

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: P311246

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-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: P311246
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 2481.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

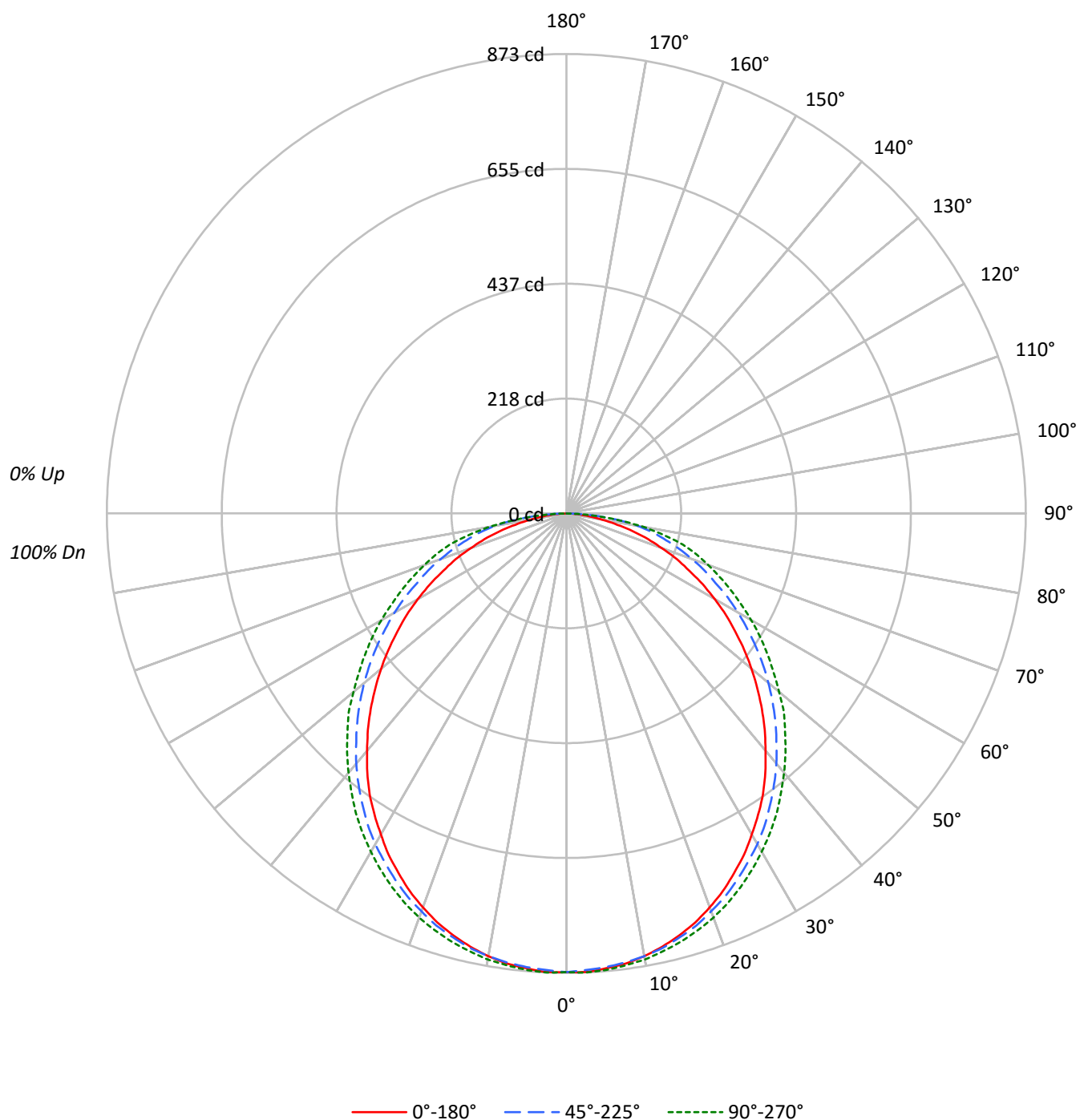
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1173	1173	1173
5°	1172	1169	1176
10°	1167	1167	1176
15°	1156	1161	1173
20°	1141	1152	1170
25°	1120	1141	1163
30°	1095	1128	1153
35°	1070	1109	1144
40°	1034	1091	1131
45°	1000	1069	1119
50°	962	1049	1105
55°	919	1030	1094
60°	876	1014	1092
65°	820	996	1099
70°	760	1001	1129
75°	680	1020	1192
80°	549	1081	1166
85°	414	949	925



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.5	3.3
10°-20°	235.8	9.5
20°-30°	354.4	14.3
30°-40°	422.2	17.0
40°-50°	432.1	17.4
50°-60°	389.0	15.7
60°-70°	305.5	12.3
70°-80°	198.3	8.0
80°-90°	61.3	2.5
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°	672.7	27.1
0°-40°	1094.9	44.1
0°-60°	1915.9	77.2
0°-90°	2481.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2481.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	872	872	872	872	872	
5°	868	869	865	870	871	82
15°	830	832	834	841	842	234
25°	754	760	768	781	783	347
35°	652	660	675	692	697	407
45°	526	538	562	583	588	405
55°	392	409	439	462	466	351
65°	258	277	313	339	345	257
75°	131	156	196	223	229	138
85°	27	50	62	60	60	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	871.6	871.6	871.6	871.6	871.6
2.5°	872.4	872.4	868.4	872.4	873.2
5°	867.7	869.2	865.3	870.0	870.8
7.5°	862.9	862.9	860.6	865.3	866.1
10°	854.3	855.0	854.3	859.8	860.6
12.5°	843.2	844.8	845.6	851.1	851.9
15°	829.8	832.2	833.8	840.9	842.4
17.5°	814.9	817.2	821.2	829.0	830.6
20°	796.7	799.9	804.6	814.9	817.2
22.5°	777.0	780.2	788.1	797.5	801.5
25°	754.2	760.5	768.4	781.0	783.3
27.5°	731.3	736.8	747.1	760.5	763.6
30°	704.5	713.2	725.8	739.2	742.4
32.5°	678.5	687.2	702.2	716.3	720.3
35°	651.7	659.6	675.4	691.9	696.6
37.5°	621.0	631.2	648.6	665.1	669.8
40°	588.7	601.3	621.0	638.3	643.8
42.5°	557.9	571.3	591.0	610.0	616.3
45°	525.6	538.2	561.9	583.2	587.9
47.5°	492.5	506.7	531.9	553.2	561.1
50°	459.4	474.4	501.2	523.3	528.0
52.5°	426.3	442.1	470.5	494.1	496.5
55°	391.7	409.0	438.9	461.8	466.5
57.5°	360.1	375.1	407.4	431.1	436.6
60°	325.5	342.0	376.7	398.8	405.8
62.5°	292.4	309.7	346.0	368.0	374.3
65°	257.7	277.4	312.9	338.9	345.2
67.5°	227.7	246.7	284.5	309.7	316.0
70°	193.1	214.4	254.5	280.5	286.9
72.5°	163.1	185.2	225.4	250.6	260.1
75°	130.8	156.0	196.2	223.0	229.3
77.5°	99.3	128.5	169.4	189.9	189.9
80°	70.9	101.7	139.5	148.9	150.5
82.5°	46.5	76.4	103.2	102.4	102.4
85°	26.8	49.6	61.5	59.9	59.9
87.5°	10.2	20.5	22.1	22.1	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)