

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: P310706

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CP250-W2A-U-2700K**

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: P310706
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: 24FCZ2-40HE-UNV-L82765-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 2700K 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: 3171.0 lumens
Efficiency: N/A
Efficacy: 104.3 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

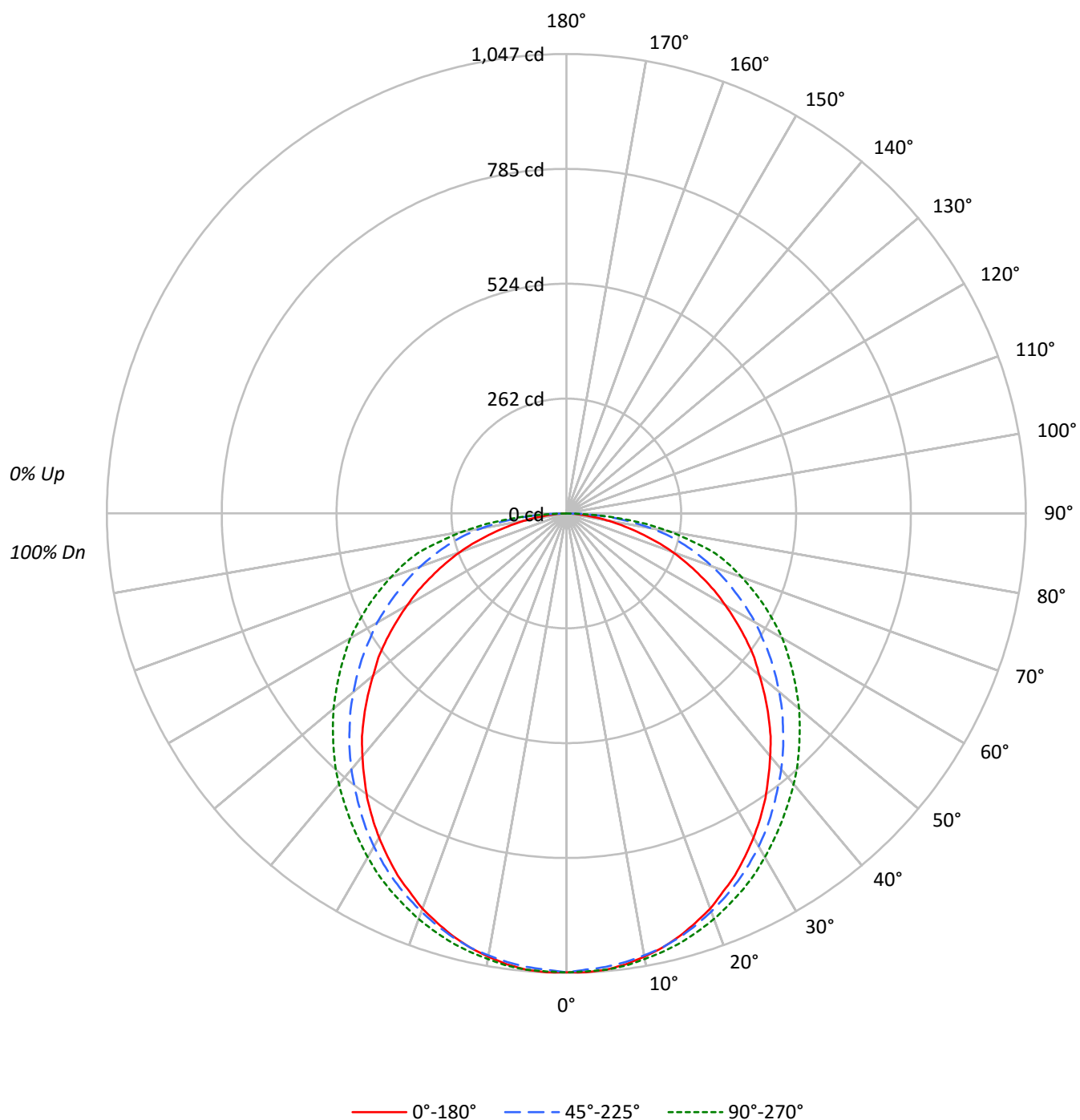
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1407	1407	1407
5°	1410	1401	1410
10°	1401	1397	1409
15°	1389	1392	1410
20°	1372	1383	1409
25°	1351	1373	1407
30°	1326	1362	1406
35°	1300	1348	1407
40°	1270	1338	1415
45°	1239	1329	1427
50°	1202	1326	1449
55°	1172	1328	1478
60°	1127	1339	1529
65°	1075	1353	1584
70°	1018	1395	1672
75°	908	1455	1827
80°	774	1540	1867
85°	553	1527	1786



