

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: P309223

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP250-W2A-U-3500K**

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: P309223
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3500K 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: 1907.0 lumens
Efficiency: N/A
Efficacy: 81.1 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

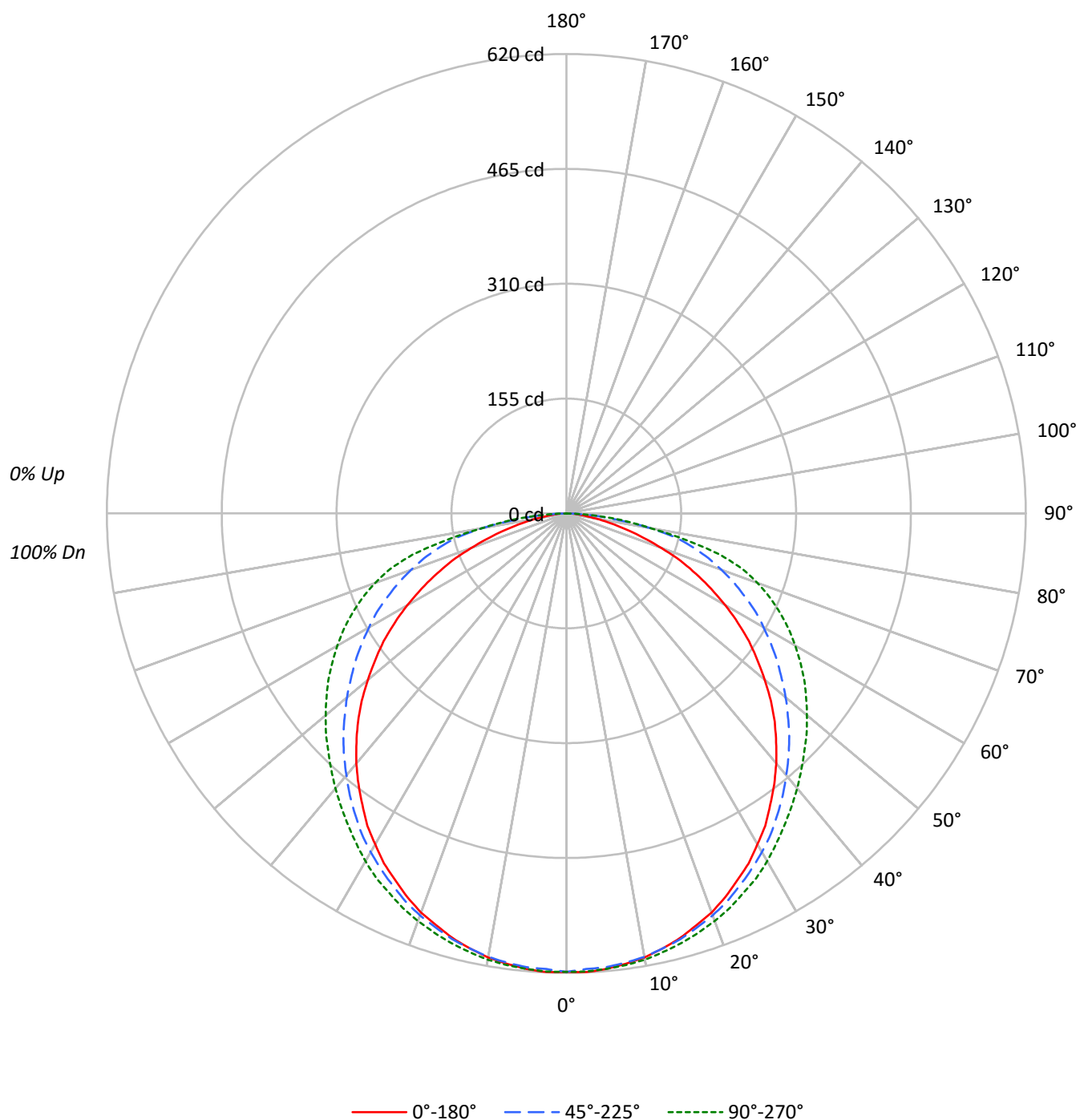
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	832	832	832
5°	833	830	833
10°	831	830	835
15°	826	829	836
20°	821	826	838
25°	811	823	839
30°	801	820	842
35°	788	816	843
40°	774	811	851
45°	757	810	864
50°	732	809	887
55°	706	815	920
60°	666	827	960
65°	615	847	1014
70°	537	876	1080
75°	436	921	1117
80°	322	903	903
85°	247	665	752



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	3.1
10°-20°	168.3	8.8
20°-30°	256.2	13.4
30°-40°	311.1	16.3
40°-50°	328.7	17.2
50°-60°	310.2	16.3
60°-70°	257.9	13.5
70°-80°	169.7	8.9
80°-90°	46.3	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°	483.2	25.3
0°-40°	794.3	41.7
0°-60°	1433.2	75.2
0°-90°	1907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	617	617	615	617	617	59
15°	593	594	595	600	600	167
25°	546	549	554	564	565	252
35°	480	485	497	509	513	300
45°	398	406	426	446	454	306
55°	301	314	347	380	392	268
65°	193	216	266	305	318	191
75°	84	122	177	210	215	90
85°	16	35	43	48	49	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	618.7	618.7	618.7	618.7	618.7
2.5°	619.5	618.7	615.5	618.7	618.7
5°	617.1	617.1	614.7	617.1	617.1
7.5°	613.1	613.1	611.5	614.7	614.7
10°	608.3	608.3	607.6	611.5	611.5
12.5°	601.2	602.0	601.2	606.0	606.0
15°	593.2	594.0	594.8	600.4	600.4
17.5°	582.8	584.4	586.0	592.4	593.2
20°	573.2	574.0	577.2	584.4	585.2
22.5°	560.4	562.8	566.8	574.0	576.4
25°	546.1	549.3	554.1	563.6	565.2
27.5°	532.5	534.9	541.3	551.7	554.9
30°	515.7	519.7	527.7	538.1	542.1
32.5°	499.8	503.8	513.3	524.5	527.7
35°	479.8	485.4	496.6	509.4	513.3
37.5°	460.7	466.2	479.8	494.2	499.0
40°	440.7	447.1	461.5	478.2	484.6
42.5°	419.1	427.9	443.9	462.2	469.4
45°	397.6	405.6	425.5	446.3	454.3
47.5°	374.4	384.0	405.6	430.3	439.9
50°	349.7	361.7	386.4	413.5	423.9
52.5°	324.9	338.5	366.4	396.8	408.0
55°	301.0	313.8	347.3	380.0	392.0
57.5°	274.6	290.6	327.3	362.5	374.4
60°	247.5	265.1	307.4	344.1	356.9
62.5°	220.3	240.3	288.2	324.9	338.5
65°	193.2	215.6	265.9	305.0	318.5
67.5°	166.9	191.6	245.1	284.2	297.8
70°	136.5	167.7	222.7	261.1	274.6
72.5°	108.6	144.5	201.2	237.1	249.1
75°	83.8	122.1	177.2	210.0	214.8
77.5°	61.5	99.8	152.5	163.7	164.5
80°	41.5	79.8	116.6	115.0	116.6
82.5°	27.1	59.9	73.4	82.2	83.0
85°	16.0	35.1	43.1	47.9	48.7
87.5°	8.0	12.0	15.2	16.0	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)