

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: P309156

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CA125-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: P309156
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-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 2212.0 lumens
Efficiency: N/A
Efficacy: 101.9 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

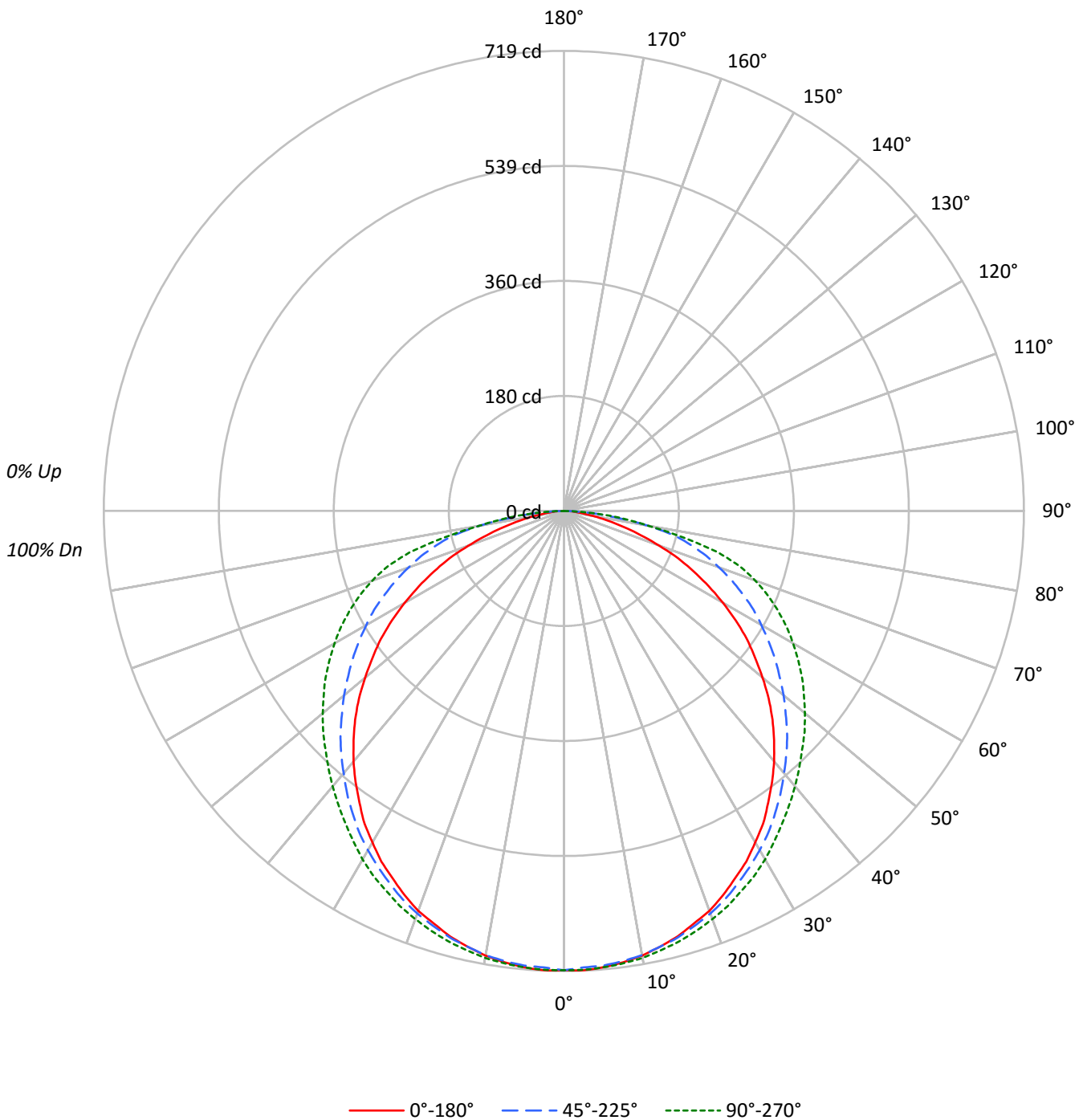
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	966	966	966
5°	967	963	967
10°	964	963	969
15°	958	961	970
20°	952	959	972
25°	940	954	973
30°	929	951	977
35°	914	946	978
40°	898	940	987
45°	878	939	1003
50°	849	938	1029
55°	819	945	1067
60°	773	959	1114
65°	713	982	1176
70°	623	1017	1253
75°	505	1069	1295
80°	373	1048	1048
85°	286	772	872



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	3.1
10°-20°	195.2	8.8
20°-30°	297.2	13.4
30°-40°	360.9	16.3
40°-50°	381.3	17.2
50°-60°	359.8	16.3
60°-70°	299.1	13.5
70°-80°	196.8	8.9
80°-90°	53.7	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°	560.4	25.3
0°-40°	921.3	41.7
0°-60°	1662.4	75.2
0°-90°	2212.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2212.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	716	716	713	716	716	68
15°	688	689	690	696	696	194
25°	633	637	643	654	656	292
35°	557	563	576	591	595	348
45°	461	470	494	518	527	355
55°	349	364	403	441	455	311
65°	224	250	308	354	370	222
75°	97	142	206	244	249	105
85°	18	41	50	56	56	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	717.7	717.7	717.7	717.7	717.7
2.5°	718.6	717.7	714.0	717.7	717.7
5°	715.8	715.8	713.1	715.8	715.8
7.5°	711.2	711.2	709.4	713.1	713.1
10°	705.6	705.6	704.7	709.4	709.4
12.5°	697.3	698.2	697.3	702.9	702.9
15°	688.1	689.0	689.9	696.4	696.4
17.5°	676.0	677.9	679.7	687.1	688.1
20°	664.9	665.8	669.5	677.9	678.8
22.5°	650.1	652.9	657.5	665.8	668.6
25°	633.4	637.1	642.7	653.8	655.6
27.5°	617.7	620.5	627.9	639.9	643.6
30°	598.2	602.9	612.1	624.2	628.8
32.5°	579.7	584.3	595.4	608.4	612.1
35°	556.6	563.0	576.0	590.8	595.4
37.5°	534.3	540.8	556.6	573.2	578.8
40°	511.2	518.6	535.3	554.7	562.1
42.5°	486.2	496.4	514.9	536.2	544.5
45°	461.2	470.4	493.6	517.7	526.9
47.5°	434.3	445.4	470.4	499.1	510.3
50°	405.6	419.5	448.2	479.7	491.7
52.5°	376.9	392.6	425.1	460.2	473.2
55°	349.1	363.9	402.8	440.8	454.7
57.5°	318.6	337.1	379.7	420.4	434.3
60°	287.1	307.4	356.5	399.1	413.9
62.5°	255.6	278.7	334.3	376.9	392.6
65°	224.1	250.0	308.4	353.7	369.5
67.5°	193.5	222.3	284.3	329.7	345.4
70°	158.4	194.5	258.4	302.8	318.6
72.5°	125.9	167.6	233.4	275.0	288.9
75°	97.2	141.7	205.6	243.5	249.1
77.5°	71.3	115.8	176.9	189.8	190.8
80°	48.2	92.6	135.2	133.4	135.2
82.5°	31.5	69.5	85.2	95.4	96.3
85°	18.5	40.7	50.0	55.6	56.5
87.5°	9.3	13.9	17.6	18.5	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)