

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: P313886

Luminaire Tested: **24FCZ2-35-UNV-L83050-CP250-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: P313886  
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: 24FCZ2-35-UNV-L83050-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 3500K 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**

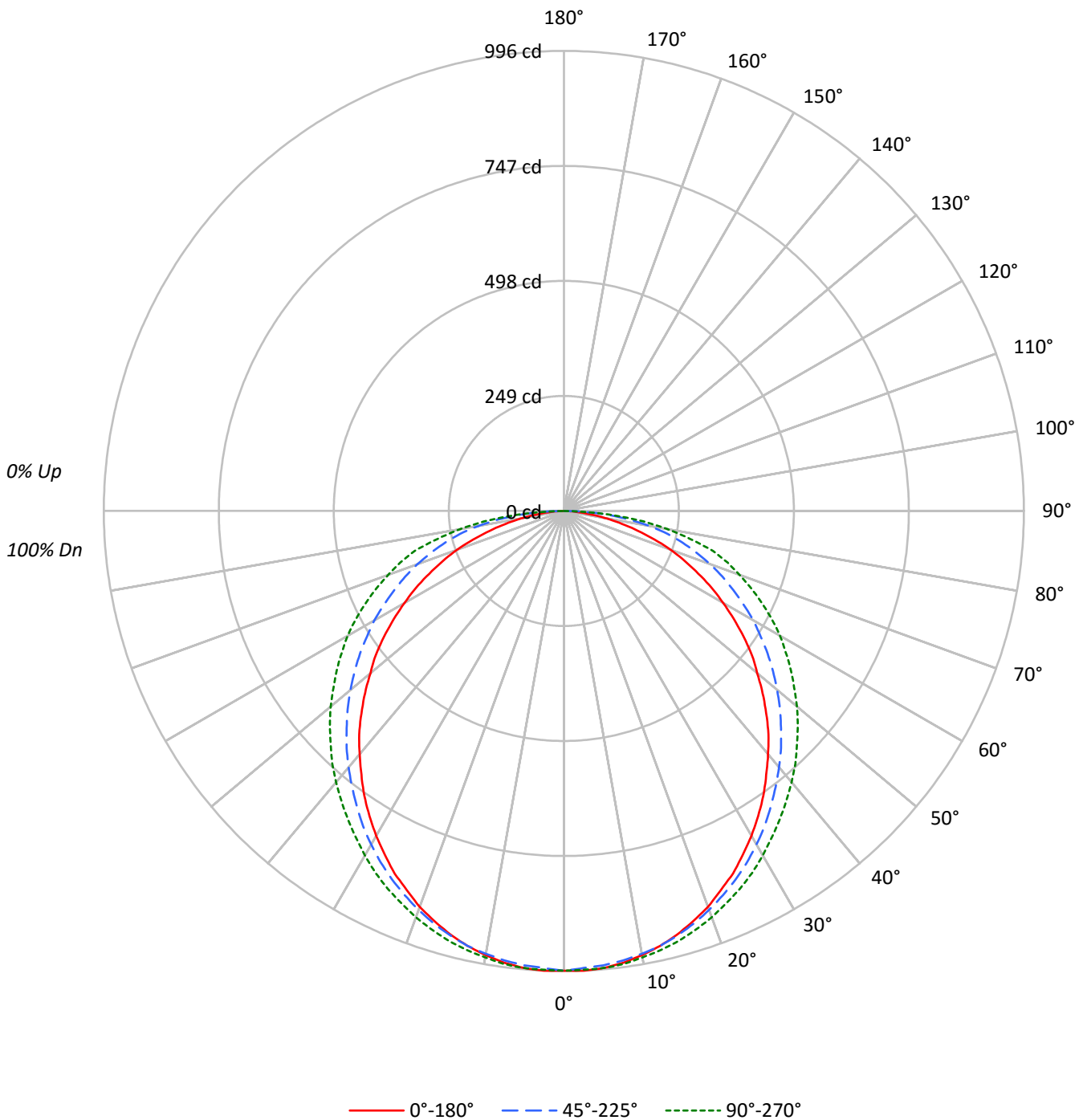
Lumens per Lamp: N/A  
Luminaire Lumens: 3018.0 lumens  
Efficiency: N/A  
Efficacy: 107.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1339	1339	1339
5°	1342	1333	1342
10°	1334	1330	1341
15°	1322	1325	1342
20°	1306	1316	1340
25°	1286	1307	1339
30°	1262	1296	1338
35°	1237	1283	1339
40°	1208	1273	1347
45°	1179	1265	1358
50°	1144	1262	1379
55°	1116	1264	1407
60°	1072	1274	1455
65°	1023	1288	1508
70°	969	1327	1591
75°	864	1385	1738
80°	737	1466	1777
85°	525	1453	1700