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	3.1
10°-20°	283.0	8.9
20°-30°	427.4	13.5
30°-40°	515.2	16.2
40°-50°	540.8	17.1
50°-60°	506.0	16.0
60°-70°	417.8	13.2
70°-80°	284.7	9.0
80°-90°	97.1	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°	809.4	25.5
0°-40°	1324.5	41.8
0°-60°	2371.3	74.8
0°-90°	3171.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3171.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1046	1046	1046	1046	1046	
5°	1044	1043	1037	1044	1044	99
15°	997	998	1000	1010	1012	281
25°	910	914	925	943	948	419
35°	791	800	821	848	856	494
45°	651	665	699	736	750	502
55°	500	520	566	612	630	446
65°	338	366	425	479	498	335
75°	175	215	280	332	351	186
85°	36	70	99	112	116	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1045.8	1045.8	1045.8	1045.8	1045.8
2.5°	1046.8	1045.8	1040.5	1045.8	1044.7
5°	1043.7	1042.6	1037.4	1043.7	1043.7
7.5°	1036.3	1036.3	1031.0	1038.4	1039.5
10°	1025.8	1025.8	1022.6	1031.0	1031.0
12.5°	1013.2	1013.2	1013.2	1021.6	1022.6
15°	997.4	998.4	999.5	1010.0	1012.1
17.5°	978.4	980.5	983.7	996.3	998.4
20°	958.4	960.5	965.8	980.5	983.7
22.5°	933.2	938.5	945.8	962.7	965.8
25°	910.0	914.3	924.8	942.7	947.9
27.5°	881.6	888.0	901.6	920.6	927.9
30°	853.2	859.5	876.4	898.5	904.8
32.5°	822.7	832.2	850.1	873.2	880.6
35°	791.2	799.6	820.6	848.0	856.4
37.5°	756.4	768.0	791.2	820.6	831.1
40°	722.8	735.4	761.7	793.3	805.9
42.5°	689.1	701.7	731.2	767.0	779.6
45°	651.2	664.9	698.6	736.5	750.1
47.5°	613.4	630.2	667.0	707.0	721.7
50°	574.4	593.4	633.4	675.4	692.3
52.5°	539.7	557.6	599.7	644.9	660.7
55°	499.7	519.7	566.0	612.3	630.2
57.5°	458.7	480.8	530.2	580.7	598.6
60°	418.7	442.9	497.6	548.1	568.1
62.5°	379.8	404.0	460.8	513.4	533.4
65°	337.7	366.1	425.0	478.7	497.6
67.5°	297.7	328.2	390.3	442.9	461.9
70°	258.8	288.3	354.6	406.1	425.0
72.5°	216.7	250.4	316.7	370.3	390.3
75°	174.6	214.6	279.9	332.5	351.4
77.5°	135.7	176.7	242.0	285.1	294.6
80°	99.9	142.0	198.8	229.4	240.9
82.5°	64.2	106.3	151.5	173.6	183.1
85°	35.8	70.5	98.9	111.5	115.7
87.5°	14.7	30.5	40.0	45.2	45.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)