

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: P312485

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CP250-W2A-U-3000K**

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: P312485
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-HRP-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K 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: 1550.0 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

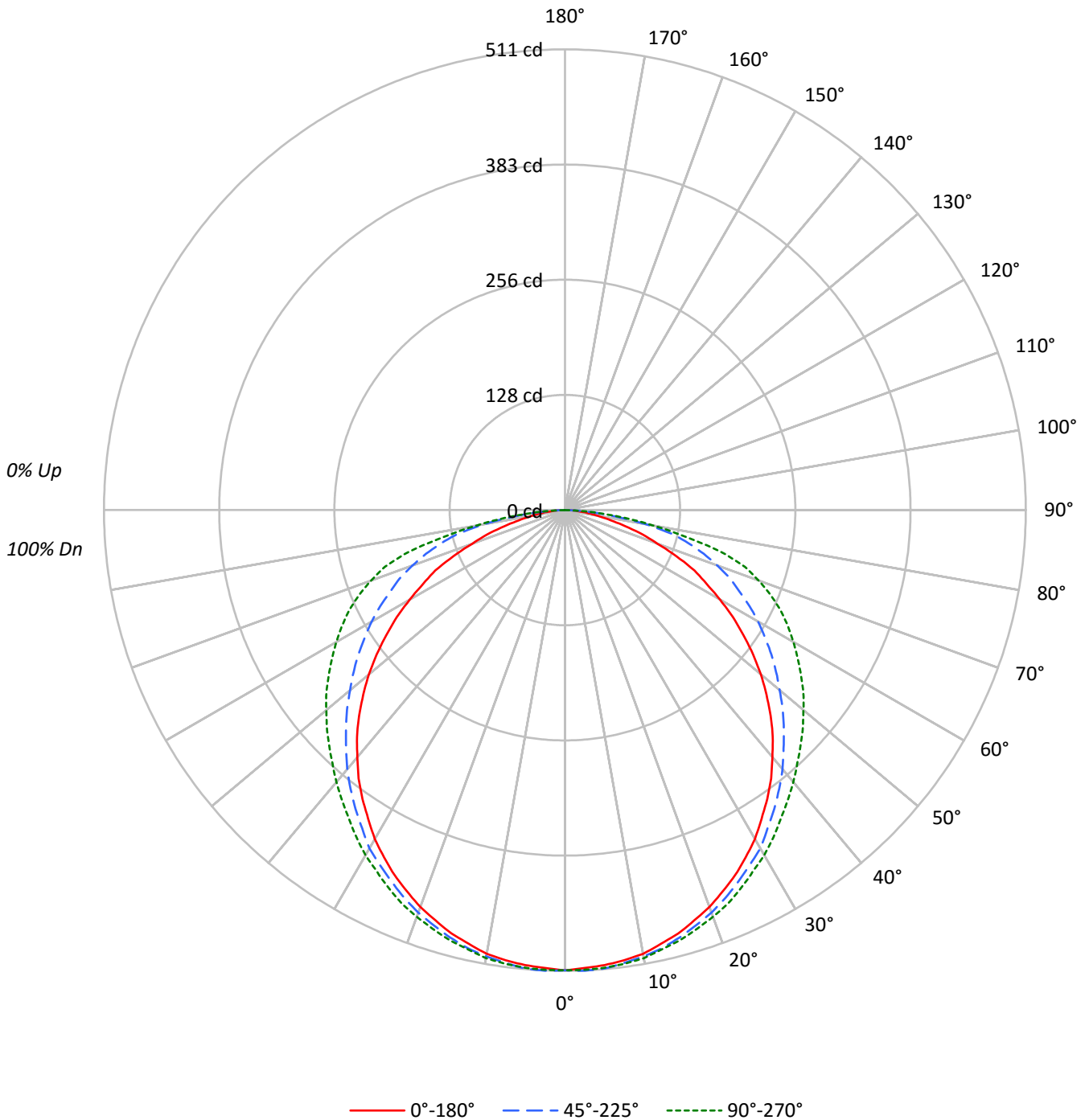
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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°	1373	1373	1373
5°	1368	1379	1376
10°	1365	1373	1379
15°	1354	1367	1376
20°	1341	1361	1375
25°	1327	1350	1373
30°	1309	1346	1373
35°	1285	1330	1372
40°	1257	1319	1384
45°	1228	1306	1407
50°	1187	1302	1445
55°	1133	1312	1500
60°	1068	1331	1574
65°	1009	1358	1681
70°	862	1415	1800
75°	722	1474	1870
80°	590	1424	1561
85°	513	1056	1149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.4	3.1
10°-20°	138.4	8.9
20°-30°	209.7	13.5
30°-40°	253.2	16.3
40°-50°	266.1	17.2
50°-60°	250.3	16.2
60°-70°	208.8	13.5
70°-80°	138.3	8.9
80°-90°	36.9	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°	396.5	25.6
0°-40°	649.7	41.9
0°-60°	1166.1	75.2
0°-90°	1550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1550.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	510	510	510	510	510	
5°	506	508	510	510	509	48
15°	486	488	491	493	494	137
25°	447	450	455	460	462	206
35°	391	395	405	414	418	245
45°	323	328	343	361	370	249
55°	242	252	280	308	320	216
65°	158	172	213	248	264	154
75°	69	97	142	171	180	75
85°	17	25	34	37	37	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	510.4	510.4	510.4	510.4	510.4
2.5°	508.4	509.4	511.4	511.4	510.4
5°	506.5	507.5	510.4	510.4	509.4
7.5°	503.6	504.5	506.5	508.4	507.5
10°	499.6	500.6	502.6	504.5	504.5
12.5°	492.8	493.8	497.7	498.7	498.7
15°	486.0	487.9	490.8	492.8	493.8
17.5°	477.2	479.1	483.0	486.9	486.9
20°	468.4	470.3	475.2	479.1	480.1
22.5°	457.6	460.5	465.4	470.3	472.3
25°	446.8	449.8	454.7	460.5	462.5
27.5°	434.1	437.1	443.9	450.8	451.7
30°	421.4	424.4	433.2	439.0	442.0
32.5°	405.8	409.7	418.5	427.3	430.2
35°	391.1	395.0	404.8	413.6	417.5
37.5°	375.5	379.4	390.1	400.9	405.8
40°	357.9	362.8	375.5	387.2	394.0
42.5°	341.2	346.1	358.8	374.5	381.3
45°	322.7	327.6	343.2	360.8	369.6
47.5°	303.1	309.0	327.6	349.1	357.9
50°	283.6	290.4	310.9	335.4	345.2
52.5°	263.0	271.8	295.3	321.7	333.4
55°	241.5	252.3	279.6	308.0	319.7
57.5°	221.0	230.8	263.0	293.3	306.0
60°	198.5	211.2	247.4	278.7	292.4
62.5°	177.0	190.7	230.8	264.0	278.7
65°	158.4	172.1	213.2	248.4	264.0
67.5°	134.0	152.5	198.5	231.7	247.4
70°	109.5	134.9	179.9	214.1	228.8
72.5°	90.9	115.4	161.3	195.6	209.2
75°	69.4	96.8	141.8	171.1	179.9
77.5°	51.8	80.2	121.2	135.9	136.9
80°	38.1	61.6	91.9	96.8	100.7
82.5°	26.4	43.0	59.6	65.5	67.5
85°	16.6	25.4	34.2	37.2	37.2
87.5°	8.8	9.8	11.7	11.7	11.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)