

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: P308378

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-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: P308378
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-L82765-RDP-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1467.0 lumens
Efficiency: N/A
Efficacy: 76.8 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

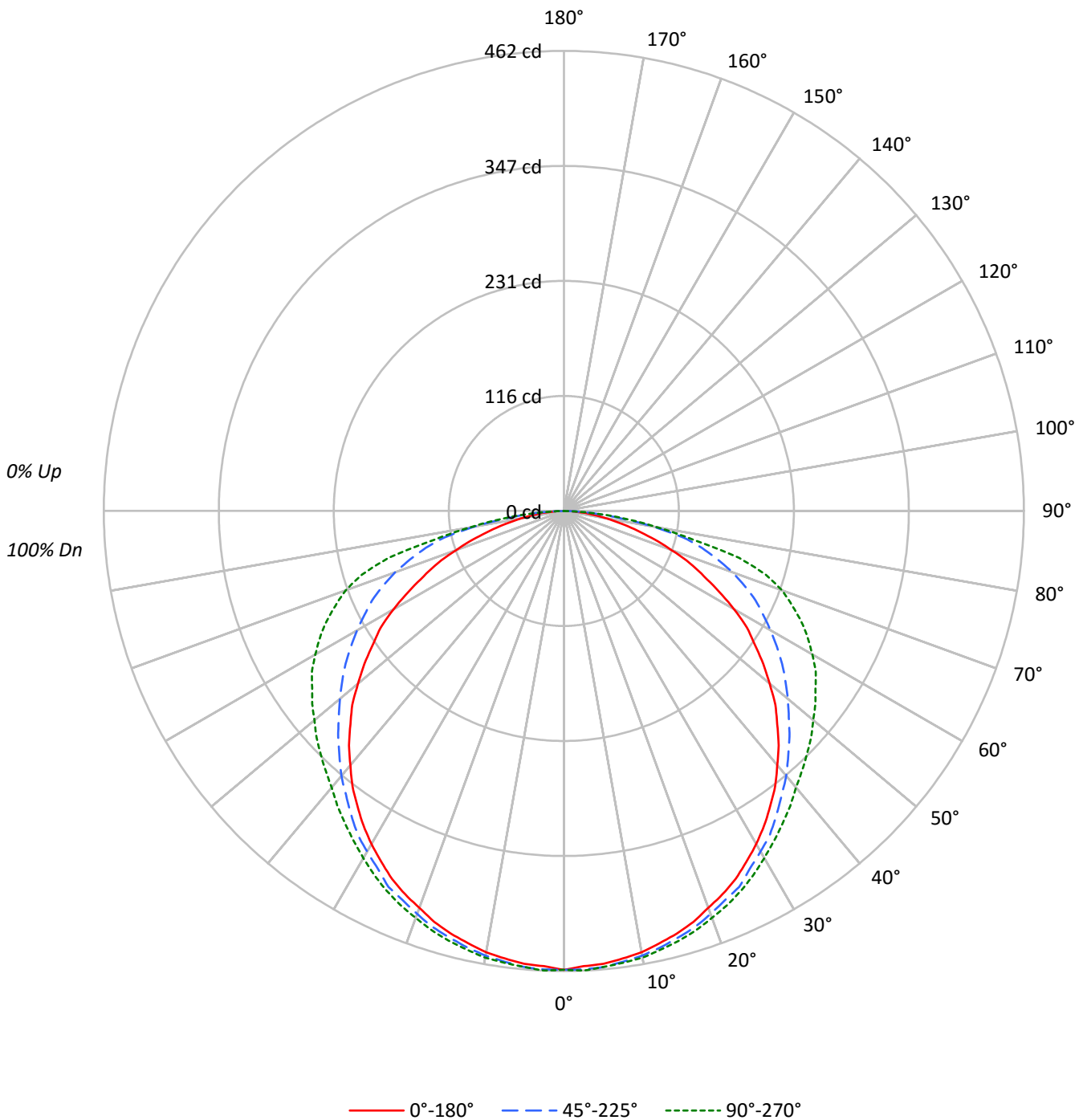
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1240	1240	1240
5°	1233	1242	1242
10°	1230	1239	1244
15°	1224	1236	1245
20°	1214	1233	1245
25°	1211	1237	1250
30°	1200	1227	1251
35°	1188	1223	1259
40°	1172	1221	1274
45°	1154	1220	1314
50°	1129	1229	1369
55°	1099	1255	1448
60°	1063	1290	1551
65°	989	1354	1677
70°	909	1418	1834
75°	796	1492	1896
80°	685	1421	1488
85°	599	1034	1133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	3.0
10°-20°	125.2	8.5
20°-30°	190.9	13.0
30°-40°	233.2	15.9
40°-50°	249.3	17.0
50°-60°	240.6	16.4
60°-70°	207.1	14.1
70°-80°	140.1	9.6
80°-90°	37.0	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°	359.7	24.5
0°-40°	592.8	40.4
0°-60°	1082.7	73.8
0°-90°	1467.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1467.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	461	461	461	461	461	
5°	456	458	460	460	460	43
15°	439	440	444	446	447	124
25°	408	410	417	419	421	188
35°	362	365	372	380	383	226
45°	303	309	320	337	345	234
55°	234	242	268	295	309	210
65°	155	170	213	246	263	155
75°	77	101	144	173	182	82
85°	19	27	34	34	37	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	460.8	460.8	460.8	460.8	460.8
2.5°	457.6	458.7	460.8	460.8	461.9
5°	456.5	457.6	459.7	459.7	459.7
7.5°	453.3	454.3	456.5	457.6	457.6
10°	450.0	451.1	453.3	454.3	455.4
12.5°	444.6	445.7	448.9	451.1	451.1
15°	439.2	440.3	443.5	445.7	446.8
17.5°	432.8	434.9	438.1	440.3	441.4
20°	424.1	426.3	430.6	433.8	434.9
22.5°	416.6	418.7	423.0	426.3	428.4
25°	407.9	410.1	416.6	418.7	420.9
27.5°	397.1	399.3	404.7	409.0	412.2
30°	386.3	388.5	395.0	400.4	402.5
32.5°	374.5	377.7	385.3	389.6	392.8
35°	361.5	364.8	372.3	379.9	383.1
37.5°	348.6	351.8	359.4	369.1	373.4
40°	333.5	337.8	347.5	360.4	362.6
42.5°	319.4	324.8	333.5	348.6	354.0
45°	303.2	308.6	320.5	336.7	345.3
47.5°	288.1	293.5	306.5	325.9	336.7
50°	269.8	277.3	293.5	316.2	327.0
52.5°	252.5	259.0	280.6	305.4	318.4
55°	234.2	241.7	267.6	294.6	308.6
57.5°	218.0	224.5	253.6	283.8	300.0
60°	197.5	206.1	239.6	272.0	288.1
62.5°	175.9	188.9	225.5	259.0	276.3
65°	155.4	170.5	212.6	246.1	263.3
67.5°	137.1	153.2	196.4	232.0	248.2
70°	115.5	136.0	180.2	214.8	233.1
72.5°	96.0	118.7	161.9	196.4	212.6
75°	76.6	101.4	143.5	172.7	182.4
77.5°	59.4	83.1	123.0	131.7	132.7
80°	44.2	65.8	91.7	92.8	96.0
82.5°	30.2	46.4	59.4	64.8	65.8
85°	19.4	27.0	33.5	34.5	36.7
87.5°	8.6	9.7	11.9	10.8	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)