

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: P308379

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-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: P308379
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-4500K
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: 1493.0 lumens
Efficiency: N/A
Efficacy: 77.4 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

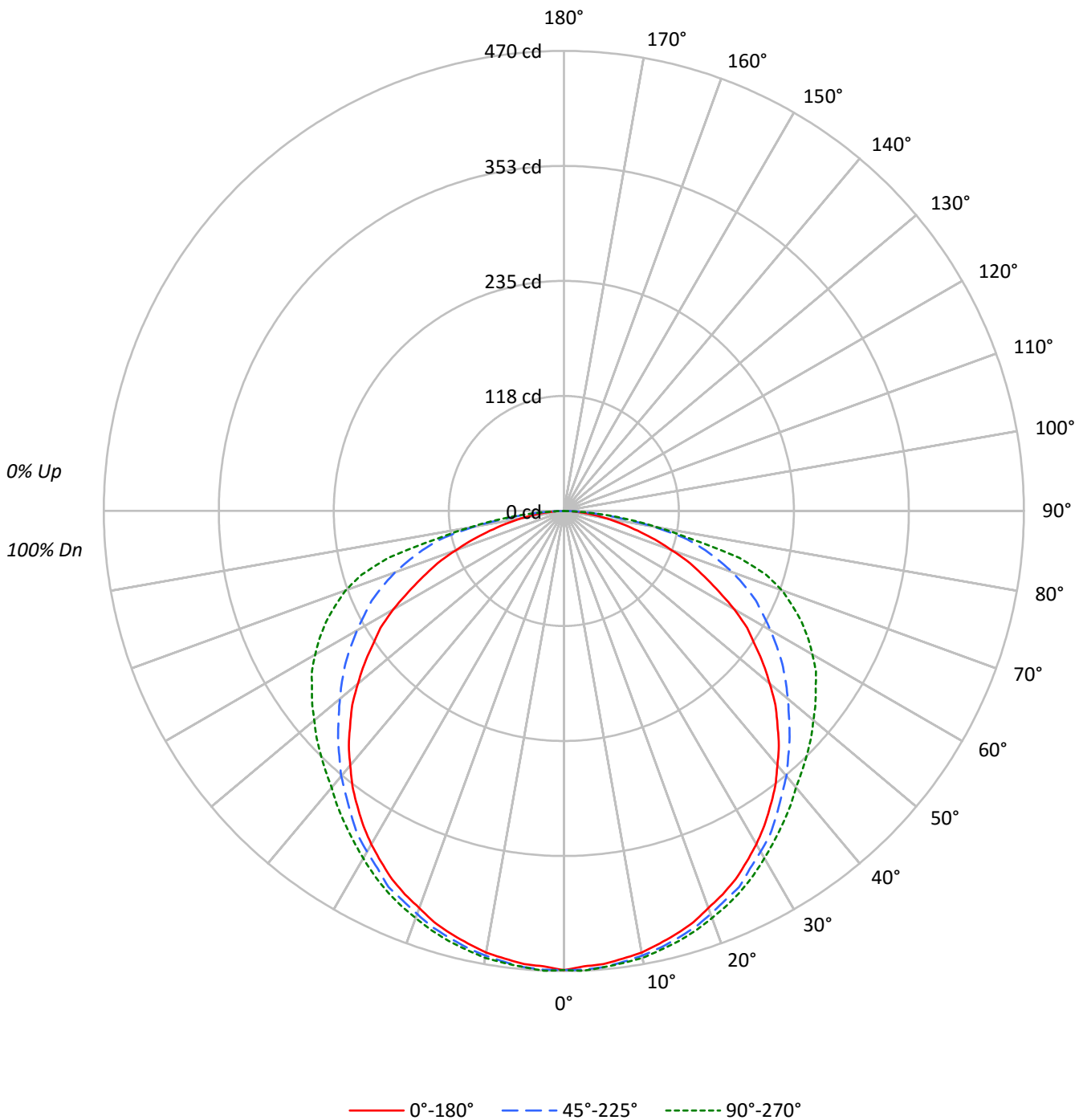
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	100	100	100	100	100		
	1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82	82	82	82	82	82		
	2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67	67	67	67	67	67		
	3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55	55	55	55	55	55		
	4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47	47	47	47	47	47		
	5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40	40	40	40	40	40		
	6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35	35	35	35	35	35		
	7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31	31	31	31	31	31		
	8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27	27	27	27	27	27		
	9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24	24	24	24	24	24		
	10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22	22	22	22	22	22		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1262	1262	1262
5°	1255	1264	1264
10°	1251	1260	1267
15°	1245	1258	1267
20°	1236	1255	1267
25°	1233	1259	1272
30°	1222	1249	1273
35°	1209	1245	1281
40°	1192	1242	1296
45°	1174	1241	1338
50°	1150	1250	1393
55°	1118	1278	1474
60°	1082	1312	1578
65°	1007	1378	1706
70°	924	1443	1866
75°	811	1519	1930
80°	697	1447	1514
85°	611	1050	1152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	3.0
10°-20°	127.4	8.5
20°-30°	194.3	13.0
30°-40°	237.3	15.9
40°-50°	253.7	17.0
50°-60°	244.9	16.4
