

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: P309225

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP250-W2A-U-4500K**

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: P309225
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-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4500K 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: 1983.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

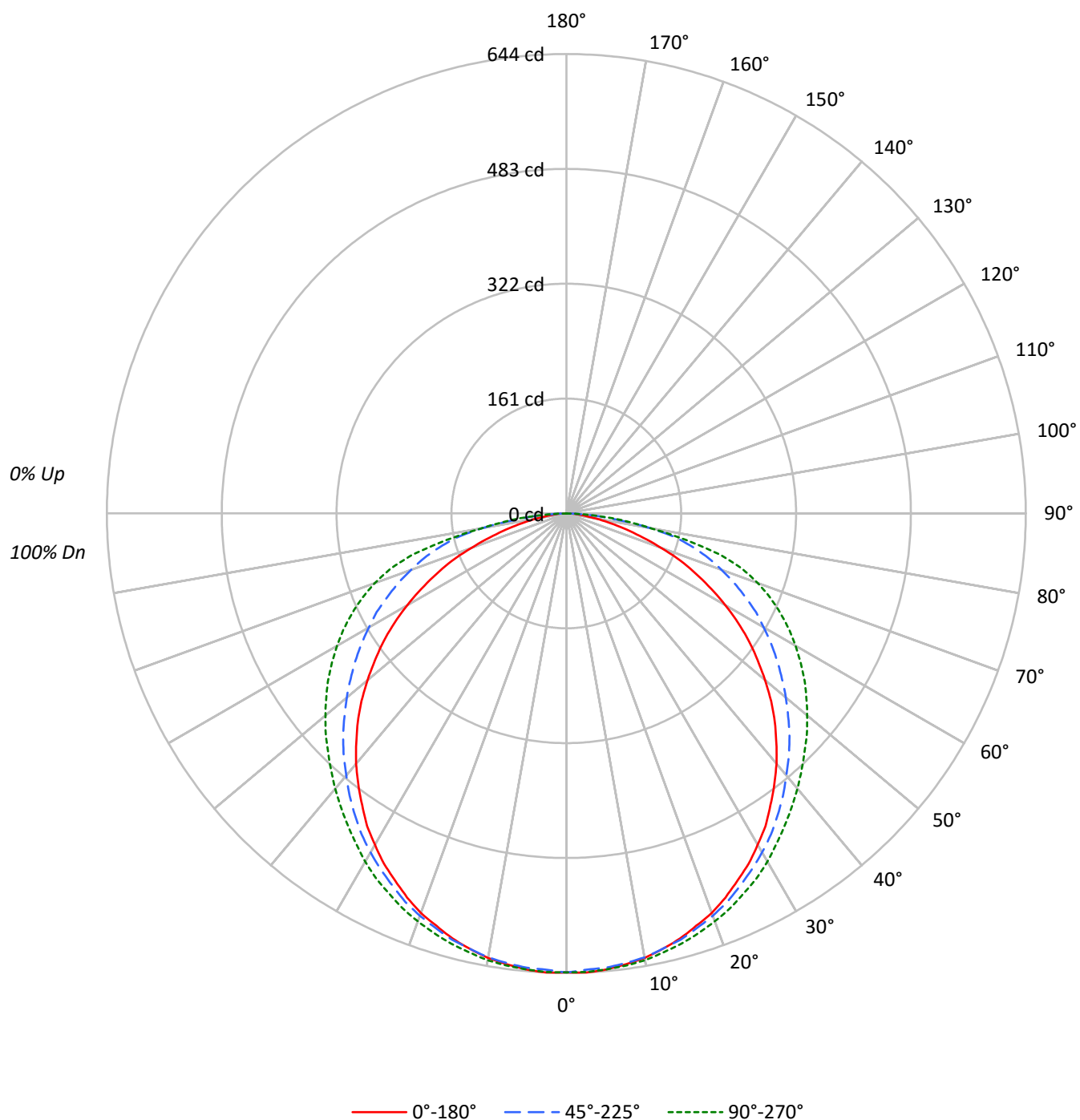
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	866	866	866
5°	867	863	867
10°	864	863	869
15°	859	862	870
20°	854	859	871
25°	843	855	873
30°	833	852	876
35°	819	848	877
40°	805	843	885
45°	787	842	899
50°	761	841	923
55°	734	847	956
60°	693	860	999
65°	640	880	1054
70°	559	911	1124
75°	453	958	1161
80°	335	939	939
85°	256	692	781



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.9	3.1
10°-20°	175.0	8.8
20°-30°	266.5	13.4
30°-40°	323.5	16.3
40°-50°	341.8	17.2
50°-60°	322.5	16.3
60°-70°	268.2	13.5
70°-80°	176.4	8.9
80°-90°	48.1	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°	502.4	25.3
0°-40°	825.9	41.7
0°-60°	1490.3	75.2
0°-90°	1983.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1983.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	643	643	643	643	643	
5°	642	642	639	642	642	61
15°	617	618	618	624	624	174
25°	568	571	576	586	588	262
35°	499	505	516	530	534	312
45°	413	422	442	464	472	318
55°	313	326	361	395	408	279
65°	201	224	276	317	331	199
75°	87	127	184	218	223	94
85°	17	36	45	50	51	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	643.4	643.4	643.4	643.4	643.4
2.5°	644.2	643.4	640.1	643.4	643.4
5°	641.7	641.7	639.2	641.7	641.7
7.5°	637.6	637.6	635.9	639.2	639.2
10°	632.6	632.6	631.8	635.9	635.9
12.5°	625.1	626.0	625.1	630.1	630.1
15°	616.8	617.7	618.5	624.3	624.3
17.5°	606.0	607.7	609.3	616.0	616.8
20°	596.1	596.9	600.2	607.7	608.5
22.5°	582.8	585.3	589.4	596.9	599.4
25°	567.8	571.2	576.1	586.1	587.8
27.5°	553.7	556.2	562.9	573.7	577.0
30°	536.3	540.4	548.7	559.5	563.7
32.5°	519.7	523.8	533.8	545.4	548.7
35°	498.9	504.7	516.4	529.7	533.8
37.5°	479.0	484.8	498.9	513.9	518.9
40°	458.3	464.9	479.8	497.3	503.9
42.5°	435.8	445.0	461.6	480.7	488.1
45°	413.4	421.7	442.5	464.1	472.4
47.5°	389.4	399.3	421.7	447.5	457.4
50°	363.6	376.1	401.8	430.0	440.8
52.5°	337.9	352.0	381.1	412.6	424.2
55°	313.0	326.3	361.1	395.2	407.6
57.5°	285.6	302.2	340.4	376.9	389.4
60°	257.4	275.6	319.6	357.8	371.1
62.5°	229.1	249.9	299.7	337.9	352.0
65°	200.9	224.1	276.4	317.1	331.2
67.5°	173.5	199.2	254.9	295.5	309.7
70°	142.0	174.3	231.6	271.5	285.6
72.5°	112.9	150.3	209.2	246.6	259.0
75°	87.2	127.0	184.3	218.3	223.3
77.5°	63.9	103.8	158.6	170.2	171.0
80°	43.2	83.0	121.2	119.5	121.2
82.5°	28.2	62.3	76.4	85.5	86.3
85°	16.6	36.5	44.8	49.8	50.6
87.5°	8.3	12.5	15.8	16.6	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)