNV-L82765-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 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**

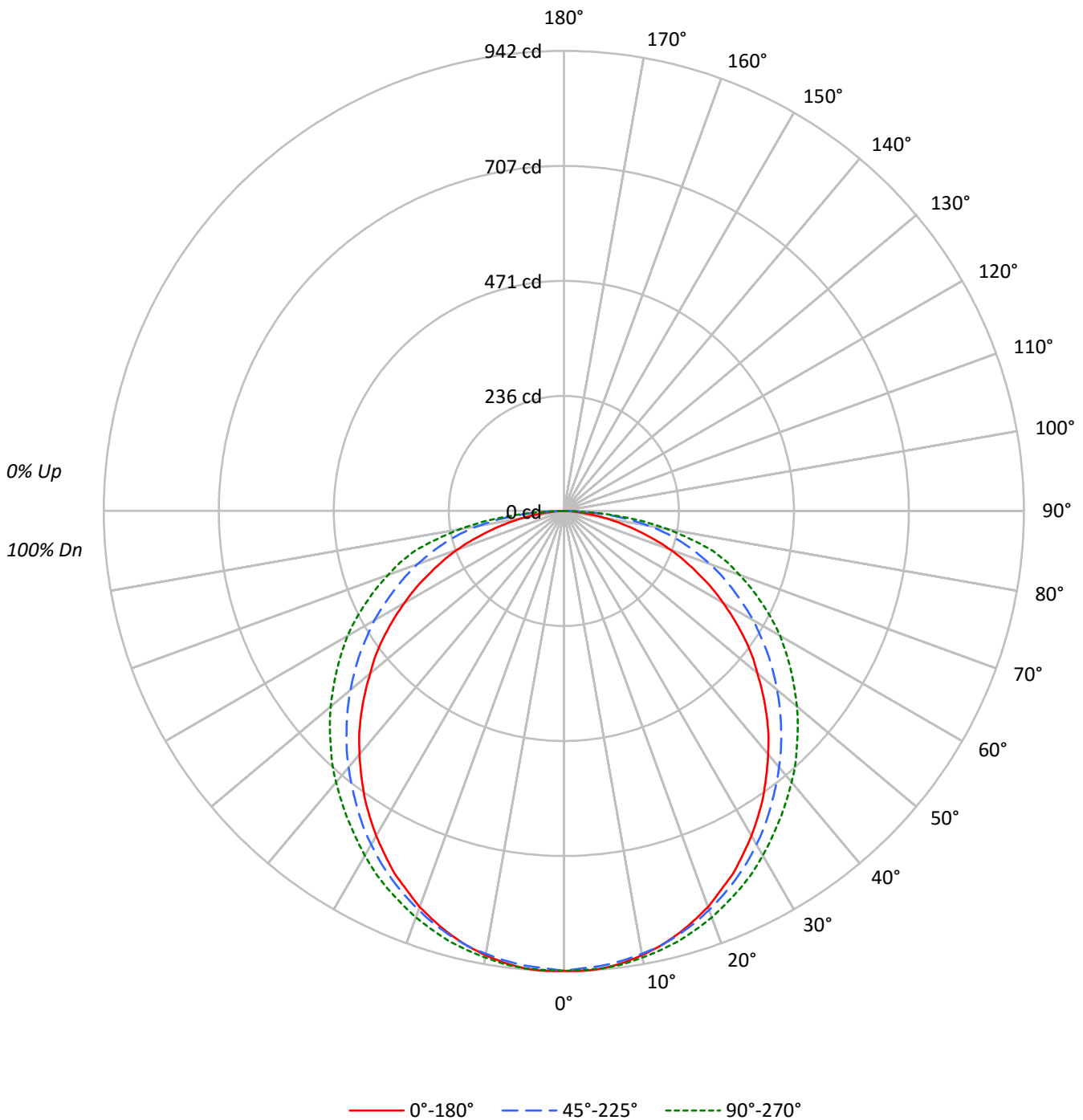
Lumens per Lamp: N/A  
Luminaire Lumens: 2855.0 lumens  
Efficiency: N/A  
Efficacy: 119.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1267	1267	1267
5°	1269	1261	1269
10°	1262	1258	1268
15°	1251	1254	1269
20°	1236	1245	1268
25°	1216	1236	1267
30°	1194	1226	1266
35°	1170	1214	1267
40°	1143	1205	1274
45°	1116	1197	1285
50°	1083	1194	1305
55°	1055	1195	1331
60°	1014	1206	1376
65°	968	1218	1426
70°	917	1256	1506
75°	817	1310	1645
80°	697	1387	1681
85°	497	1374	1609



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.1	3.1
10°-20°	254.8	8.9
20°-30°	384.8	13.5
30°-40°	463.8	16.2
40°-50°	486.9	17.1
50°-60°	455.5	16.0
60°-70°	376.2	13.2
70°-80°	256.3	9.0
80°-90°	87.4	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°	728.7	25.5
0°-40°	1192.5	41.8
0°-60°	2135.0	74.8
0°-90°	2855.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2855.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	942	942	942	942	942	
5°	940	939	934	940	940	89
15°	898	899	900	909	911	253
25°	819	823	833	849	854	377
35°	712	720	739	764	771	445
45°	586	599	629	663	675	452
55°	450	468	510	551	567	402
65°	304	330	383	431	448	302
75°	157	193	252	299	316	168
85°	32	64	89	100	104	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	941.6	941.6	941.6	941.6	941.6
2.5°	942.5	941.6	936.8	941.6	940.6
5°	939.7	938.7	934.0	939.7	939.7
7.5°	933.0	933.0	928.3	934.9	935.9
10°	923.6	923.6	920.7	928.3	928.3
12.5°	912.2	912.2	912.2	919.8	920.7
15°	898.0	898.9	899.9	909.3	911.2
17.5°	880.9	882.8	885.7	897.0	898.9
20°	862.9	864.8	869.6	882.8	885.7
22.5°	840.2	844.9	851.6	866.7	869.6
25°	819.4	823.1	832.6	848.7	853.5
27.5°	793.8	799.5	811.8	828.8	835.5
30°	768.2	773.9	789.0	808.9	814.6
32.5°	740.7	749.3	765.4	786.2	792.8
35°	712.3	719.9	738.8	763.5	771.1
37.5°	681.1	691.5	712.3	738.8	748.3
40°	650.8	662.1	685.8	714.2	725.6
42.5°	620.4	631.8	658.3	690.5	701.9
45°	586.3	598.7	629.0	663.1	675.4
47.5°	552.2	567.4	600.5	636.5	649.8
50°	517.2	534.2	570.2	608.1	623.3
52.5°	485.9	502.0	539.9	580.7	594.9
55°	449.9	467.9	509.6	551.3	567.4
57.5°	413.0	432.9	477.4	522.9	539.0
60°	377.0	398.8	448.0	493.5	511.5
62.5°	342.0	363.7	414.9	462.3	480.2
65°	304.1	329.6	382.7	431.0	448.0
67.5°	268.1	295.5	351.4	398.8	415.8
70°	233.0	259.5	319.2	365.6	382.7
72.5°	195.1	225.4	285.1	333.4	351.4
75°	157.2	193.2	252.0	299.3	316.4
77.5°	122.2	159.1	217.9	256.7	265.2
80°	90.0	127.9	179.0	206.5	216.9
82.5°	57.8	95.7	136.4	156.3	164.8
85°	32.2	63.5	89.0	100.4	104.2
87.5°	13.3	27.5	36.0	40.7	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)