

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: P308148

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP250-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: P308148
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-L82765-HRP-CP250-W2A-U-5700K
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: 1650.0 lumens
Efficiency: N/A
Efficacy: 85.1 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

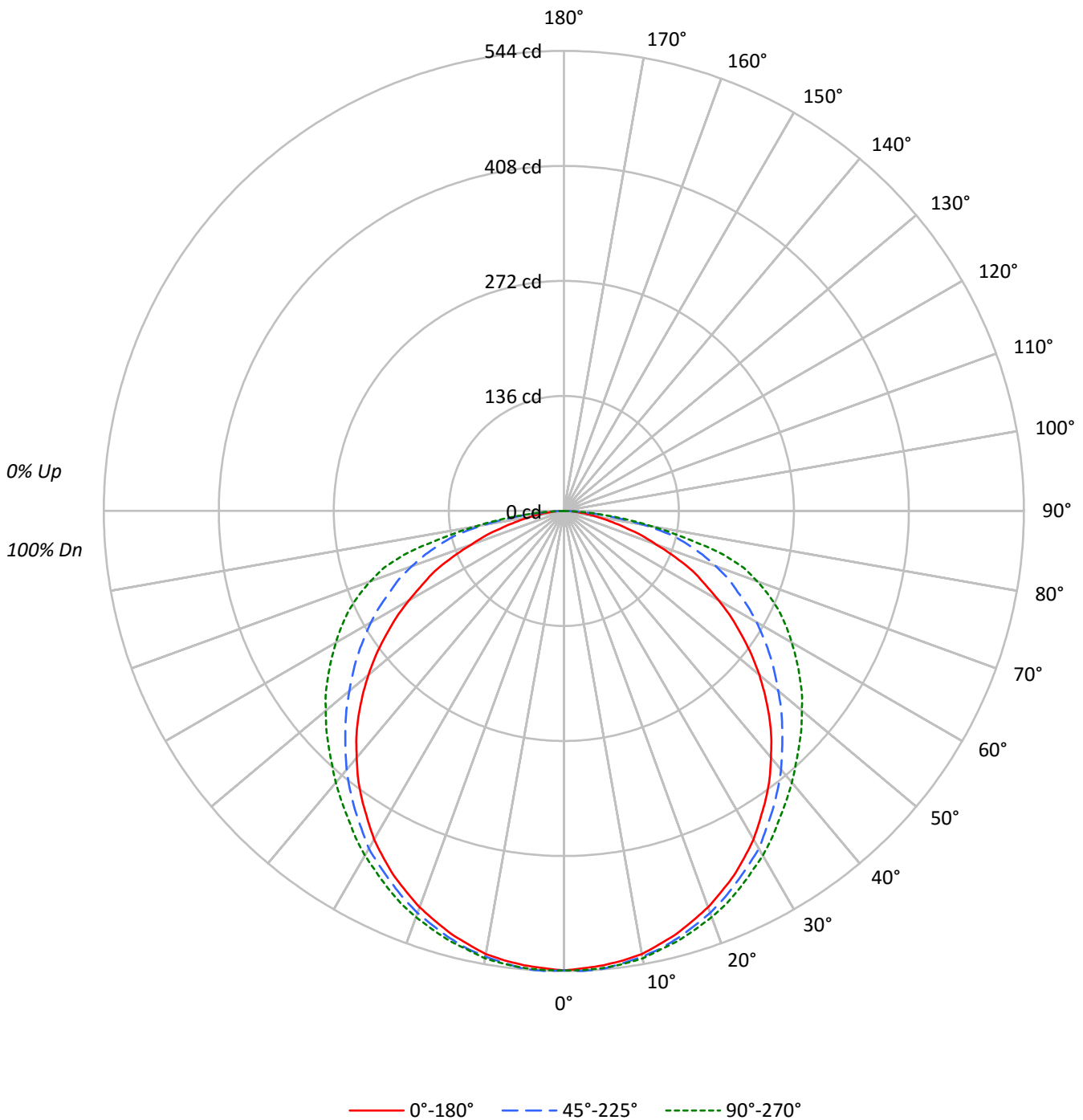
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1462	1462	1462
5°	1457	1468	1465
10°	1453	1462	1468
15°	1441	1456	1464
20°	1428	1449	1464
25°	1412	1437	1462
30°	1394	1433	1462
35°	1368	1416	1460
40°	1338	1404	1474
45°	1307	1390	1497
50°	1263	1386	1538
55°	1206	1397	1597
60°	1137	1417	1675
65°	1074	1445	1789
70°	917	1507	1917
75°	768	1569	1991
80°	629	1516	1661
85°	546	1124	1223



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	3.1
10°-20°	147.3	8.9
20°-30°	223.2	13.5
30°-40°	269.6	16.3
40°-50°	283.2	17.2
50°-60°	266.5	16.2
60°-70°	222.2	13.5
70°-80°	147.2	8.9
80°-90°	39.2	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°	422.0	25.6
0°-40°	691.6	41.9
0°-60°	1241.3	75.2
0°-90°	1650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	539	540	543	543	542	51
15°	517	519	522	525	526	146
25°	476	479	484	490	492	219
35°	416	420	431	440	444	260
45°	344	349	365	384	393	265
55°	257	268	298	328	340	230
65°	169	183	227	264	281	164
75°	74	103	151	182	192	80
85°	18	27	36	40	40	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	543.3	543.3	543.3	543.3	543.3
2.5°	541.2	542.3	544.4	544.4	543.3
5°	539.2	540.2	543.3	543.3	542.3
7.5°	536.0	537.1	539.2	541.2	540.2
10°	531.9	532.9	535.0	537.1	537.1
12.5°	524.6	525.6	529.8	530.8	530.8
15°	517.3	519.4	522.5	524.6	525.6
17.5°	507.9	510.0	514.2	518.3	518.3
20°	498.6	500.7	505.9	510.0	511.1
22.5°	487.1	490.2	495.4	500.7	502.7
25°	475.7	478.8	484.0	490.2	492.3
27.5°	462.1	465.3	472.5	479.8	480.9
30°	448.6	451.7	461.1	467.3	470.5
32.5°	432.0	436.1	445.5	454.9	458.0
35°	416.3	420.5	430.9	440.3	444.4
37.5°	399.7	403.9	415.3	426.8	432.0
40°	381.0	386.2	399.7	412.2	419.5
42.5°	363.3	368.5	382.0	398.6	405.9
45°	343.5	348.7	365.3	384.1	393.4
47.5°	322.7	328.9	348.7	371.6	381.0
50°	301.8	309.1	331.0	357.0	367.4
52.5°	280.0	289.4	314.3	342.4	354.9
55°	257.1	268.5	297.7	327.9	340.4
57.5°	235.2	245.6	280.0	312.3	325.8
60°	211.3	224.8	263.3	296.6	311.2
62.5°	188.4	203.0	245.6	281.0	296.6
65°	168.6	183.2	226.9	264.4	281.0
67.5°	142.6	162.4	211.3	246.7	263.3
70°	116.6	143.6	191.5	227.9	243.6
72.5°	96.8	122.8	171.7	208.2	222.7
75°	73.9	103.0	150.9	182.1	191.5
77.5°	55.2	85.4	129.1	144.7	145.7
80°	40.6	65.6	97.8	103.0	107.2
82.5°	28.1	45.8	63.5	69.7	71.8
85°	17.7	27.1	36.4	39.6	39.6
87.5°	9.4	10.4	12.5	12.5	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)