

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: P309220

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P309220
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 6500K 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: 2057.0 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

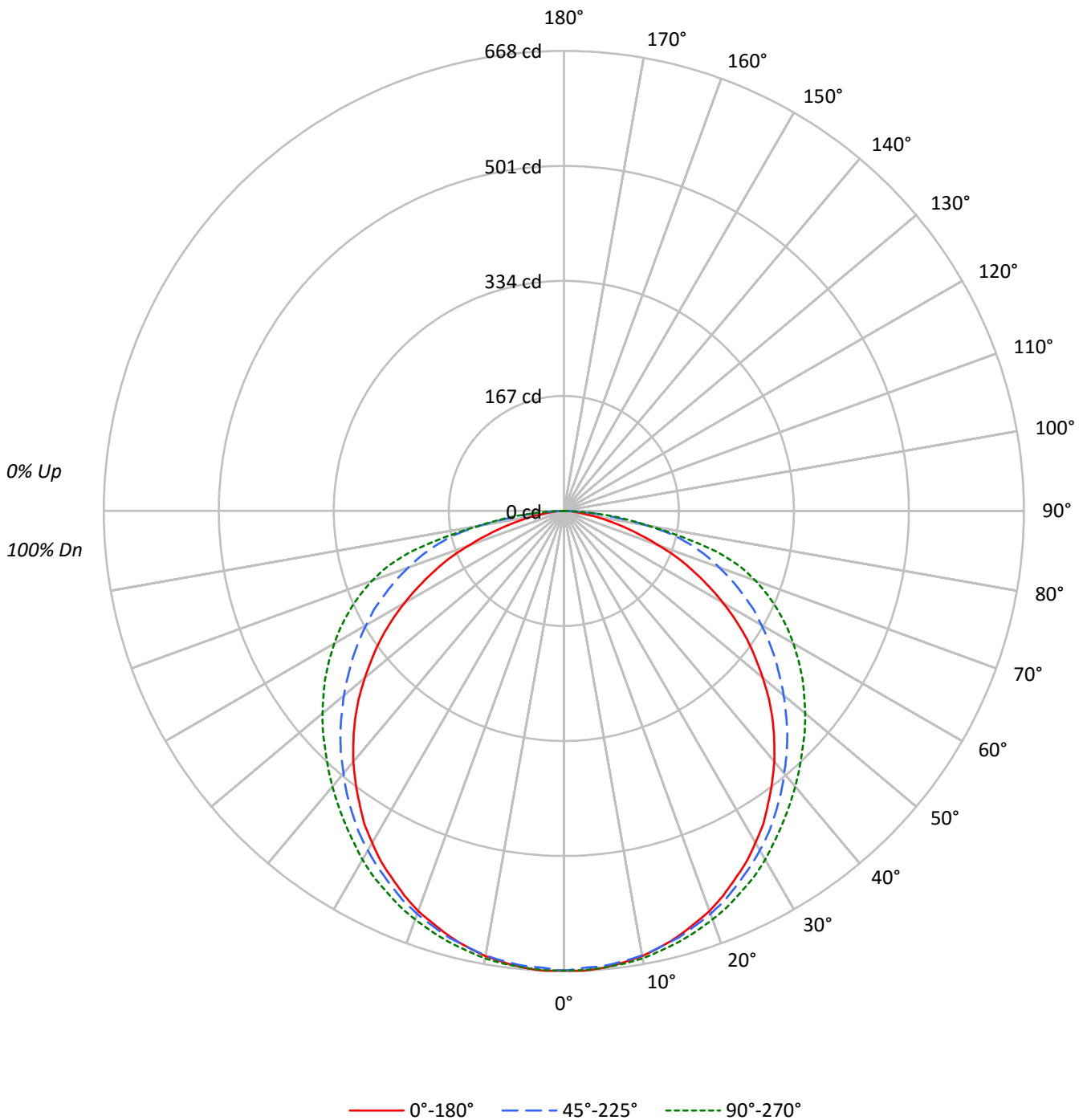
Input Watts (W): 24.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	898	898	898
5°	899	896	899
10°	897	895	901
15°	891	894	902
20°	885	891	904
25°	874	887	905
30°	864	884	908
35°	850	880	909
40°	835	874	918
45°	816	873	932
50°	790	872	957
55°	762	879	992
60°	718	892	1036
65°	663	913	1094
70°	579	945	1165
75°	470	994	1205
80°	347	974	974
85°	266	718	810



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.2	3.1
10°-20°	181.6	8.8
20°-30°	276.4	13.4
30°-40°	335.6	16.3
40°-50°	354.6	17.2
50°-60°	334.6	16.3
60°-70°	278.2	13.5
70°-80°	183.0	8.9
80°-90°	49.9	2.4
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°	521.2	25.3
0°-40°	856.8	41.7
0°-60°	1545.9	75.2
0°-90°	2057.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2057.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	667	667	667	667	667	
5°	666	666	663	666	666	63
15°	640	641	642	648	648	180
25°	589	592	598	608	610	272
35°	518	524	536	549	554	324
45°	429	438	459	481	490	330
55°	325	338	375	410	423	289
65°	208	232	287	329	344	206
75°	90	132	191	226	232	97
85°	17	38	46	52	52	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	667.4	667.4	667.4	667.4	667.4
2.5°	668.3	667.4	664.0	667.4	667.4
5°	665.7	665.7	663.1	665.7	665.7
7.5°	661.4	661.4	659.6	663.1	663.1
10°	656.2	656.2	655.3	659.6	659.6
12.5°	648.4	649.3	648.4	653.6	653.6
15°	639.8	640.7	641.6	647.6	647.6
17.5°	628.6	630.4	632.1	639.0	639.8
20°	618.3	619.2	622.6	630.4	631.2
22.5°	604.5	607.1	611.4	619.2	621.8
25°	589.0	592.5	597.6	608.0	609.7
27.5°	574.4	577.0	583.9	595.1	598.5
30°	556.3	560.6	569.2	580.4	584.7
32.5°	539.1	543.4	553.7	565.8	569.2
35°	517.6	523.6	535.6	549.4	553.7
37.5°	496.9	502.9	517.6	533.1	538.2
40°	475.4	482.2	497.7	515.8	522.7
42.5°	452.1	461.6	478.8	498.6	506.4
45°	428.9	437.5	459.0	481.4	490.0
47.5°	403.9	414.2	437.5	464.2	474.5
50°	377.2	390.1	416.8	446.1	457.3
52.5°	350.5	365.1	395.3	428.0	440.1
55°	324.7	338.4	374.6	409.9	422.8
57.5°	296.2	313.5	353.1	391.0	403.9
60°	267.0	285.9	331.5	371.2	384.9
62.5°	237.7	259.2	310.9	350.5	365.1
65°	208.4	232.5	286.8	329.0	343.6
67.5°	180.0	206.7	264.4	306.6	321.2
70°	147.3	180.8	240.3	281.6	296.2
72.5°	117.1	155.9	217.0	255.8	268.7
75°	90.4	131.8	191.2	226.5	231.7
77.5°	66.3	107.6	164.5	176.5	177.4
80°	44.8	86.1	125.7	124.0	125.7
82.5°	29.3	64.6	79.2	88.7	89.6
85°	17.2	37.9	46.5	51.7	52.5
87.5°	8.6	12.9	16.4	17.2	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)