

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: P310661

Luminaire Tested: **24FCZ2-35-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: P310661
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-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: 2770.0 lumens
Efficiency: N/A
Efficacy: 98.9 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

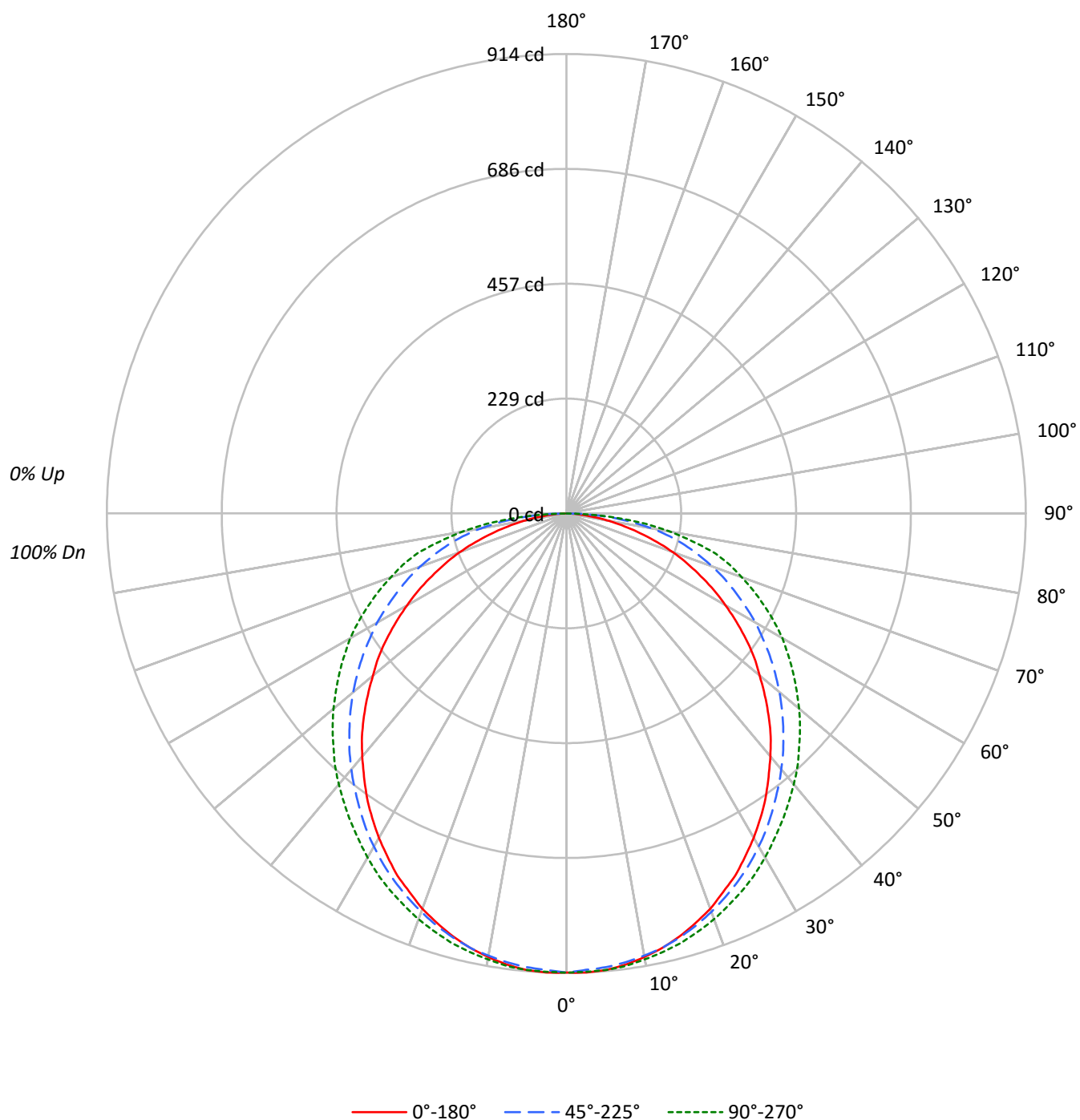
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1229	1229	1229
5°	1231	1224	1231
10°	1224	1220	1231
15°	1214	1216	1232
20°	1199	1208	1230
25°	1180	1199	1229
30°	1158	1189	1228
35°	1135	1177	1229
40°	1109	1169	1237
45°	1083	1161	1247
50°	1050	1158	1266
55°	1024	1160	1291
60°	984	1170	1336
65°	939	1182	1384
70°	889	1218	1461
75°	793	1271	1596
80°	676	1346	1631
85°	482	1334	1561



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.5	3.1
10°-20°	247.2	8.9
20°-30°	373.4	13.5
30°-40°	450.0	16.2
40°-50°	472.4	17.1
50°-60°	442.0	16.0
60°-70°	365.0	13.2
70°-80°	248.7	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°	707.0	25.5
0°-40°	1157.1	41.8
0°-60°	2071.5	74.8
0°-90°	2770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2770.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	912	911	906	912	912	87
15°	871	872	873	882	884	246
25°	795	799	808	824	828	366
35°	691	698	717	741	748	432
45°	569	581	610	643	655	439
55°	436	454	494	535	550	390
65°	295	320	371	418	435	293
75°	153	188	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°	913.5	913.5	913.5	913.5	913.5
2.5°	914.4	913.5	908.9	913.5	912.6
5°	911.7	910.8	906.2	911.7	911.7
7.5°	905.3	905.3	900.7	907.1	908.0
10°	896.1	896.1	893.3	900.7	900.7
12.5°	885.0	885.0	885.0	892.4	893.3
15°	871.2	872.2	873.1	882.3	884.1
17.5°	854.7	856.5	859.3	870.3	872.2
20°	837.2	839.1	843.7	856.5	859.3
22.5°	815.2	819.8	826.2	840.9	843.7
25°	795.0	798.6	807.8	823.5	828.1
27.5°	770.2	775.7	787.6	804.2	810.6
30°	745.3	750.9	765.6	784.9	790.4
32.5°	718.7	727.0	742.6	762.8	769.2
35°	691.1	698.5	716.8	740.7	748.1
37.5°	660.8	670.9	691.1	716.8	726.0
40°	631.4	642.4	665.4	693.0	704.0
42.5°	602.0	613.0	638.7	670.0	681.0
45°	568.9	580.8	610.2	643.3	655.3
47.5°	535.8	550.5	582.7	617.6	630.5
50°	501.8	518.3	553.3	590.0	604.7
52.5°	471.5	487.1	523.9	563.4	577.2
55°	436.5	454.0	494.4	534.9	550.5
57.5°	400.7	420.0	463.2	507.3	522.9
60°	365.8	386.9	434.7	478.8	496.3
62.5°	331.8	352.9	402.5	448.5	466.0
65°	295.0	319.8	371.3	418.2	434.7
67.5°	260.1	286.7	341.0	386.9	403.5
70°	226.1	251.8	309.7	354.7	371.3
72.5°	189.3	218.7	276.6	323.5	341.0
75°	152.6	187.5	244.5	290.4	307.0
77.5°	118.6	154.4	211.4	249.1	257.3
80°	87.3	124.1	173.7	200.3	210.5
82.5°	56.1	92.8	132.3	151.6	159.9
85°	31.2	61.6	86.4	97.4	101.1
87.5°	12.9	26.7	34.9	39.5	39.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)