

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: P308645

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CA08-W2A-U-2700K**

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: P308645
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA08-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 2014.0 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

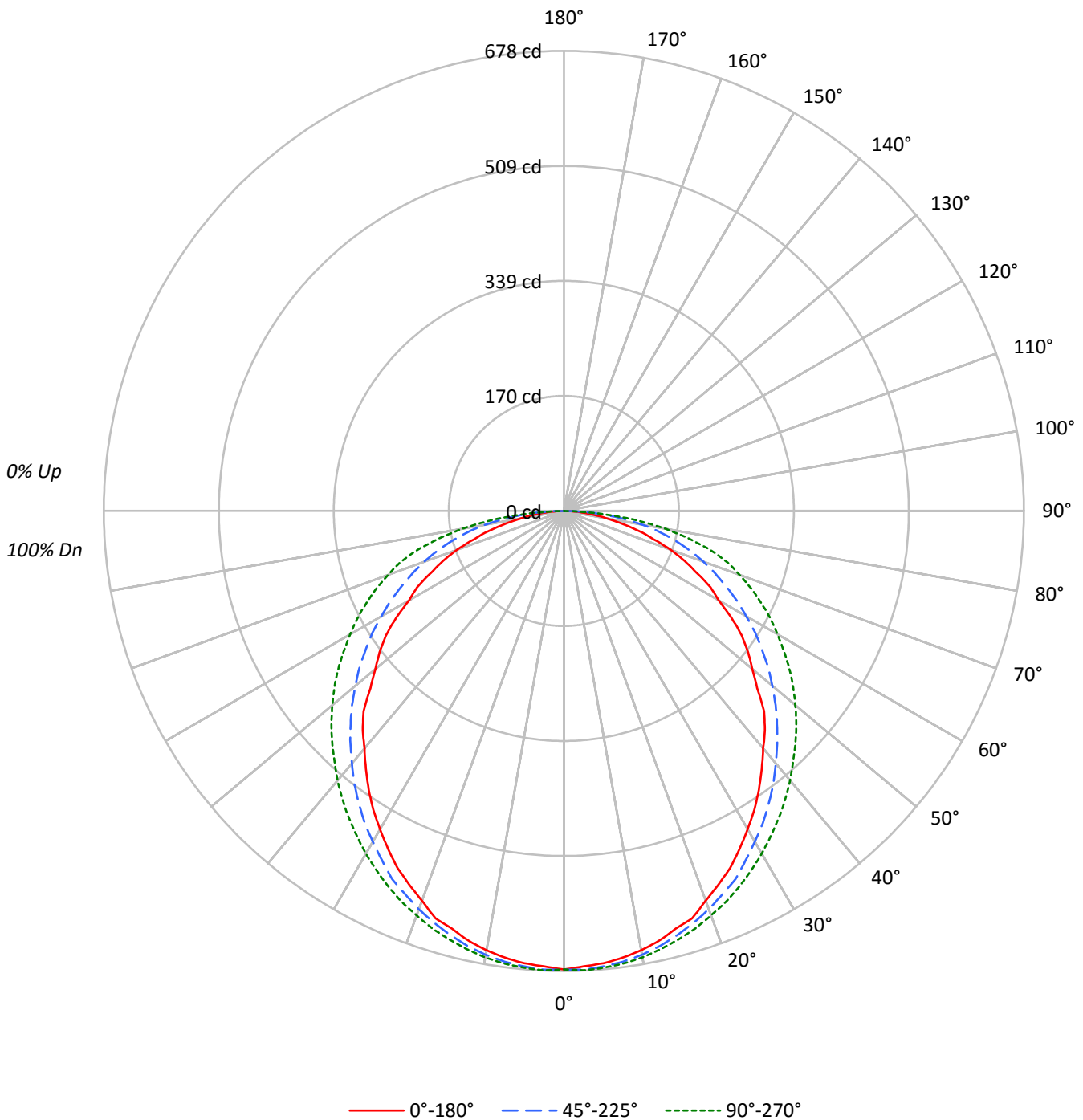
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	90	92	89	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	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1818	1818	1818
5°	1807	1820	1825
10°	1796	1815	1825
15°	1775	1802	1821
20°	1750	1789	1816
25°	1723	1777	1814
30°	1683	1749	1812
35°	1646	1729	1814
40°	1605	1707	1822
45°	1588	1691	1838
50°	1517	1679	1864
55°	1501	1673	1904
60°	1417	1671	1956
65°	1375	1682	2044
70°	1319	1721	2169
75°	1203	1774	2335
80°	1031	1838	2360
85°	834	1757	2022



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.9	3.2
10°-20°	182.4	9.1
20°-30°	274.5	13.6
30°-40°	329.5	16.4
40°-50°	344.4	17.1
50°-60°	320.9	15.9
60°-70°	263.2	13.1
70°-80°	177.4	8.8
80°-90°	57.8	2.9
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°	520.9	25.9
0°-40°	850.3	42.2
0°-60°	1515.6	75.3
0°-90°	2014.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2014.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	669	671	674	675	676	63
15°	637	641	647	653	654	180
25°	580	584	599	607	611	267
35°	501	508	526	545	552	313
45°	417	420	444	471	483	319
55°	320	326	357	390	406	284
65°	216	226	264	303	321	215
75°	116	128	171	209	225	122
85°	27	39	57	66	66	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	675.7	675.7	675.7	675.7	675.7
2.5°	671.9	673.8	676.7	677.6	677.6
5°	669.0	670.9	673.8	674.8	675.7
7.5°	664.1	666.1	669.9	671.9	672.8
10°	657.4	659.3	664.1	667.0	668.0
12.5°	648.7	650.7	656.4	660.3	661.3
15°	637.2	641.0	646.8	652.6	653.5
17.5°	629.4	628.5	636.2	642.9	644.9
20°	611.1	616.0	624.6	632.3	634.3
22.5°	595.7	599.6	611.1	619.8	623.7
25°	580.3	584.1	598.6	607.3	611.1
27.5°	561.0	566.8	580.3	592.8	597.6
30°	541.7	547.5	562.9	577.4	583.2
32.5°	522.4	529.2	545.6	561.0	567.8
35°	501.2	508.0	526.3	544.6	552.3
37.5°	479.1	487.7	507.0	527.3	535.9
40°	456.9	465.6	485.8	509.0	518.6
42.5°	438.6	442.4	465.6	490.6	500.3
45°	417.4	420.3	444.4	471.4	482.9
47.5°	386.5	397.1	423.2	453.0	464.6
50°	362.4	374.0	401.0	432.8	445.3
52.5°	342.2	349.9	379.8	411.6	426.1
55°	320.0	325.8	356.7	390.4	405.8
57.5°	293.0	303.6	334.5	369.2	384.6
60°	263.2	276.6	310.4	348.0	363.4
62.5°	243.9	251.6	288.2	325.8	343.2
65°	215.9	225.6	264.1	302.7	321.0
67.5°	192.8	202.4	241.9	280.5	298.8
70°	167.7	177.4	218.8	257.4	275.7
72.5°	138.8	152.3	195.7	234.2	253.5
75°	115.7	128.2	170.6	209.2	224.6
77.5°	89.6	106.0	145.6	177.4	188.9
80°	66.5	82.9	118.6	141.7	152.3
82.5°	45.3	61.7	88.7	106.0	111.8
85°	27.0	38.6	56.9	66.5	65.5
87.5°	12.5	16.4	23.1	23.1	22.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)