

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: P309217

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-5000K**

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: P309217
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 5000K 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: 2027.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

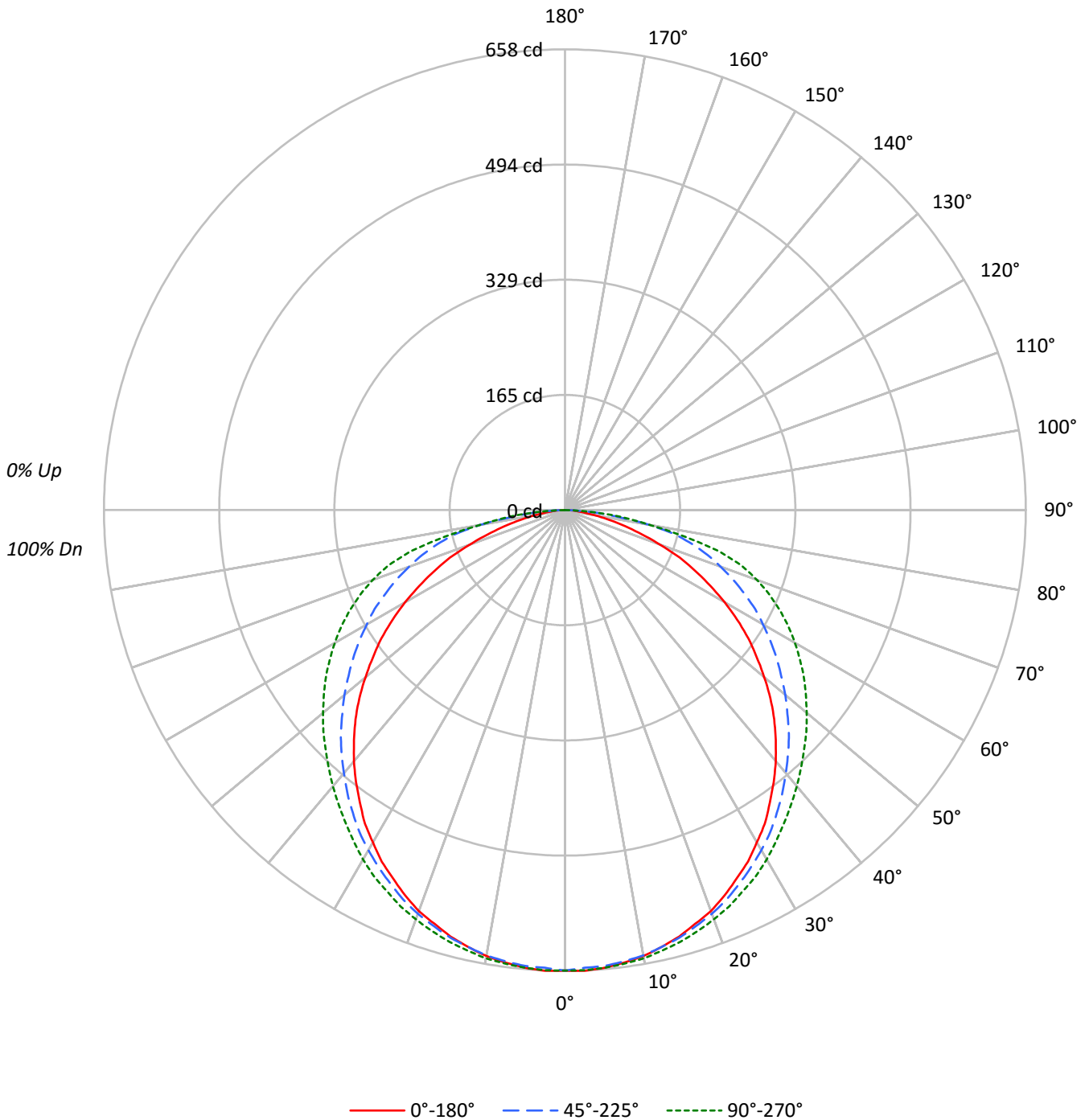
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	885	885	885
5°	886	883	886
10°	883	882	888
15°	878	881	889
20°	872	878	891
25°	862	874	892
30°	852	871	895
35°	838	867	896
40°	823	862	905
45°	804	861	919
50°	778	860	943
55°	750	866	977
60°	708	879	1021
65°	654	900	1078
70°	571	932	1148
75°	463	979	1187
80°	342	960	960
85°	262	707	800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.3	3.1
10°-20°	178.9	8.8
20°-30°	272.4	13.4
30°-40°	330.7	16.3
40°-50°	349.4	17.2
50°-60°	329.7	16.3
60°-70°	274.1	13.5
70°-80°	180.4	8.9
80°-90°	49.2	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°	513.6	25.3
0°-40°	844.3	41.7
0°-60°	1523.4	75.2
0°-90°	2027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	658	658	658	658	658	
5°	656	656	653	656	656	62
15°	630	631	632	638	638	178
25°	580	584	589	599	601	268
35°	510	516	528	541	546	319
45°	423	431	452	474	483	325
55°	320	334	369	404	417	285
65°	205	229	283	324	339	203
75°	89	130	188	223	228	96
85°	17	37	46	51	52	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	657.7	657.7	657.7	657.7	657.7
2.5°	658.5	657.7	654.3	657.7	657.7
5°	656.0	656.0	653.4	656.0	656.0
7.5°	651.7	651.7	650.0	653.4	653.4
10°	646.6	646.6	645.8	650.0	650.0
12.5°	639.0	639.8	639.0	644.1	644.1
15°	630.5	631.4	632.2	638.1	638.1
17.5°	619.5	621.2	622.9	629.7	630.5
20°	609.3	610.1	613.5	621.2	622.0
22.5°	595.7	598.3	602.5	610.1	612.7
25°	580.4	583.8	588.9	599.1	600.8
27.5°	566.0	568.6	575.3	586.4	589.8
30°	548.2	552.4	560.9	572.0	576.2
32.5°	531.2	535.5	545.6	557.5	560.9
35°	510.0	515.9	527.8	541.4	545.6
37.5°	489.6	495.6	510.0	525.3	530.4
40°	468.4	475.2	490.5	508.3	515.1
42.5°	445.5	454.8	471.8	491.3	499.0
45°	422.6	431.1	452.3	474.4	482.9
47.5°	398.0	408.2	431.1	457.4	467.6
50°	371.7	384.4	410.7	439.6	450.6
52.5°	345.4	359.8	389.5	421.8	433.6
55°	319.9	333.5	369.1	403.9	416.7
57.5°	291.9	308.9	347.9	385.3	398.0
60°	263.1	281.7	326.7	365.7	379.3
62.5°	234.2	255.4	306.3	345.4	359.8
65°	205.4	229.1	282.6	324.2	338.6
67.5°	177.4	203.7	260.5	302.1	316.5
70°	145.1	178.2	236.8	277.5	291.9
72.5°	115.4	153.6	213.8	252.0	264.8
75°	89.1	129.8	188.4	223.2	228.3
77.5°	65.3	106.1	162.1	174.0	174.8
80°	44.1	84.9	123.9	122.2	123.9
82.5°	28.9	63.6	78.1	87.4	88.3
85°	17.0	37.3	45.8	50.9	51.8
87.5°	8.5	12.7	16.1	17.0	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)