

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: P309219

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-5700K**

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: P309219
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-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 5700K 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: 2052.0 lumens
Efficiency: N/A
Efficacy: 85.1 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

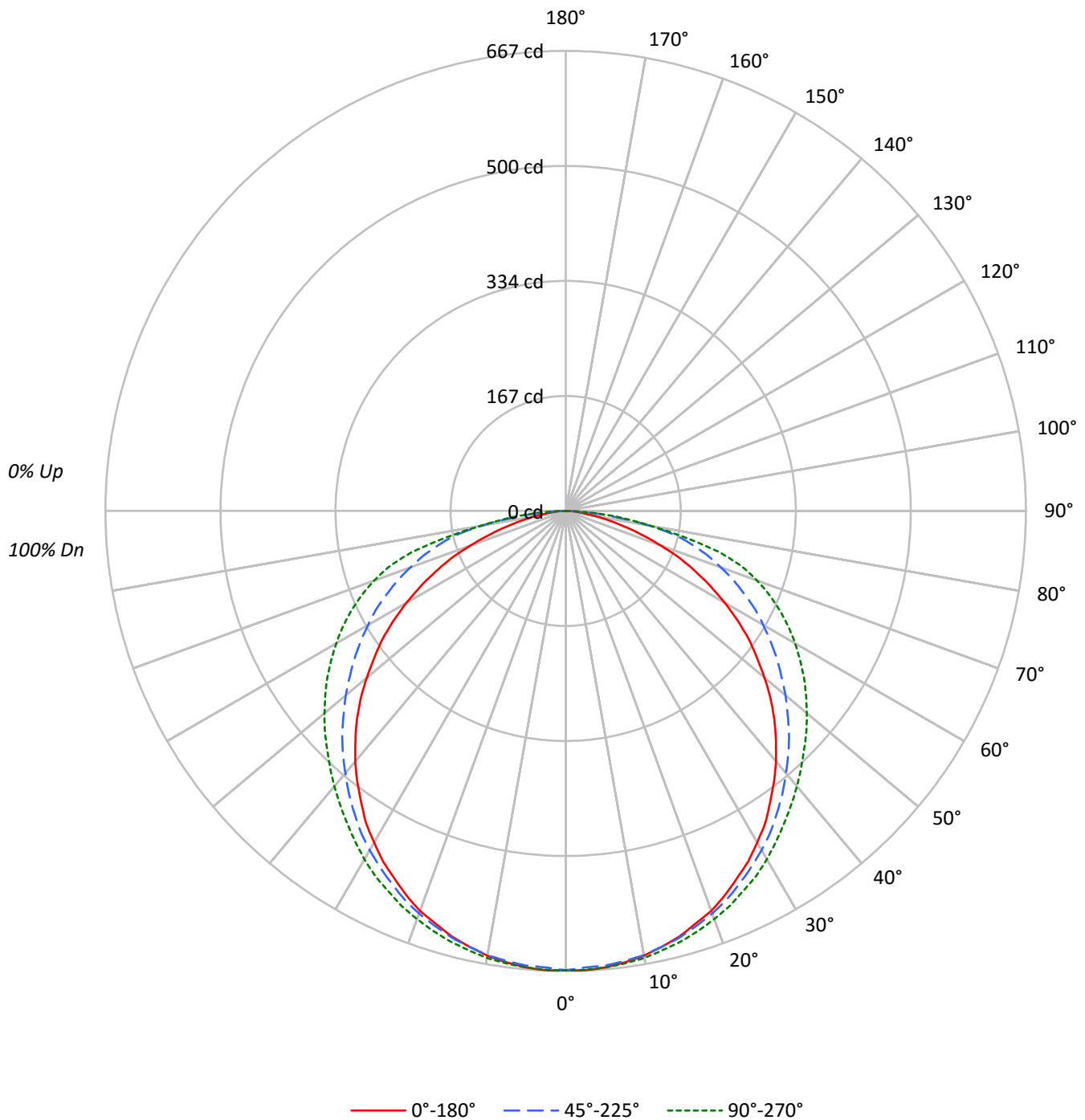
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	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	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	896	896	896
5°	897	893	897
10°	894	893	899
15°	889	891	900
20°	883	889	902
25°	872	885	903
30°	862	882	906
35°	848	878	907
40°	833	872	916
45°	814	871	930
50°	788	870	955
55°	760	877	989
60°	717	890	1033
65°	662	911	1091
70°	578	943	1162
75°	469	991	1201
80°	346	972	972
85°	266	716	809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.1	3.1
10°-20°	181.1	8.8
20°-30°	275.7	13.4
30°-40°	334.8	16.3
40°-50°	353.7	17.2
50°-60°	333.8	16.3
60°-70°	277.5	13.5
70°-80°	182.6	8.9
80°-90°	49.8	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°	519.9	25.3
0°-40°	854.7	41.7
0°-60°	1542.1	75.2
0°-90°	2052.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	664	664	662	664	664	63
15°	638	639	640	646	646	180
25°	588	591	596	606	608	271
35°	516	522	534	548	552	323
45°	428	436	458	480	489	329
55°	324	338	374	409	422	288
65°	208	232	286	328	343	205
75°	90	131	191	226	231	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°	665.8	665.8	665.8	665.8	665.8
2.5°	666.6	665.8	662.3	665.8	665.8
5°	664.1	664.1	661.5	664.1	664.1
7.5°	659.8	659.8	658.0	661.5	661.5
10°	654.6	654.6	653.7	658.0	658.0
12.5°	646.9	647.7	646.9	652.0	652.0
15°	638.3	639.1	640.0	646.0	646.0
17.5°	627.1	628.8	630.6	637.4	638.3
20°	616.8	617.7	621.1	628.8	629.7
22.5°	603.1	605.6	609.9	617.7	620.2
25°	587.6	591.0	596.2	606.5	608.2
27.5°	573.0	575.6	582.4	593.6	597.0
30°	555.0	559.2	567.8	579.0	583.3
32.5°	537.8	542.1	552.4	564.4	567.8
35°	516.3	522.3	534.3	548.1	552.4
37.5°	495.7	501.7	516.3	531.8	536.9
40°	474.2	481.1	496.5	514.6	521.5
42.5°	451.0	460.5	477.6	497.4	505.1
45°	427.8	436.4	457.9	480.2	488.8
47.5°	402.9	413.2	436.4	463.0	473.3
50°	376.3	389.2	415.8	445.0	456.2
52.5°	349.6	364.2	394.3	427.0	439.0
55°	323.9	337.6	373.7	408.9	421.8
57.5°	295.5	312.7	352.2	390.0	402.9
60°	266.3	285.2	330.7	370.3	384.0
62.5°	237.1	258.6	310.1	349.6	364.2
65°	207.9	231.9	286.1	328.2	342.8
67.5°	179.5	206.2	263.7	305.8	320.4
70°	146.9	180.4	239.7	280.9	295.5
72.5°	116.8	155.5	216.5	255.1	268.0
75°	90.2	131.4	190.7	225.9	231.1
77.5°	66.1	107.4	164.1	176.1	177.0
80°	44.7	85.9	125.4	123.7	125.4
82.5°	29.2	64.4	79.0	88.5	89.3
85°	17.2	37.8	46.4	51.5	52.4
87.5°	8.6	12.9	16.3	17.2	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)