

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: P310751

Luminaire Tested: **24FCZ2-40-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: P310751
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: 24FCZ2-40-UNV-L82765-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 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: 3151.0 lumens
Efficiency: N/A
Efficacy: 96.4 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

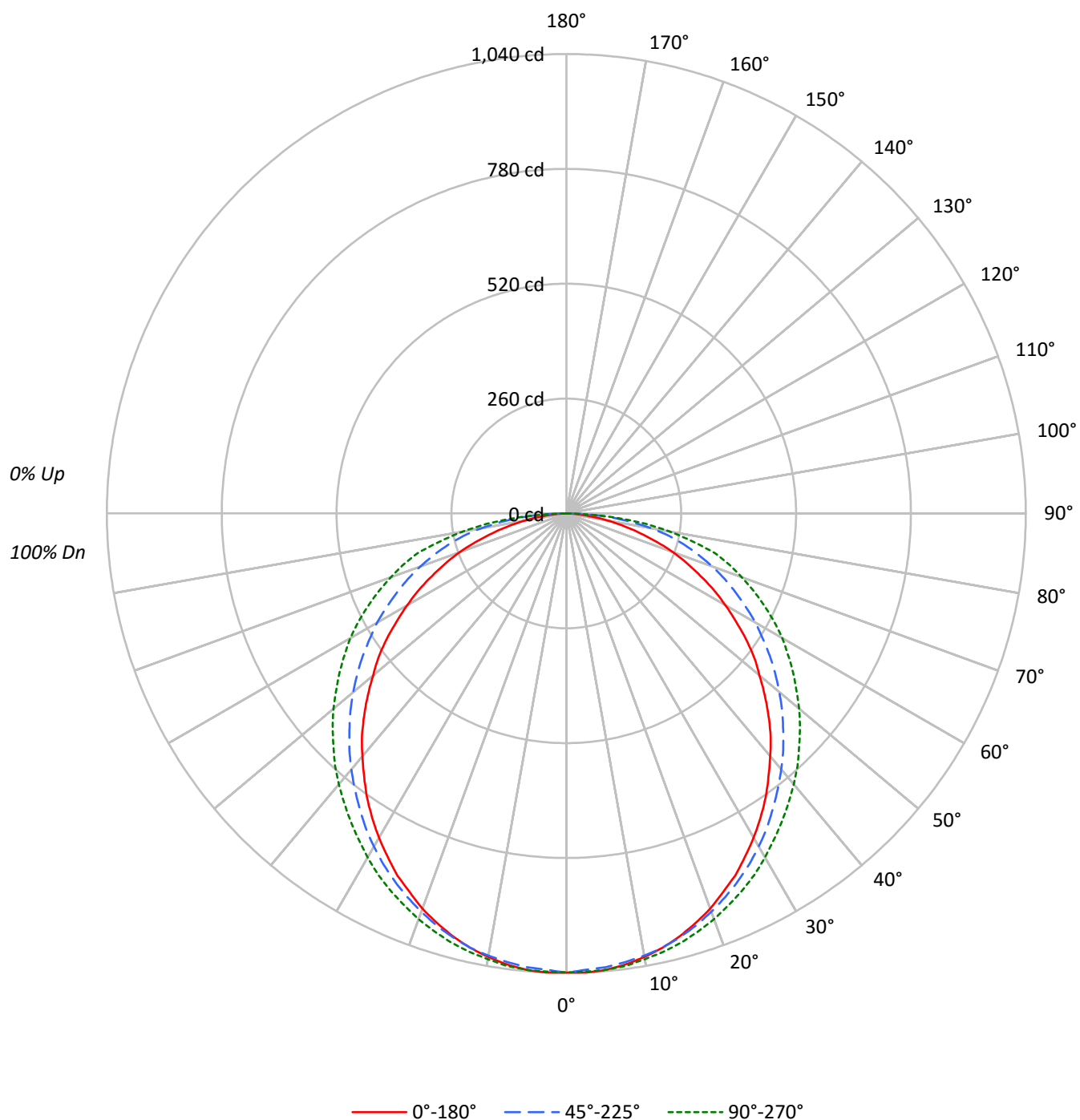
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1398	1398	1398
5°	1401	1392	1401
10°	1393	1388	1400
15°	1381	1383	1401
20°	1364	1374	1400
25°	1343	1364	1398
30°	1317	1353	1397
35°	1291	1339	1398
40°	1261	1329	1407
45°	1231	1321	1418
50°	1195	1317	1440
55°	1165	1319	1469
60°	1120	1331	1519
65°	1068	1345	1574
70°	1012	1386	1662
75°	902	1446	1815
80°	769	1531	1855
85°	548	1518	1775



