

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: P310662

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP250-W2A-U-3000K**

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: P310662
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-L82765-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3000K 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: 2849.0 lumens
Efficiency: N/A
Efficacy: 102.5 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

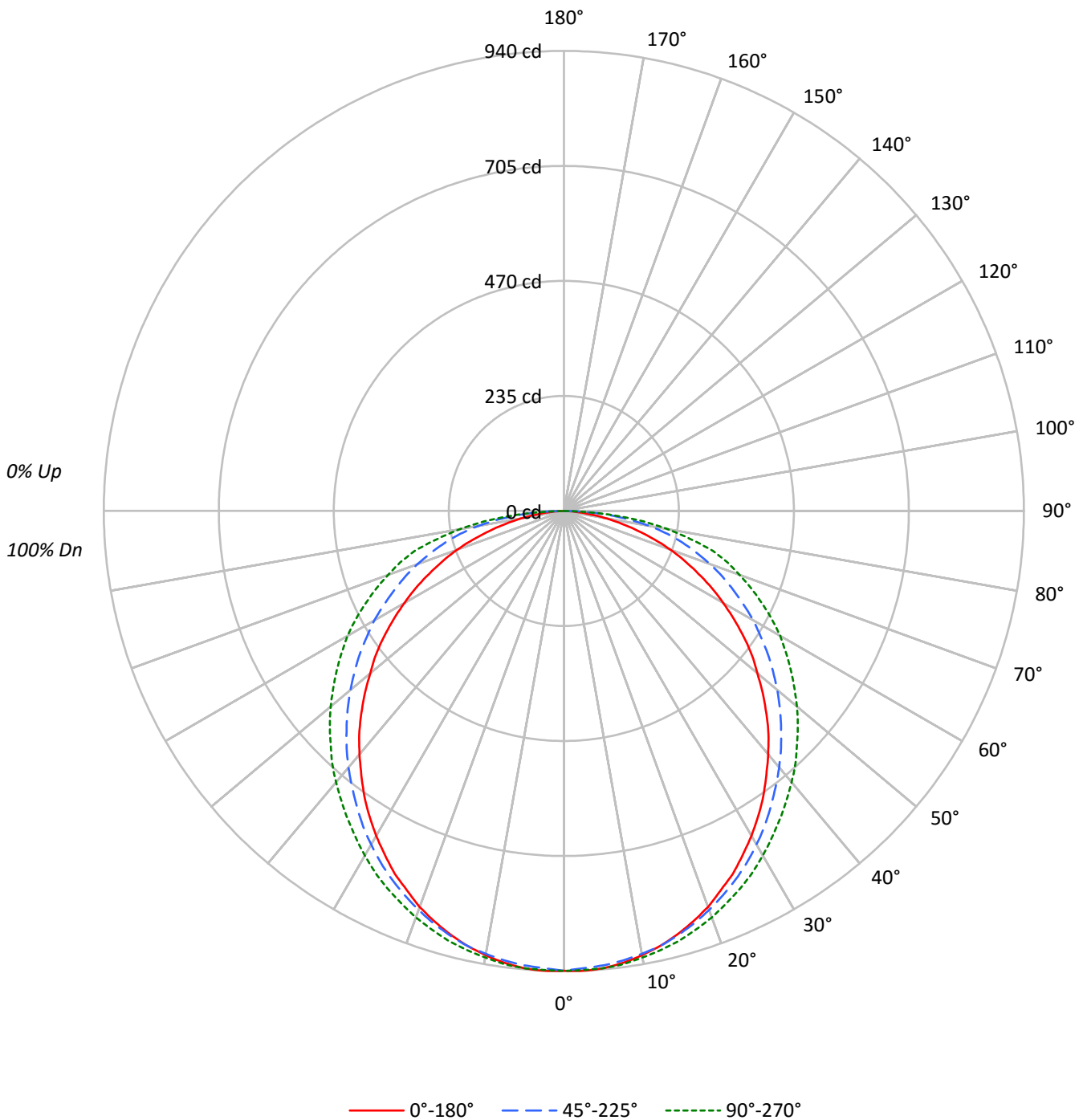
Input Watts (W): 27.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1264	1264	1264
5°	1266	1259	1266
10°	1259	1255	1266
15°	1248	1251	1267
20°	1233	1242	1265
25°	1214	1234	1264
30°	1191	1223	1263
35°	1168	1211	1264
40°	1141	1202	1272
45°	1113	1194	1282
50°	1080	1191	1302
55°	1053	1193	1328
60°	1012	1203	1373
65°	966	1216	1423
70°	915	1253	1502
75°	816	1307	1641
80°	696	1385	1678
85°	496	1372	1606



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.9	3.1
10°-20°	254.3	8.9
20°-30°	384.0	13.5
30°-40°	462.8	16.2
40°-50°	485.9	17.1
50°-60°	454.6	16.0
60°-70°	375.4	13.2
70°-80°	255.8	9.0
80°-90°	87.2	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°	727.2	25.5
0°-40°	1190.0	41.8
0°-60°	2130.5	74.8
0°-90°	2849.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2849.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	938	937	932	938	938	89
15°	896	897	898	907	909	253
25°	818	821	831	847	852	376
35°	711	718	737	762	769	444
45°	585	597	628	662	674	451
55°	449	467	508	550	566	401
65°	303	329	382	430	447	301
75°	157	193	251	299	316	167
85°	32	63	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°	939.6	939.6	939.6	939.6	939.6
2.5°	940.5	939.6	934.8	939.6	938.6
5°	937.7	936.7	932.0	937.7	937.7
7.5°	931.1	931.1	926.3	933.0	933.9
10°	921.6	921.6	918.8	926.3	926.3
12.5°	910.3	910.3	910.3	917.8	918.8
15°	896.1	897.0	898.0	907.4	909.3
17.5°	879.1	881.0	883.8	895.1	897.0
20°	861.1	863.0	867.7	881.0	883.8
22.5°	838.4	843.2	849.8	864.9	867.7
25°	817.6	821.4	830.9	846.9	851.7
27.5°	792.1	797.8	810.1	827.1	833.7
30°	766.6	772.3	787.4	807.2	812.9
32.5°	739.2	747.7	763.8	784.6	791.2
35°	710.8	718.4	737.3	761.9	769.4
37.5°	679.6	690.0	710.8	737.3	746.7
40°	649.4	660.7	684.4	712.7	724.1
42.5°	619.1	630.5	656.9	689.1	700.4
45°	585.1	597.4	627.6	661.7	674.0
47.5°	551.1	566.2	599.3	635.2	648.4
50°	516.1	533.1	569.0	606.8	622.0
52.5°	484.9	501.0	538.8	579.4	593.6
55°	449.0	467.0	508.5	550.1	566.2
57.5°	412.1	432.0	476.4	521.8	537.8
60°	376.2	397.9	447.1	492.5	510.4
62.5°	341.2	363.0	414.0	461.3	479.2
65°	303.4	328.9	381.9	430.1	447.1
67.5°	267.5	294.9	350.7	397.9	415.0
70°	232.5	259.0	318.5	364.9	381.9
72.5°	194.7	225.0	284.5	332.7	350.7
75°	156.9	192.8	251.4	298.7	315.7
77.5°	121.9	158.8	217.4	256.2	264.7
80°	89.8	127.6	178.7	206.1	216.5
82.5°	57.7	95.5	136.1	156.0	164.5
85°	32.1	63.3	88.9	100.2	104.0
87.5°	13.2	27.4	35.9	40.6	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)