

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: P310538

Luminaire Tested: **24FCZ2-30-UNV-L82765-CA08-W2A-U-4000K**

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: P310538
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2768.0 lumens
Efficiency: N/A
Efficacy: 116.8 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

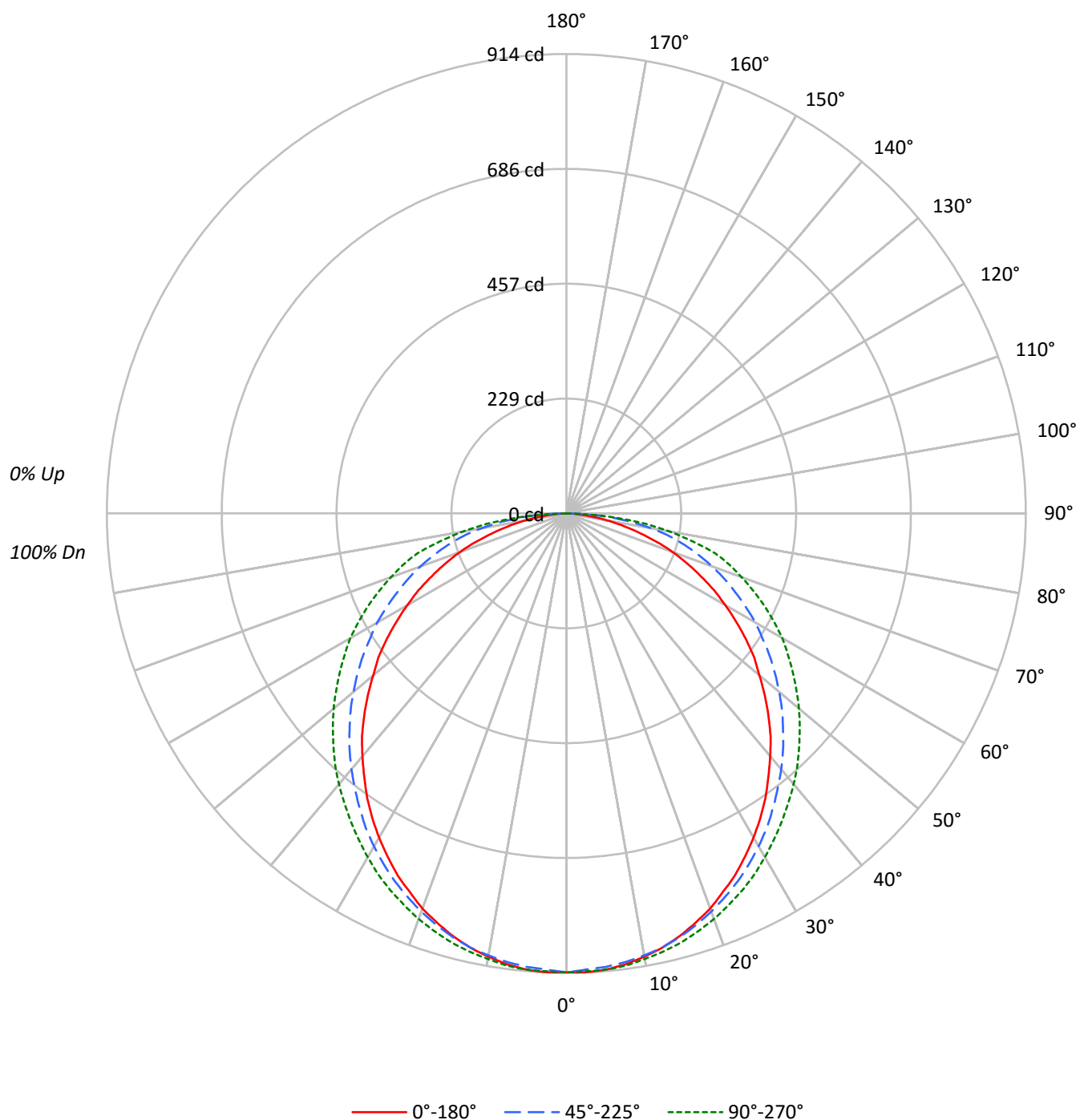
Input Watts (W): 23.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1228	1228	1228
5°	1230	1223	1230
10°	1223	1220	1230
15°	1213	1215	1231
20°	1198	1207	1230
25°	1179	1198	1228
30°	1157	1189	1227
35°	1134	1177	1228
40°	1108	1168	1236
45°	1082	1160	1246
50°	1050	1157	1265
55°	1023	1159	1290
60°	984	1169	1334
65°	939	1181	1383
70°	889	1218	1459
75°	792	1270	1594
80°	676	1345	1629
85°	482	1332	1559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.4	3.1
10°-20°	247.0	8.9
20°-30°	373.1	13.5
30°-40°	449.7	16.2
40°-50°	472.1	17.1
50°-60°	441.7	16.0
60°-70°	364.7	13.2
70°-80°	248.5	9.0
80°-90°	84.8	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°	706.5	25.5
0°-40°	1156.2	41.8
0°-60°	2070.0	74.8
0°-90°	2768.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2768.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	913	913	913	913	913	
5°	911	910	906	911	911	86
15°	871	872	872	882	884	245
25°	794	798	807	823	828	366
35°	691	698	716	740	748	432
45°	568	580	610	643	655	438
55°	436	454	494	534	550	389
65°	295	320	371	418	434	292
75°	152	187	244	290	307	163
85°	31	62	86	97	101	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.9	912.9	912.9	912.9	912.9
2.5°	913.8	912.9	908.3	912.9	911.9
5°	911.0	910.1	905.5	911.0	911.0
7.5°	904.6	904.6	900.0	906.4	907.4
10°	895.4	895.4	892.7	900.0	900.0
12.5°	884.4	884.4	884.4	891.7	892.7
15°	870.6	871.5	872.5	881.6	883.5
17.5°	854.1	855.9	858.7	869.7	871.5
20°	836.6	838.5	843.1	855.9	858.7
22.5°	814.6	819.2	825.6	840.3	843.1
25°	794.4	798.1	807.2	822.9	827.5
27.5°	769.6	775.1	787.0	803.6	810.0
30°	744.8	750.3	765.0	784.3	789.8
32.5°	718.2	726.4	742.0	762.2	768.7
35°	690.6	698.0	716.3	740.2	747.6
37.5°	660.3	670.4	690.6	716.3	725.5
40°	630.9	641.9	664.9	692.5	703.5
42.5°	601.5	612.6	638.3	669.5	680.5
45°	568.5	580.4	609.8	642.9	654.8
47.5°	535.4	550.1	582.2	617.1	630.0
50°	501.4	518.0	552.9	589.6	604.3
52.5°	471.1	486.7	523.5	563.0	576.7
55°	436.2	453.7	494.1	534.5	550.1
57.5°	400.4	419.7	462.9	506.9	522.6
60°	365.5	386.6	434.4	478.5	495.9
62.5°	331.5	352.7	402.2	448.2	465.6
65°	294.8	319.6	371.0	417.9	434.4
67.5°	259.9	286.5	340.7	386.6	403.2
70°	225.9	251.6	309.5	354.5	371.0
72.5°	189.2	218.6	276.4	323.3	340.7
75°	152.4	187.3	244.3	290.2	306.7
77.5°	118.5	154.3	211.2	248.9	257.1
80°	87.2	124.0	173.6	200.2	210.3
82.5°	56.0	92.8	132.2	151.5	159.8
85°	31.2	61.5	86.3	97.3	101.0
87.5°	12.9	26.6	34.9	39.5	39.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)