60°-70°	210.8	14.1
70°-80°	142.6	9.6
80°-90°	37.6	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°	366.1	24.5
0°-40°	603.3	40.4
0°-60°	1101.9	73.8
0°-90°	1493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	469	469	469	469	469	
5°	465	466	468	468	468	44
15°	447	448	451	454	455	126
25°	415	417	424	426	428	191
35°	368	371	379	387	390	230
45°	309	314	326	343	352	238
55°	238	246	272	300	314	214
65°	158	174	216	250	268	157
75°	78	103	146	176	186	84
85°	20	28	34	35	37	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	469.0	469.0	469.0	469.0	469.0
2.5°	465.7	466.8	469.0	469.0	470.1
5°	464.6	465.7	467.9	467.9	467.9
7.5°	461.3	462.4	464.6	465.7	465.7
10°	458.0	459.1	461.3	462.4	463.5
12.5°	452.5	453.6	456.9	459.1	459.1
15°	447.0	448.1	451.4	453.6	454.7
17.5°	440.4	442.6	445.9	448.1	449.2
20°	431.6	433.8	438.2	441.5	442.6
22.5°	423.9	426.1	430.5	433.8	436.0
25°	415.2	417.4	423.9	426.1	428.3
27.5°	404.2	406.4	411.9	416.3	419.6
30°	393.2	395.4	402.0	407.5	409.7
32.5°	381.1	384.4	392.1	396.5	399.8
35°	367.9	371.2	378.9	386.6	389.9
37.5°	354.8	358.0	365.7	375.6	380.0
40°	339.4	343.8	353.7	366.8	369.0
42.5°	325.1	330.6	339.4	354.8	360.2
45°	308.6	314.1	326.2	342.7	351.5
47.5°	293.2	298.7	311.9	331.7	342.7
50°	274.6	282.3	298.7	321.8	332.8
52.5°	257.0	263.6	285.6	310.8	324.0
55°	238.3	246.0	272.4	299.8	314.1
57.5°	221.9	228.4	258.1	288.9	305.3
60°	201.0	209.8	243.8	276.8	293.2
62.5°	179.0	192.2	229.5	263.6	281.2
65°	158.2	173.5	216.4	250.4	268.0
67.5°	139.5	156.0	199.9	236.1	252.6
70°	117.5	138.4	183.4	218.6	237.2
72.5°	97.7	120.8	164.7	199.9	216.4
75°	78.0	103.2	146.1	175.7	185.6
77.5°	60.4	84.6	125.2	134.0	135.1
80°	45.0	67.0	93.4	94.5	97.7
82.5°	30.8	47.2	60.4	65.9	67.0
85°	19.8	27.5	34.0	35.1	37.3
87.5°	8.8	9.9	12.1	11.0	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)