

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: P309152

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CA125-W2A-U-4000K**

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: P309152
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 2117.0 lumens
Efficiency: N/A
Efficacy: 99.4 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

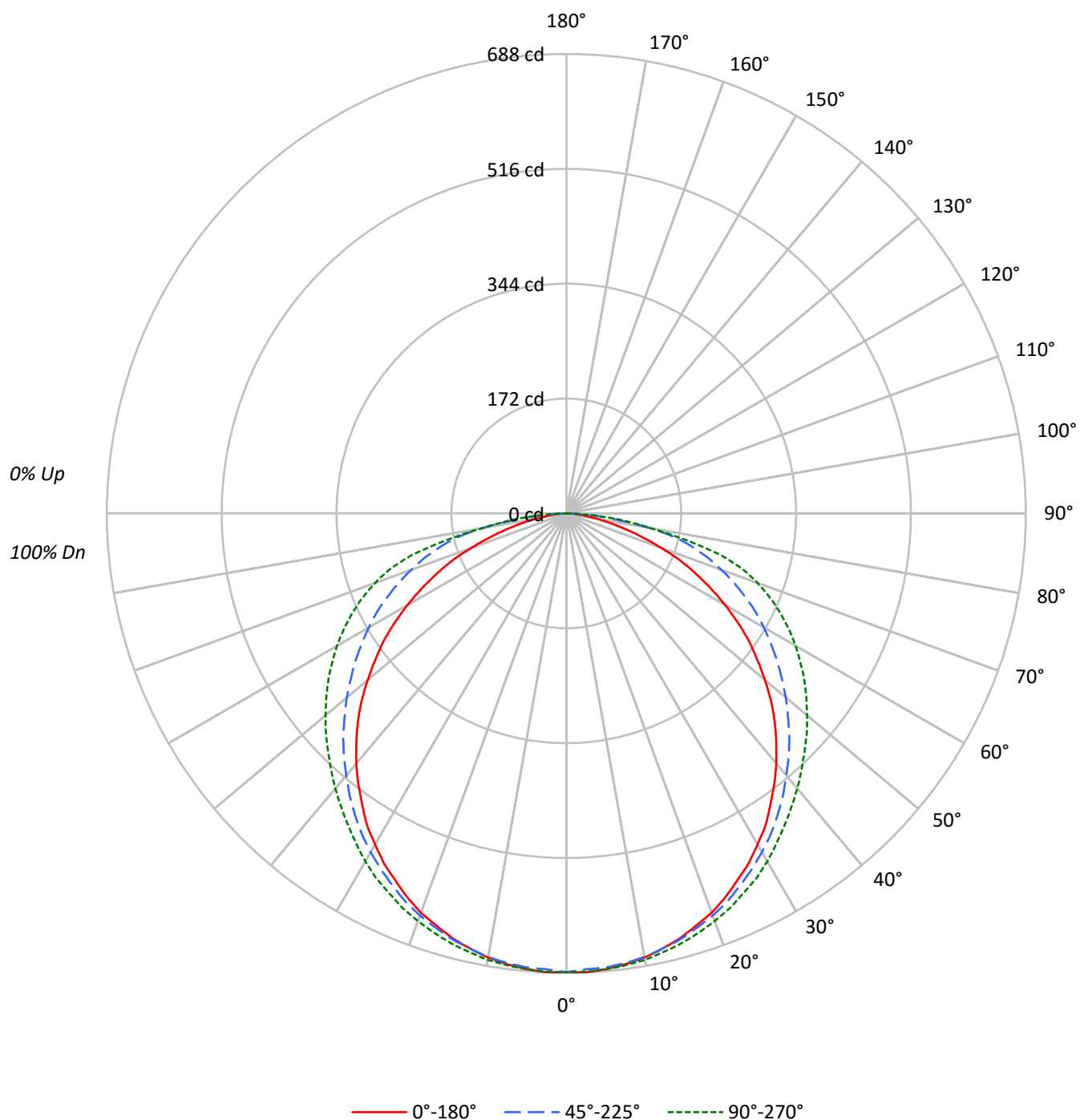
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	924	924	924
5°	925	922	925
10°	923	922	928
15°	917	920	928
20°	911	918	930
25°	900	913	932
30°	889	910	935
35°	875	906	936
40°	859	900	945
45°	840	899	960
50°	813	898	985
55°	784	904	1021
60°	739	918	1066
65°	683	940	1126
70°	596	973	1199
75°	484	1023	1239
80°	357	1003	1003
85°	273	739	835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	3.1
10°-20°	186.9	8.8
20°-30°	284.5	13.4
30°-40°	345.4	16.3
40°-50°	364.9	17.2
50°-60°	344.3	16.3
60°-70°	286.3	13.5
70°-80°	188.4	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°	536.4	25.3
0°-40°	881.8	41.7
0°-60°	1591.0	75.2
0°-90°	2117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2117.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	687	687	687	687	687	
5°	685	685	682	685	685	65
15°	658	659	660	666	666	186
25°	606	610	615	626	628	280
35°	533	539	551	565	570	333
45°	441	450	472	495	504	340
55°	334	348	386	422	435	298
65°	214	239	295	339	354	212
75°	93	136	197	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°	686.9	686.9	686.9	686.9	686.9
2.5°	687.7	686.9	683.3	686.9	686.9
5°	685.1	685.1	682.4	685.1	685.1
7.5°	680.7	680.7	678.9	682.4	682.4
10°	675.3	675.3	674.5	678.9	678.9
12.5°	667.4	668.3	667.4	672.7	672.7
15°	658.5	659.4	660.3	666.5	666.5
17.5°	647.0	648.8	650.5	657.6	658.5
20°	636.3	637.2	640.8	648.8	649.6
22.5°	622.2	624.8	629.3	637.2	639.9
25°	606.2	609.8	615.1	625.7	627.5
27.5°	591.1	593.8	600.9	612.4	616.0
30°	572.5	577.0	585.8	597.3	601.8
32.5°	554.8	559.2	569.9	582.3	585.8
35°	532.7	538.9	551.3	565.4	569.9
37.5°	511.4	517.6	532.7	548.6	553.9
40°	489.2	496.3	512.3	530.9	538.0
42.5°	465.3	475.0	492.8	513.2	521.1
45°	441.4	450.2	472.4	495.4	504.3
47.5°	415.7	426.3	450.2	477.7	488.3
50°	388.2	401.5	429.0	459.1	470.6
52.5°	360.7	375.8	406.8	440.5	452.9
55°	334.1	348.3	385.5	421.9	435.2
57.5°	304.9	322.6	363.4	402.4	415.7
60°	274.7	294.2	341.2	382.0	396.2
62.5°	244.6	266.8	319.9	360.7	375.8
65°	214.5	239.3	295.1	338.6	353.6
67.5°	185.2	212.7	272.1	315.5	330.6
70°	151.6	186.1	247.3	289.8	304.9
72.5°	120.5	160.4	223.3	263.2	276.5
75°	93.1	135.6	196.8	233.1	238.4
77.5°	68.2	110.8	169.3	181.7	182.6
80°	46.1	88.6	129.4	127.6	129.4
82.5°	30.1	66.5	81.5	91.3	92.2
85°	17.7	39.0	47.9	53.2	54.1
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)