

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: P309162

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CP125-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: P309162
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: 24FCZ2-30HE-UNV-L82765-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (336) 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: 2114.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

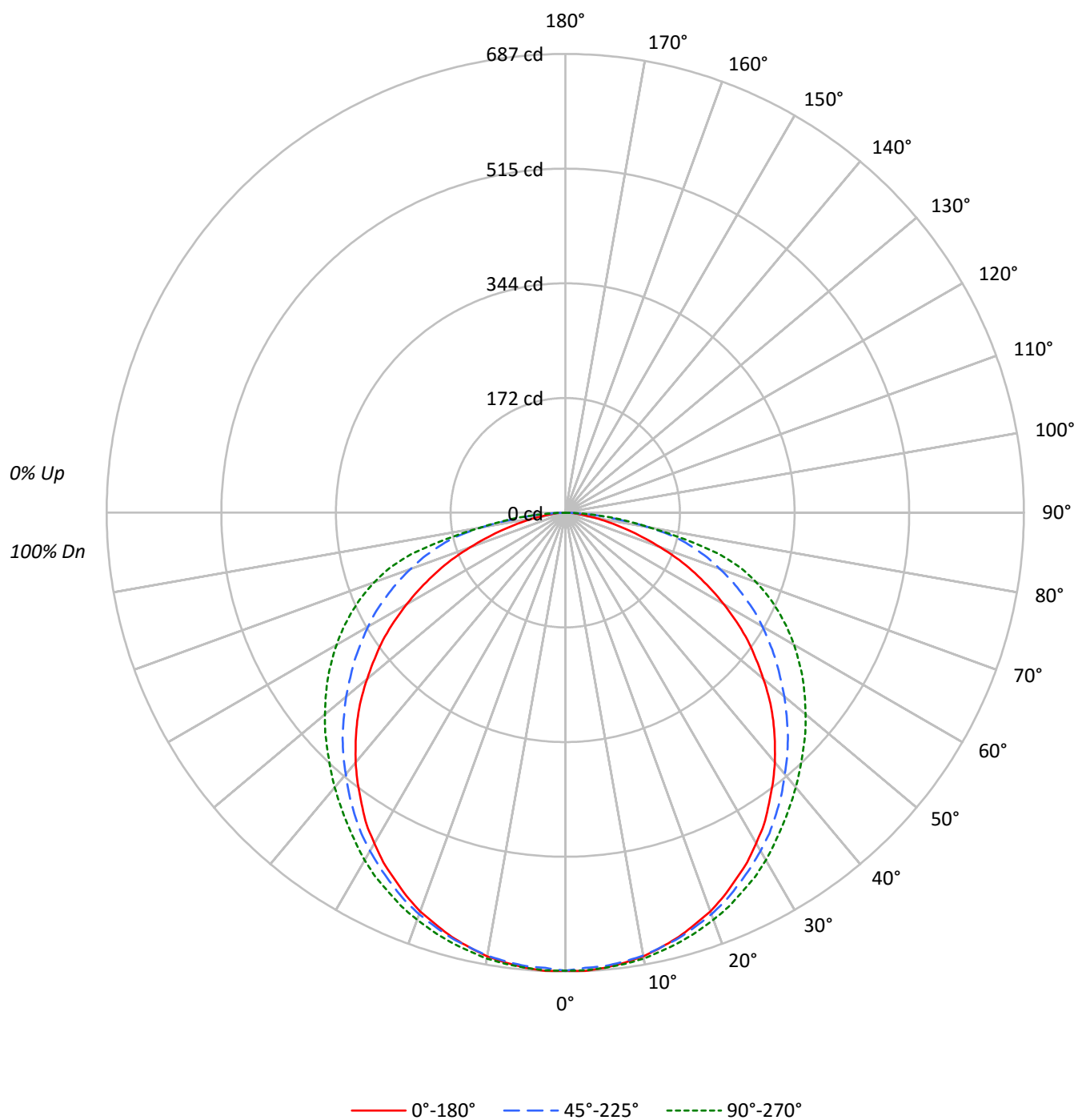
Input Watts (W): 21.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	923	923	923
5°	924	920	924
10°	921	920	926
15°	916	918	927
20°	910	916	929
25°	899	912	930
30°	888	909	934
35°	874	904	935
40°	858	898	944
45°	839	898	958
50°	811	897	984
55°	783	903	1019
60°	738	917	1065
65°	682	938	1124
70°	595	971	1197
75°	483	1022	1238
80°	356	1001	1001
85°	273	738	834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.0	3.1
10°-20°	186.6	8.8
20°-30°	284.0	13.4
30°-40°	344.9	16.3
40°-50°	364.4	17.2
50°-60°	343.8	16.3
60°-70°	285.9	13.5
70°-80°	188.1	8.9
80°-90°	51.3	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°	535.6	25.3
0°-40°	880.5	41.7
0°-60°	1588.7	75.2
0°-90°	2114.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2114.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	684	684	682	684	684	65
15°	658	658	659	666	666	185
25°	605	609	614	625	627	279
35°	532	538	550	565	569	333
45°	441	450	472	495	504	339
55°	334	348	385	421	434	297
65°	214	239	295	338	353	212
75°	93	135	196	233	238	100
85°	18	39	48	53	54	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	685.9	685.9	685.9	685.9	685.9
2.5°	686.8	685.9	682.3	685.9	685.9
5°	684.1	684.1	681.5	684.1	684.1
7.5°	679.7	679.7	677.9	681.5	681.5
10°	674.4	674.4	673.5	677.9	677.9
12.5°	666.4	667.3	666.4	671.7	671.7
15°	657.6	658.5	659.3	665.5	665.5
17.5°	646.1	647.8	649.6	656.7	657.6
20°	635.4	636.3	639.9	647.8	648.7
22.5°	621.3	623.9	628.4	636.3	639.0
25°	605.4	608.9	614.2	624.8	626.6
27.5°	590.3	593.0	600.0	611.5	615.1
30°	571.7	576.1	585.0	596.5	600.9
32.5°	554.0	558.4	569.1	581.5	585.0
35°	531.9	538.1	550.5	564.6	569.1
37.5°	510.7	516.9	531.9	547.8	553.1
40°	488.5	495.6	511.5	530.1	537.2
42.5°	464.6	474.4	492.1	512.4	520.4
45°	440.7	449.6	471.7	494.7	503.6
47.5°	415.1	425.7	449.6	477.0	487.6
50°	387.6	400.9	428.3	458.4	469.9
52.5°	360.2	375.2	406.2	439.9	452.2
55°	333.7	347.8	385.0	421.3	434.5
57.5°	304.4	322.1	362.9	401.8	415.1
60°	274.4	293.8	340.7	381.4	395.6
62.5°	244.3	266.4	319.5	360.2	375.2
65°	214.2	239.0	294.7	338.1	353.1
67.5°	185.0	212.4	271.7	315.1	330.1
70°	151.3	185.9	246.9	289.4	304.4
72.5°	120.4	160.2	223.0	262.9	276.1
75°	92.9	135.4	196.5	232.8	238.1
77.5°	68.1	110.6	169.0	181.4	182.3
80°	46.0	88.5	129.2	127.4	129.2
82.5°	30.1	66.4	81.4	91.2	92.0
85°	17.7	38.9	47.8	53.1	54.0
87.5°	8.9	13.3	16.8	17.7	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)