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.3	3.1
10°-20°	281.2	8.9
20°-30°	424.7	13.5
30°-40°	511.9	16.2
40°-50°	537.4	17.1
50°-60°	502.8	16.0
60°-70°	415.2	13.2
70°-80°	282.9	9.0
80°-90°	96.5	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°	804.3	25.5
0°-40°	1316.2	41.8
0°-60°	2356.4	74.8
0°-90°	3151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1039	1039	1039	1039	1039	
5°	1037	1036	1031	1037	1037	98
15°	991	992	993	1004	1006	279
25°	904	908	919	937	942	416
35°	786	794	815	843	851	491
45°	647	661	694	732	745	499
55°	497	516	562	608	626	443
65°	336	364	422	476	494	333
75°	174	213	278	330	349	185
85°	36	70	98	111	115	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1039.2	1039.2	1039.2	1039.2	1039.2
2.5°	1040.2	1039.2	1033.9	1039.2	1038.1
5°	1037.1	1036.0	1030.8	1037.1	1037.1
7.5°	1029.8	1029.8	1024.5	1031.9	1032.9
10°	1019.3	1019.3	1016.2	1024.5	1024.5
12.5°	1006.8	1006.8	1006.8	1015.1	1016.2
15°	991.1	992.1	993.2	1003.6	1005.7
17.5°	972.3	974.4	977.5	990.0	992.1
20°	952.4	954.5	959.7	974.4	977.5
22.5°	927.3	932.5	939.9	956.6	959.7
25°	904.3	908.5	918.9	936.7	941.9
27.5°	876.1	882.4	895.9	914.8	922.1
30°	847.9	854.1	870.9	892.8	899.1
32.5°	817.5	826.9	844.7	867.7	875.0
35°	786.2	794.5	815.4	842.6	851.0
37.5°	751.7	763.2	786.2	815.4	825.9
40°	718.2	730.8	756.9	788.3	800.8
42.5°	684.8	697.3	726.6	762.1	774.7
45°	647.1	660.7	694.2	731.8	745.4
47.5°	609.5	626.2	662.8	702.5	717.2
50°	570.8	589.6	629.4	671.2	687.9
52.5°	536.3	554.1	595.9	640.9	656.5
55°	496.6	516.4	562.4	608.4	626.2
57.5°	455.8	477.8	526.9	577.1	594.9
60°	416.1	440.1	494.5	544.7	564.5
62.5°	377.4	401.5	457.9	510.2	530.0
65°	335.6	363.8	422.4	475.7	494.5
67.5°	295.9	326.2	387.9	440.1	459.0
70°	257.2	286.5	352.3	403.5	422.4
72.5°	215.4	248.8	314.7	368.0	387.9
75°	173.5	213.3	278.1	330.4	349.2
77.5°	134.9	175.6	240.5	283.3	292.7
80°	99.3	141.1	197.6	227.9	239.4
82.5°	63.8	105.6	150.5	172.5	181.9
85°	35.5	70.0	98.3	110.8	115.0
87.5°	14.6	30.3	39.7	45.0	45.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)