

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: P312618

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-CA08-W2A-U-4500K**

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: P312618
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CA08-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 1557.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

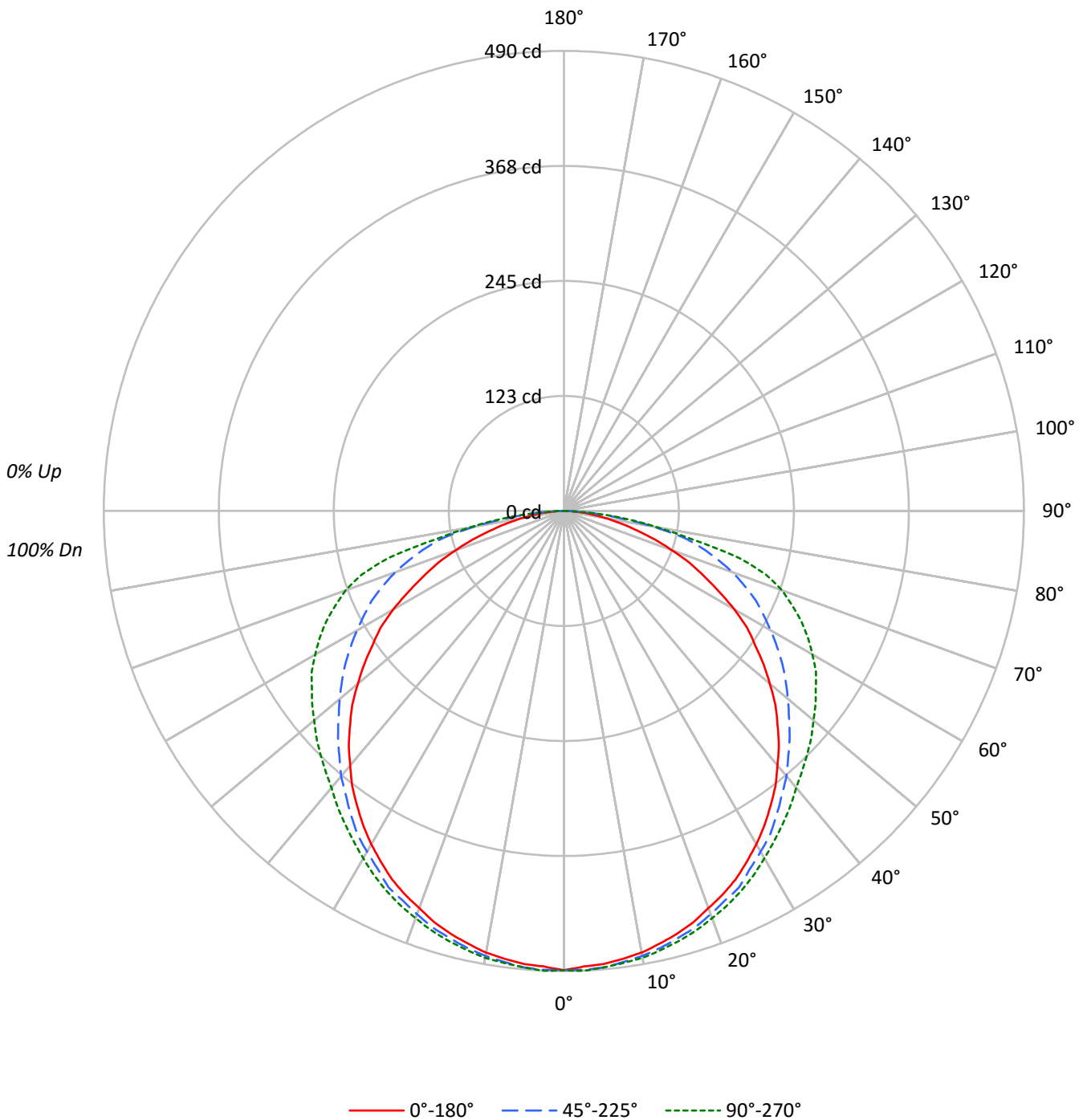
Input Watts (W): 19.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1316	1316	1316
5°	1309	1318	1318
10°	1305	1315	1321
15°	1299	1312	1321
20°	1289	1309	1322
25°	1286	1313	1326
30°	1274	1303	1327
35°	1260	1298	1336
40°	1243	1296	1352
45°	1225	1295	1395
50°	1199	1304	1453
55°	1166	1333	1537
60°	1128	1369	1646
65°	1050	1436	1780
70°	965	1505	1947
75°	845	1583	2013
80°	728	1509	1579
85°	636	1096	1201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.3	3.0
10°-20°	132.8	8.5
20°-30°	202.7	13.0
30°-40°	247.5	15.9
40°-50°	264.6	17.0
50°-60°	255.4	16.4
60°-70°	219.8	14.1
70°-80°	148.7	9.6
80°-90°	39.3	2.5
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°	381.7	24.5
0°-40°	629.2	40.4
0°-60°	1149.2	73.8
0°-90°	1557.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1557.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	489	489	489	489	489	
5°	484	486	488	488	488	46
15°	466	467	471	473	474	132
25°	433	435	442	444	447	199
35°	384	387	395	403	407	240
45°	322	328	340	357	366	248
55°	248	257	284	313	328	223
65°	165	181	226	261	280	164
75°	81	108	152	183	194	87
85°	21	29	36	37	39	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	489.1	489.1	489.1	489.1	489.1
2.5°	485.6	486.8	489.1	489.1	490.2
5°	484.5	485.6	487.9	487.9	487.9
7.5°	481.1	482.2	484.5	485.6	485.6
10°	477.6	478.8	481.1	482.2	483.4
12.5°	471.9	473.0	476.5	478.8	478.8
15°	466.2	467.3	470.8	473.0	474.2
17.5°	459.3	461.6	465.0	467.3	468.5
20°	450.1	452.4	457.0	460.4	461.6
22.5°	442.1	444.4	449.0	452.4	454.7
25°	433.0	435.2	442.1	444.4	446.7
27.5°	421.5	423.8	429.5	434.1	437.5
30°	410.0	412.3	419.2	424.9	427.2
32.5°	397.4	400.9	408.9	413.5	416.9
35°	383.7	387.1	395.2	403.2	406.6
37.5°	370.0	373.4	381.4	391.7	396.3
40°	353.9	358.5	368.8	382.6	384.9
42.5°	339.0	344.8	353.9	370.0	375.7
45°	321.9	327.6	340.2	357.4	366.5
47.5°	305.8	311.5	325.3	345.9	357.4
50°	286.3	294.4	311.5	335.6	347.1
52.5°	268.0	274.9	297.8	324.1	337.9
55°	248.5	256.6	284.1	312.7	327.6
57.5°	231.4	238.2	269.2	301.2	318.4
60°	209.6	218.8	254.3	288.6	305.8
62.5°	186.7	200.4	239.4	274.9	293.2
65°	164.9	181.0	225.6	261.1	279.5
67.5°	145.5	162.6	208.5	246.3	263.4
70°	122.6	144.3	191.3	227.9	247.4
72.5°	101.9	126.0	171.8	208.5	225.6
75°	81.3	107.7	152.3	183.3	193.6
77.5°	63.0	88.2	130.6	139.7	140.9
80°	47.0	69.9	97.4	98.5	101.9
82.5°	32.1	49.3	63.0	68.7	69.9
85°	20.6	28.6	35.5	36.7	38.9
87.5°	9.2	10.3	12.6	11.5	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)