

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: P313042

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CA08-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: P313042
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-L83050-HRP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" 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: 2289.0 lumens
Efficiency: N/A
Efficacy: 106.0 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

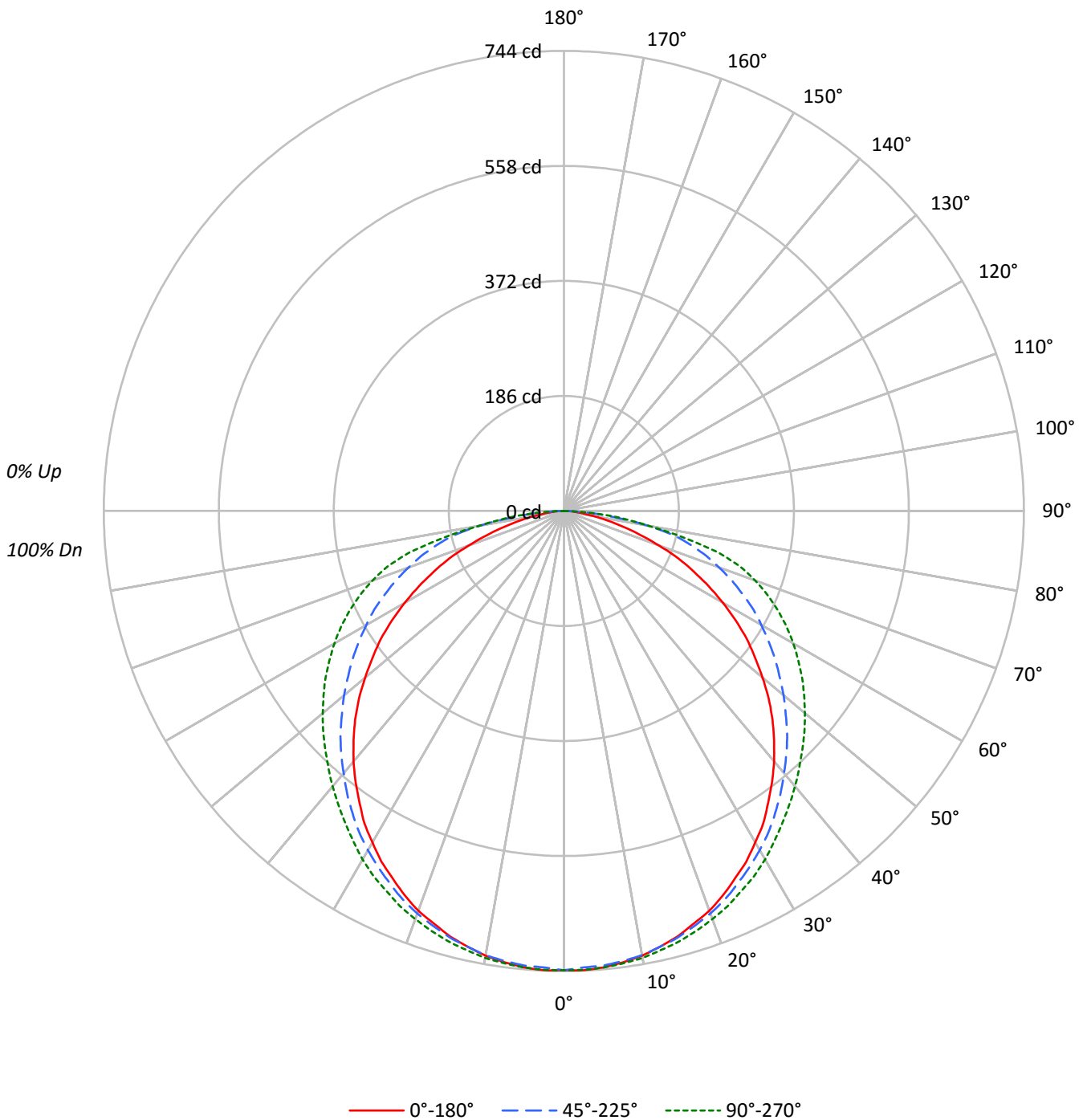
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	999	999	999
5°	1001	997	1001
10°	998	996	1003
15°	992	994	1004
20°	985	992	1006
25°	973	987	1007
30°	962	984	1011
35°	946	979	1012
40°	929	973	1022
45°	908	972	1038
50°	879	971	1065
55°	848	978	1104
60°	799	993	1153
65°	738	1016	1217
70°	645	1052	1297
75°	523	1106	1340
80°	386	1084	1084
85°	296	798	903



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.4	3.1
10°-20°	202.0	8.8
20°-30°	307.6	13.4
30°-40°	373.5	16.3
40°-50°	394.6	17.2
50°-60°	372.3	16.3
60°-70°	309.6	13.5
70°-80°	203.6	8.9
80°-90°	55.5	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°	579.9	25.3
0°-40°	953.4	41.7
0°-60°	1720.3	75.2
0°-90°	2289.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2289.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	743	743	743	743	743	
5°	741	741	738	741	741	70
15°	712	713	714	721	721	201
25°	656	659	665	676	678	302
35°	576	583	596	611	616	361
45°	477	487	511	536	545	367
55°	361	377	417	456	470	322
65°	232	259	319	366	382	229
75°	101	147	213	252	258	108
85°	19	42	52	58	58	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	742.7	742.7	742.7	742.7	742.7
2.5°	743.6	742.7	738.8	742.7	742.7
5°	740.8	740.8	737.9	740.8	740.8
7.5°	736.0	736.0	734.0	737.9	737.9
10°	730.2	730.2	729.3	734.0	734.0
12.5°	721.6	722.5	721.6	727.3	727.3
15°	712.0	713.0	713.9	720.6	720.6
17.5°	699.5	701.5	703.4	711.0	712.0
20°	688.0	689.0	692.8	701.5	702.4
22.5°	672.7	675.6	680.4	689.0	691.9
25°	655.5	659.3	665.0	676.5	678.5
27.5°	639.2	642.0	649.7	662.2	666.0
30°	619.0	623.8	633.4	645.9	650.7
32.5°	599.9	604.7	616.2	629.6	633.4
35°	575.9	582.6	596.1	611.4	616.2
37.5°	552.9	559.6	575.9	593.2	598.9
40°	529.0	536.6	553.9	574.0	581.7
42.5°	503.1	513.6	532.8	554.8	563.5
45°	477.2	486.8	510.8	535.7	545.3
47.5°	449.4	460.9	486.8	516.5	528.0
50°	419.7	434.1	463.8	496.4	508.8
52.5°	390.0	406.3	439.9	476.3	489.7
55°	361.3	376.6	416.9	456.1	470.5
57.5°	329.6	348.8	392.9	435.1	449.4
60°	297.1	318.1	368.9	413.0	428.4
62.5°	264.5	288.4	345.9	390.0	406.3
65°	231.9	258.7	319.1	366.1	382.4
67.5°	200.3	230.0	294.2	341.1	357.4
70°	163.9	201.2	267.4	313.4	329.6
72.5°	130.3	173.4	241.5	284.6	299.0
75°	100.6	146.6	212.7	252.0	257.8
77.5°	73.8	119.8	183.0	196.4	197.4
80°	49.8	95.8	139.9	138.0	139.9
82.5°	32.6	71.9	88.2	98.7	99.7
85°	19.2	42.2	51.7	57.5	58.5
87.5°	9.6	14.4	18.2	19.2	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)