

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: P310575

Luminaire Tested: **24FCZ2-30-UNV-L82765-CP250-W2A-U-4500K**

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: P310575
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 2614.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

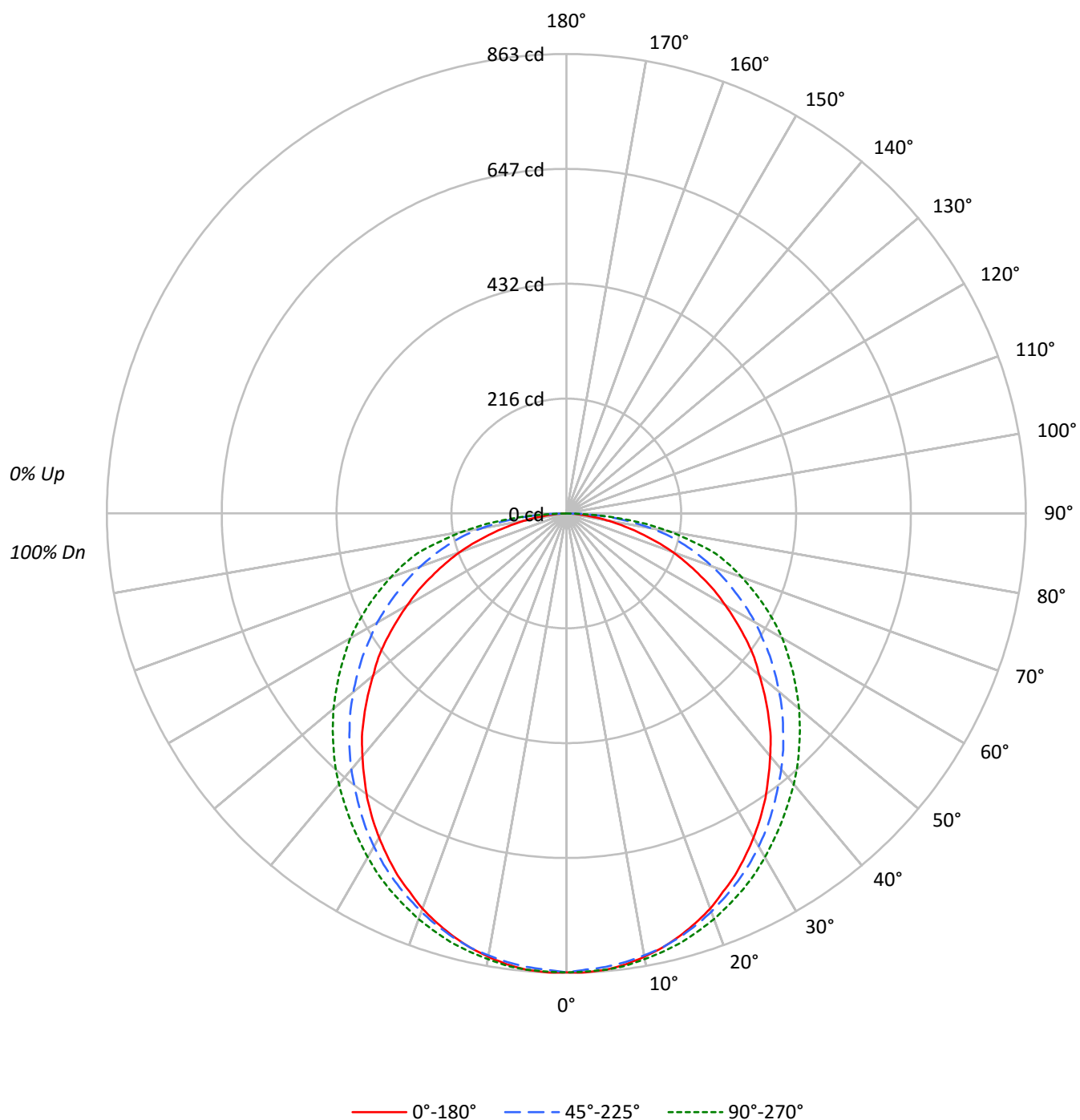
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1160	1160	1160
5°	1162	1155	1162
10°	1155	1152	1161
15°	1145	1148	1162
20°	1131	1140	1161
25°	1114	1132	1160
30°	1093	1122	1159
35°	1071	1111	1160
40°	1046	1103	1167
45°	1021	1096	1177
50°	991	1093	1195
55°	966	1095	1219
60°	929	1104	1260
65°	886	1116	1306
70°	840	1150	1378
75°	749	1199	1506
80°	638	1270	1539
85°	455	1258	1473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.6	3.1
10°-20°	233.3	8.9
20°-30°	352.4	13.5
30°-40°	424.7	16.2
40°-50°	445.8	17.1
50°-60°	417.1	16.0
60°-70°	344.4	13.2
70°-80°	234.7	9.0
80°-90°	80.1	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°	667.2	25.5
0°-40°	1091.9	41.8
0°-60°	1954.8	74.8
0°-90°	2614.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2614.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	860	860	855	860	860	82
15°	822	823	824	833	834	232
25°	750	754	762	777	781	345
35°	652	659	676	699	706	408
45°	537	548	576	607	618	414
55°	412	428	467	505	520	368
65°	278	302	350	395	410	276
75°	144	177	231	274	290	154
85°	30	58	82	92	95	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	862.1	862.1	862.1	862.1	862.1
2.5°	862.9	862.1	857.7	862.1	861.2
5°	860.3	859.5	855.1	860.3	860.3
7.5°	854.3	854.3	849.9	856.0	856.9
10°	845.6	845.6	843.0	849.9	849.9
12.5°	835.2	835.2	835.2	842.1	843.0
15°	822.2	823.0	823.9	832.6	834.3
17.5°	806.6	808.3	810.9	821.3	823.0
20°	790.1	791.8	796.2	808.3	810.9
22.5°	769.3	773.6	779.7	793.6	796.2
25°	750.2	753.7	762.3	777.1	781.4
27.5°	726.8	732.0	743.3	758.9	764.9
30°	703.4	708.6	722.4	740.7	745.9
32.5°	678.2	686.0	700.8	719.8	725.9
35°	652.2	659.1	676.5	699.0	706.0
37.5°	623.6	633.1	652.2	676.5	685.1
40°	595.8	606.2	627.9	653.9	664.3
42.5°	568.1	578.5	602.8	632.2	642.7
45°	536.8	548.1	575.9	607.1	618.4
47.5°	505.6	519.5	549.9	582.8	595.0
50°	473.5	489.1	522.1	556.8	570.7
52.5°	444.9	459.7	494.3	531.6	544.7
55°	412.0	428.4	466.6	504.8	519.5
57.5°	378.1	396.3	437.1	478.7	493.5
60°	345.2	365.1	410.2	451.9	468.3
62.5°	313.1	333.0	379.9	423.2	439.7
65°	278.4	301.8	350.4	394.6	410.2
67.5°	245.4	270.6	321.8	365.1	380.7
70°	213.4	237.6	292.3	334.8	350.4
72.5°	178.7	206.4	261.1	305.3	321.8
75°	144.0	176.9	230.7	274.1	289.7
77.5°	111.9	145.7	199.5	235.0	242.8
80°	82.4	117.1	163.9	189.1	198.6
82.5°	52.9	87.6	124.9	143.1	150.9
85°	29.5	58.1	81.5	91.9	95.4
87.5°	12.1	25.2	33.0	37.3	37.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)