

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: P313791

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-CA08-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: P313791
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-L83050-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 2807.0 lumens
Efficiency: N/A
Efficacy: 133.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

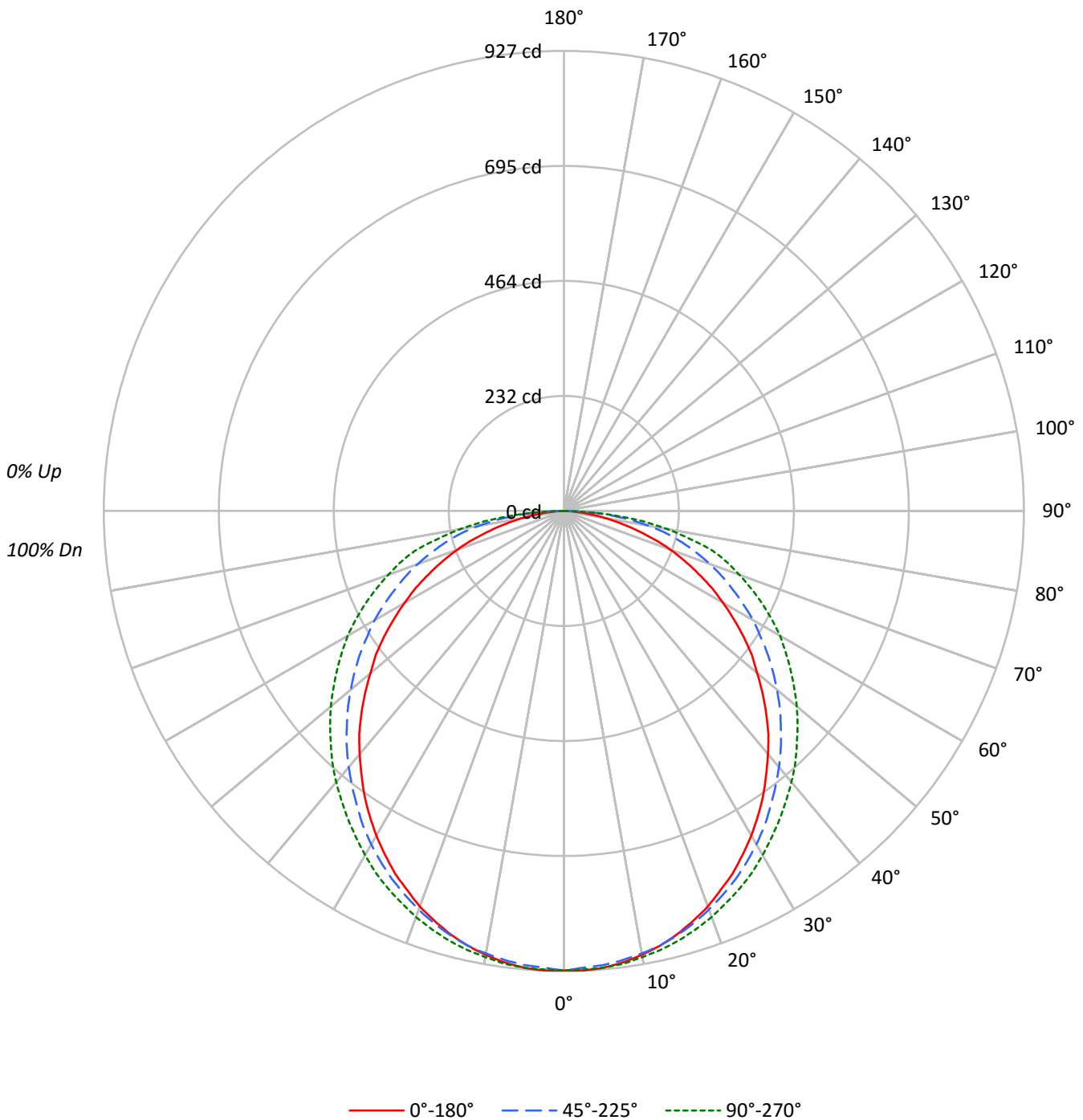
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1246	1246	1246
5°	1248	1240	1248
10°	1241	1237	1247
15°	1230	1232	1248
20°	1215	1224	1247
25°	1196	1215	1246
30°	1173	1205	1244
35°	1150	1193	1245
40°	1124	1184	1253
45°	1097	1177	1263
50°	1064	1173	1283
55°	1038	1175	1309
60°	998	1185	1353
65°	952	1198	1402
70°	901	1235	1480
75°	804	1288	1617
80°	686	1364	1653
85°	489	1351	1581



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	3.1
10°-20°	250.5	8.9
20°-30°	378.4	13.5
30°-40°	456.0	16.2
40°-50°	478.7	17.1
50°-60°	447.9	16.0
60°-70°	369.9	13.2
70°-80°	252.0	9.0
80°-90°	85.9	3.1
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°	716.5	25.5
0°-40°	1172.5	41.8
0°-60°	2099.1	74.8
0°-90°	2807.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2807.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	926	926	926	926	926	
5°	924	923	918	924	924	88
15°	883	884	885	894	896	249
25°	806	809	819	834	839	371
35°	700	708	726	751	758	438
45°	576	589	618	652	664	445
55°	442	460	501	542	558	395
65°	299	324	376	424	440	297
75°	155	190	248	294	311	165
85°	32	62	88	99	102	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	925.7	925.7	925.7	925.7	925.7
2.5°	926.7	925.7	921.1	925.7	924.8
5°	923.9	922.9	918.3	923.9	923.9
7.5°	917.3	917.3	912.7	919.2	920.1
10°	908.0	908.0	905.2	912.7	912.7
12.5°	896.9	896.9	896.9	904.3	905.2
15°	882.9	883.8	884.7	894.1	895.9
17.5°	866.1	868.0	870.8	882.0	883.8
20°	848.4	850.3	854.9	868.0	870.8
22.5°	826.1	830.7	837.2	852.2	854.9
25°	805.6	809.3	818.6	834.5	839.1
27.5°	780.4	786.0	798.1	814.9	821.4
30°	755.3	760.9	775.8	795.3	800.9
32.5°	728.3	736.7	752.5	773.0	779.5
35°	700.3	707.8	726.4	750.6	758.1
37.5°	669.6	679.9	700.3	726.4	735.7
40°	639.8	651.0	674.3	702.2	713.4
42.5°	610.0	621.2	647.3	678.9	690.1
45°	576.5	588.6	618.4	651.9	664.0
47.5°	543.0	557.9	590.5	625.8	638.9
50°	508.5	525.3	560.6	597.9	612.8
52.5°	477.8	493.6	530.8	570.9	584.9
55°	442.4	460.1	501.0	542.0	557.9
57.5°	406.1	425.6	469.4	514.1	529.9
60°	370.7	392.1	440.5	485.2	502.9
62.5°	336.2	357.6	407.9	454.5	472.2
65°	299.0	324.1	376.3	423.7	440.5
67.5°	263.6	290.6	345.5	392.1	408.8
70°	229.1	255.2	313.9	359.5	376.3
72.5°	191.9	221.7	280.3	327.8	345.5
75°	154.6	190.0	247.7	294.3	311.1
77.5°	120.1	156.5	214.2	252.4	260.8
80°	88.5	125.7	176.0	203.0	213.3
82.5°	56.8	94.1	134.1	153.7	162.0
85°	31.7	62.4	87.5	98.7	102.4
87.5°	13.0	27.0	35.4	40.0	40.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)