

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: P311213

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-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: P311213
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-L82765-S-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2909.0 lumens
Efficiency: N/A
Efficacy: 122.7 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

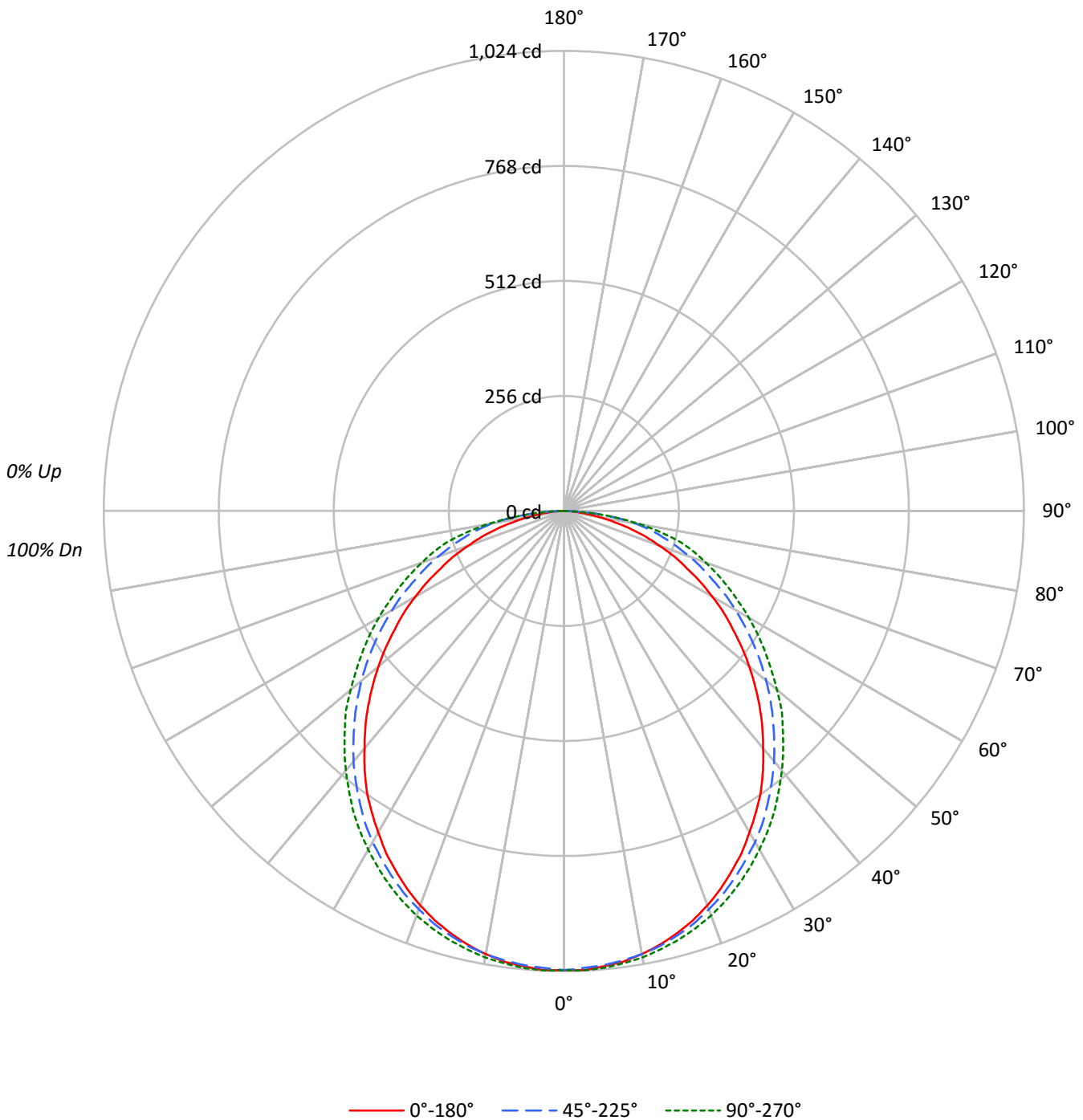
Input Watts (W): 23.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1375	1375	1375
5°	1374	1370	1379
10°	1368	1368	1379
15°	1355	1362	1376
20°	1338	1351	1372
25°	1313	1337	1364
30°	1283	1322	1352
35°	1255	1301	1342
40°	1212	1279	1326
45°	1173	1254	1312
50°	1128	1230	1296
55°	1077	1207	1283
60°	1027	1189	1281
65°	962	1168	1288
70°	891	1174	1323
75°	797	1196	1398
80°	645	1267	1368
85°	485	1113	1084



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.7	3.3
10°-20°	276.4	9.5
20°-30°	415.6	14.3
30°-40°	495.0	17.0
40°-50°	506.6	17.4
50°-60°	456.1	15.7
60°-70°	358.2	12.3
70°-80°	232.5	8.0
80°-90°	71.9	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°	788.8	27.1
0°-40°	1283.8	44.1
0°-60°	2246.5	77.2
0°-90°	2909.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2909.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1022	1022	1022	1022	1022	
5°	1017	1019	1015	1020	1021	97
15°	973	976	978	986	988	274
25°	884	892	901	916	918	407
35°	764	773	792	811	817	477
45°	616	631	659	684	689	475
55°	459	480	515	542	547	412
65°	302	325	367	397	405	301
75°	153	183	230	262	269	162
85°	31	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°	1022.0	1022.0	1022.0	1022.0	1022.0
2.5°	1022.9	1022.9	1018.3	1022.9	1023.8
5°	1017.3	1019.2	1014.6	1020.1	1021.0
7.5°	1011.8	1011.8	1009.0	1014.6	1015.5
10°	1001.6	1002.5	1001.6	1008.1	1009.0
12.5°	988.7	990.5	991.5	997.9	998.9
15°	973.0	975.8	977.6	985.9	987.8
17.5°	955.4	958.2	962.8	972.1	973.9
20°	934.2	937.9	943.4	955.4	958.2
22.5°	911.1	914.8	924.0	935.1	939.7
25°	884.3	891.7	900.9	915.7	918.5
27.5°	857.5	863.9	876.0	891.7	895.4
30°	826.1	836.2	851.0	866.7	870.4
32.5°	795.6	805.7	823.3	839.9	844.5
35°	764.2	773.4	791.9	811.3	816.8
37.5°	728.1	740.1	760.5	779.9	785.4
40°	690.2	705.0	728.1	748.4	754.9
42.5°	654.2	669.9	693.0	715.2	722.6
45°	616.3	631.1	658.8	683.8	689.3
47.5°	577.5	594.1	623.7	648.7	657.9
50°	538.7	556.3	587.7	613.5	619.1
52.5°	499.9	518.4	551.6	579.4	582.1
55°	459.2	479.6	514.7	541.5	547.0
57.5°	422.3	439.8	477.7	505.4	511.9
60°	381.6	401.0	441.7	467.5	475.9
62.5°	342.8	363.1	405.6	431.5	438.9
65°	302.1	325.3	366.8	397.3	404.7
67.5°	267.0	289.2	333.6	363.1	370.5
70°	226.4	251.3	298.5	328.9	336.3
72.5°	191.3	217.1	264.3	293.8	304.9
75°	153.4	183.0	230.1	261.5	268.9
77.5°	116.4	150.6	198.7	222.7	222.7
80°	83.2	119.2	163.5	174.6	176.5
82.5°	54.5	89.6	121.0	120.1	120.1
85°	31.4	58.2	72.1	70.2	70.2
87.5°	12.0	24.0	25.9	25.9	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)