

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: P312616

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-CA08-W2A-U-3500K**

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: P312616
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-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 1469.0 lumens
Efficiency: N/A
Efficacy: 77.7 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

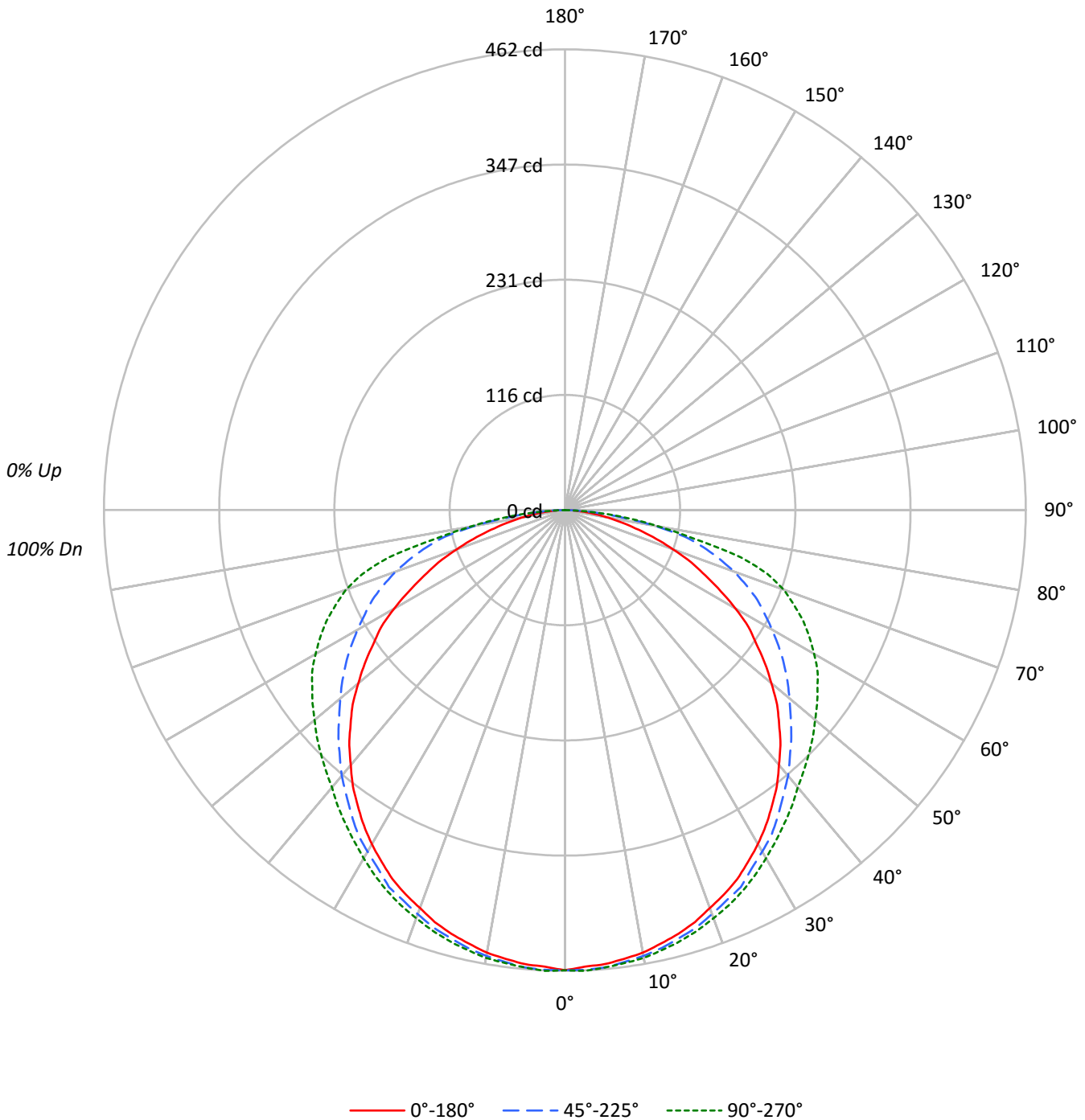
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1242	1242	1242
5°	1235	1244	1244
10°	1231	1240	1246
15°	1225	1237	1246
20°	1216	1235	1247
25°	1213	1238	1252
30°	1202	1229	1253
35°	1189	1225	1260
40°	1173	1222	1276
45°	1156	1222	1316
50°	1131	1230	1371
55°	1100	1257	1450
60°	1065	1291	1553
65°	991	1356	1679
70°	910	1420	1836
75°	797	1494	1899
80°	687	1424	1491
85°	602	1034	1133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	3.0
10°-20°	125.3	8.5
20°-30°	191.2	13.0
30°-40°	233.5	15.9
40°-50°	249.6	17.0
50°-60°	241.0	16.4
60°-70°	207.4	14.1
70°-80°	140.3	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°	360.2	24.5
0°-40°	593.6	40.4
0°-60°	1084.2	73.8
0°-90°	1469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1469.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	461	461	461	461	461	
5°	457	458	460	460	460	43
15°	440	441	444	446	447	124
25°	408	411	417	419	422	188
35°	362	365	373	380	384	227
45°	304	309	321	337	346	234
55°	234	242	268	295	309	210
65°	156	171	213	246	264	155
75°	77	102	144	173	183	82
85°	20	27	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°	461.4	461.4	461.4	461.4	461.4
2.5°	458.2	459.3	461.4	461.4	462.5
5°	457.1	458.2	460.4	460.4	460.4
7.5°	453.9	455.0	457.1	458.2	458.2
10°	450.6	451.7	453.9	455.0	456.0
12.5°	445.2	446.3	449.6	451.7	451.7
15°	439.8	440.9	444.1	446.3	447.4
17.5°	433.3	435.5	438.7	440.9	442.0
20°	424.7	426.9	431.2	434.4	435.5
22.5°	417.1	419.3	423.6	426.9	429.0
25°	408.5	410.6	417.1	419.3	421.5
27.5°	397.7	399.8	405.2	409.6	412.8
30°	386.9	389.0	395.5	400.9	403.1
32.5°	375.0	378.2	385.8	390.1	393.4
35°	362.0	365.3	372.8	380.4	383.6
37.5°	349.1	352.3	359.9	369.6	373.9
40°	333.9	338.2	348.0	360.9	363.1
42.5°	319.9	325.3	333.9	349.1	354.5
45°	303.7	309.1	321.0	337.2	345.8
47.5°	288.5	293.9	306.9	326.4	337.2
50°	270.2	277.7	293.9	316.6	327.4
52.5°	252.9	259.4	281.0	305.8	318.8
55°	234.5	242.1	268.0	295.0	309.1
57.5°	218.3	224.8	254.0	284.2	300.4
60°	197.8	206.4	239.9	272.3	288.5
62.5°	176.1	189.1	225.9	259.4	276.6
65°	155.6	170.7	212.9	246.4	263.7
67.5°	137.2	153.5	196.7	232.3	248.6
70°	115.6	136.2	180.5	215.0	233.4
72.5°	96.2	118.9	162.1	196.7	212.9
75°	76.7	101.6	143.7	172.9	182.6
77.5°	59.4	83.2	123.2	131.8	132.9
80°	44.3	65.9	91.9	92.9	96.2
82.5°	30.3	46.5	59.4	64.8	65.9
85°	19.5	27.0	33.5	34.6	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)