

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: P314191

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-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: P314191
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-S-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 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: 2914.0 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

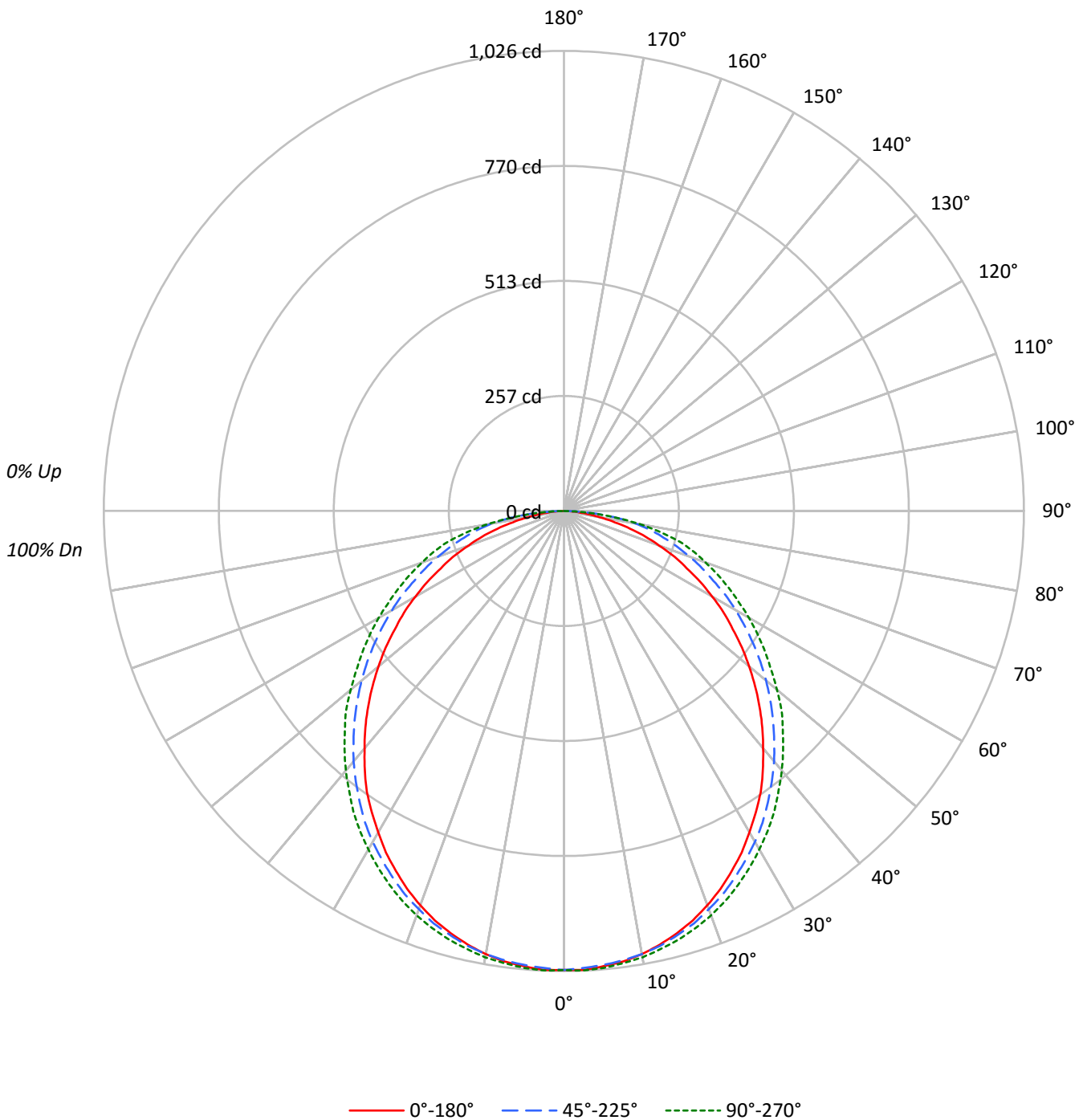
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1377	1377	1377
5°	1376	1373	1381
10°	1371	1371	1381
15°	1358	1364	1378
20°	1340	1353	1374
25°	1315	1340	1366
30°	1286	1324	1355
35°	1257	1303	1344
40°	1214	1281	1328
45°	1175	1256	1314
50°	1129	1232	1298
55°	1079	1209	1285
60°	1029	1190	1283
65°	964	1170	1291
70°	892	1176	1325
75°	799	1198	1400
80°	645	1269	1370
85°	486	1115	1085



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.9	3.3
10°-20°	276.9	9.5
20°-30°	416.3	14.3
30°-40°	495.9	17.0
40°-50°	507.5	17.4
50°-60°	456.9	15.7
60°-70°	358.8	12.3
70°-80°	232.9	8.0
80°-90°	72.0	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°	790.1	27.1
0°-40°	1286.0	44.1
0°-60°	2250.3	77.2
0°-90°	2914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2914.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1024	1024	1024	1024	1024	
5°	1019	1021	1016	1022	1023	97
15°	975	977	979	988	990	275
25°	886	893	902	917	920	408
35°	766	775	793	813	818	478
45°	617	632	660	685	690	476
55°	460	480	516	542	548	412
65°	303	326	368	398	405	301
75°	154	183	230	262	269	163
85°	32	58	72	70	70	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1023.7	1023.7	1023.7	1023.7	1023.7
2.5°	1024.6	1024.6	1020.0	1024.6	1025.6
5°	1019.1	1020.9	1016.3	1021.9	1022.8
7.5°	1013.5	1013.5	1010.7	1016.3	1017.2
10°	1003.3	1004.3	1003.3	1009.8	1010.7
12.5°	990.4	992.2	993.2	999.6	1000.6
15°	974.7	977.4	979.3	987.6	989.5
17.5°	957.1	959.8	964.5	973.7	975.6
20°	935.8	939.5	945.0	957.1	959.8
22.5°	912.6	916.3	925.6	936.7	941.3
25°	885.8	893.2	902.5	917.3	920.0
27.5°	859.0	865.4	877.5	893.2	896.9
30°	827.5	837.7	852.5	868.2	871.9
32.5°	796.9	807.1	824.7	841.4	846.0
35°	765.5	774.7	793.2	812.7	818.2
37.5°	729.4	741.4	761.8	781.2	786.8
40°	691.4	706.2	729.4	749.7	756.2
42.5°	655.3	671.1	694.2	716.4	723.8
45°	617.4	632.2	659.9	684.9	690.5
47.5°	578.5	595.2	624.8	649.8	659.0
50°	539.6	557.2	588.7	614.6	620.1
52.5°	500.7	519.3	552.6	580.3	583.1
55°	460.0	480.4	515.6	542.4	548.0
57.5°	423.0	440.6	478.5	506.3	512.8
60°	382.3	401.7	442.4	468.4	476.7
62.5°	343.4	363.8	406.3	432.3	439.7
65°	302.7	325.8	367.5	398.0	405.4
67.5°	267.5	289.7	334.1	363.8	371.2
70°	226.8	251.8	299.0	329.5	336.9
72.5°	191.6	217.5	264.7	294.3	305.4
75°	153.6	183.3	230.5	261.9	269.3
77.5°	116.6	150.9	199.0	223.1	223.1
80°	83.3	119.4	163.8	174.9	176.8
82.5°	54.6	89.8	121.3	120.3	120.3
85°	31.5	58.3	72.2	70.3	70.3
87.5°	12.0	24.1	25.9	25.9	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)