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.2	3.1
10°-20°	269.3	8.9
20°-30°	406.8	13.5
30°-40°	490.3	16.2
40°-50°	514.7	17.1
50°-60°	481.6	16.0
60°-70°	397.7	13.2
70°-80°	271.0	9.0
80°-90°	92.4	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°	770.3	25.5
0°-40°	1260.6	41.8
0°-60°	2256.9	74.8
0°-90°	3018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3018.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	995	995	995	995	995	
5°	993	992	987	993	993	94
15°	949	950	951	961	963	268
25°	866	870	880	897	902	399
35°	753	761	781	807	815	471
45°	620	633	665	701	714	478
55°	476	495	539	583	600	425
65°	321	348	404	456	474	319
75°	166	204	266	316	334	177
85°	34	67	94	106	110	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	995.3	995.3	995.3	995.3	995.3
2.5°	996.3	995.3	990.3	995.3	994.3
5°	993.3	992.3	987.3	993.3	993.3
7.5°	986.3	986.3	981.3	988.3	989.3
10°	976.3	976.3	973.3	981.3	981.3
12.5°	964.3	964.3	964.3	972.3	973.3
15°	949.2	950.3	951.3	961.3	963.3
17.5°	931.2	933.2	936.2	948.2	950.3
20°	912.2	914.2	919.2	933.2	936.2
22.5°	888.2	893.2	900.2	916.2	919.2
25°	866.1	870.1	880.2	897.2	902.2
27.5°	839.1	845.1	858.1	876.2	883.2
30°	812.1	818.1	834.1	855.1	861.1
32.5°	783.0	792.0	809.1	831.1	838.1
35°	753.0	761.0	781.0	807.1	815.1
37.5°	719.9	731.0	753.0	781.0	791.0
40°	687.9	699.9	725.0	755.0	767.0
42.5°	655.9	667.9	695.9	730.0	742.0
45°	619.8	632.8	664.9	700.9	713.9
47.5°	583.8	599.8	634.8	672.9	686.9
50°	546.7	564.7	602.8	642.8	658.9
52.5°	513.7	530.7	570.8	613.8	628.8
55°	475.6	494.7	538.7	582.8	599.8
57.5°	436.6	457.6	504.7	552.7	569.7
60°	398.5	421.6	473.6	521.7	540.7
62.5°	361.5	384.5	438.6	488.6	507.7
65°	321.4	348.5	404.5	455.6	473.6
67.5°	283.4	312.4	371.5	421.6	439.6
70°	246.3	274.4	337.4	386.5	404.5
72.5°	206.3	238.3	301.4	352.5	371.5
75°	166.2	204.3	266.4	316.4	334.4
77.5°	129.2	168.2	230.3	271.4	280.4
80°	95.1	135.2	189.2	218.3	229.3
82.5°	61.1	101.1	144.2	165.2	174.2
85°	34.0	67.1	94.1	106.1	110.1
87.5°	14.0	29.0	38.1	43.1	43.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)