

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: P311237

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP187-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: P311237
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-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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: 2502.0 lumens
Efficiency: N/A
Efficacy: 106.9 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

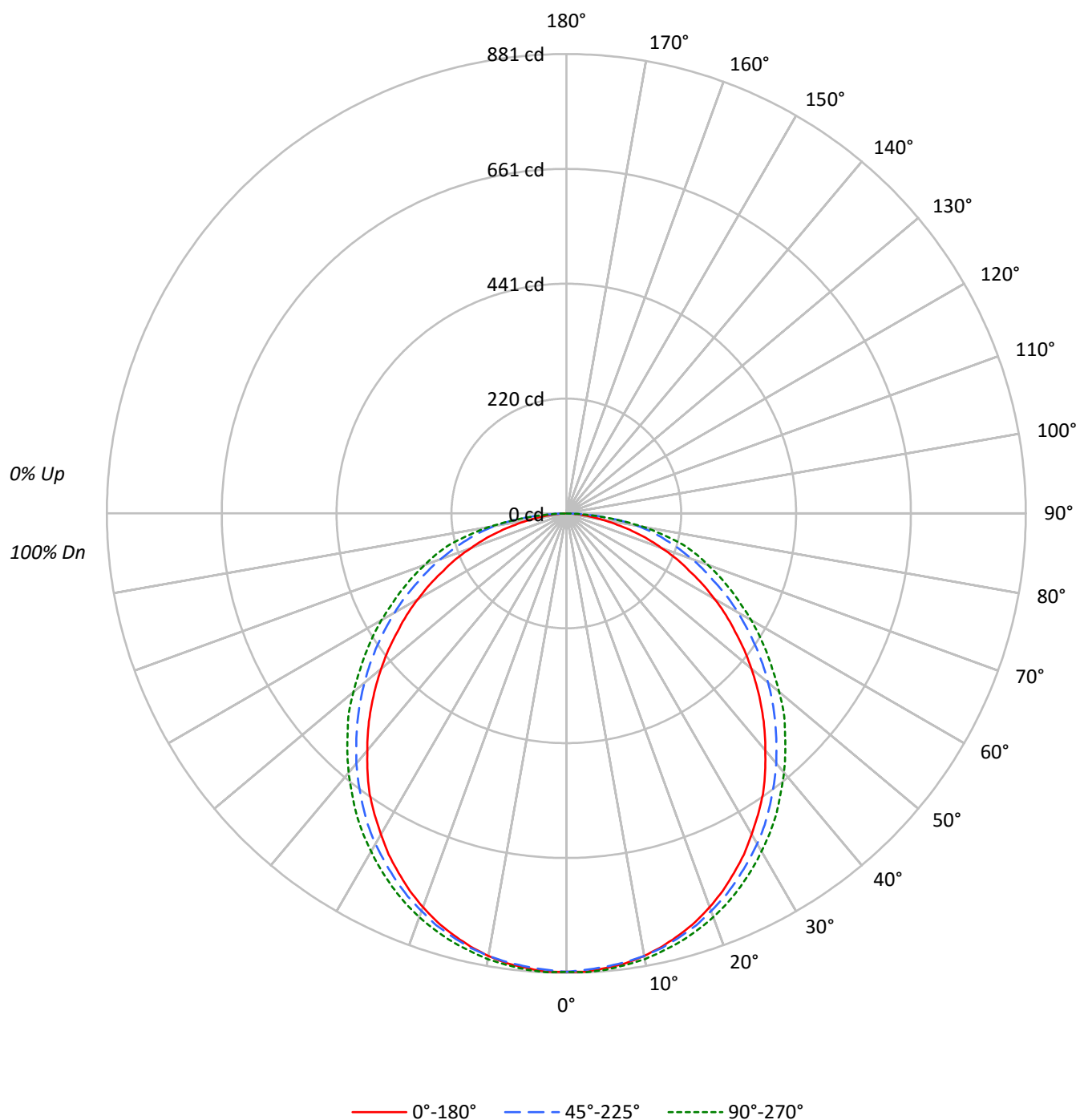
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1183	1183	1183
5°	1182	1179	1186
10°	1177	1177	1186
15°	1166	1171	1183
20°	1150	1162	1180
25°	1129	1150	1173
30°	1104	1137	1163
35°	1079	1119	1154
40°	1043	1100	1140
45°	1009	1078	1128
50°	970	1058	1115
55°	927	1038	1104
60°	883	1022	1101
65°	827	1004	1108
70°	766	1010	1138
75°	686	1029	1202
80°	554	1090	1176
85°	417	957	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.2	3.3
10°-20°	237.8	9.5
20°-30°	357.4	14.3
30°-40°	425.7	17.0
40°-50°	435.7	17.4
50°-60°	392.3	15.7
60°-70°	308.1	12.3
70°-80°	199.9	8.0
80°-90°	61.8	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°	678.4	27.1
0°-40°	1104.1	44.1
0°-60°	1932.1	77.2
0°-90°	2502.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2502.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	879	879	879	879	879	
5°	875	877	873	877	878	83
15°	837	839	841	848	850	236
25°	761	767	775	788	790	350
35°	657	665	681	698	702	410
45°	530	543	567	588	593	409
55°	395	412	443	466	470	354
65°	260	280	316	342	348	259
75°	132	157	198	225	231	140
85°	27	50	62	60	60	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	879.0	879.0	879.0	879.0	879.0
2.5°	879.8	879.8	875.8	879.8	880.6
5°	875.0	876.6	872.6	877.4	878.2
7.5°	870.2	870.2	867.8	872.6	873.4
10°	861.5	862.3	861.5	867.0	867.8
12.5°	850.4	851.9	852.7	858.3	859.1
15°	836.8	839.2	840.8	848.0	849.6
17.5°	821.7	824.1	828.1	836.1	837.6
20°	803.5	806.6	811.4	821.7	824.1
22.5°	783.6	786.8	794.7	804.3	808.2
25°	760.6	766.9	774.9	787.6	790.0
27.5°	737.5	743.1	753.4	766.9	770.1
30°	710.5	719.2	731.9	745.5	748.6
32.5°	684.3	693.0	708.1	722.4	726.4
35°	657.2	665.2	681.1	697.8	702.5
37.5°	626.2	636.6	654.1	670.8	675.5
40°	593.7	606.4	626.2	643.7	649.3
42.5°	562.7	576.2	596.0	615.1	621.5
45°	530.1	542.8	566.6	588.1	592.9
47.5°	496.7	511.0	536.4	557.9	565.8
50°	463.3	478.4	505.4	527.7	532.5
52.5°	429.9	445.8	474.5	498.3	500.7
55°	395.0	412.5	442.7	465.7	470.5
57.5°	363.2	378.3	410.9	434.7	440.3
60°	328.2	344.9	379.9	402.1	409.3
62.5°	294.8	312.3	348.9	371.1	377.5
65°	259.9	279.7	315.5	341.7	348.1
67.5°	229.7	248.7	286.9	312.3	318.7
70°	194.7	216.2	256.7	282.9	289.3
72.5°	164.5	186.8	227.3	252.7	262.3
75°	131.9	157.4	197.9	224.9	231.3
77.5°	100.1	129.5	170.9	191.5	191.5
80°	71.5	102.5	140.7	150.2	151.8
82.5°	46.9	77.1	104.1	103.3	103.3
85°	27.0	50.1	62.0	60.4	60.4
87.5°	10.3	20.7	22.3	22.3	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)