

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: P314197

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CA125-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: P314197
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3048.0 lumens
Efficiency: N/A
Efficacy: 127.5 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

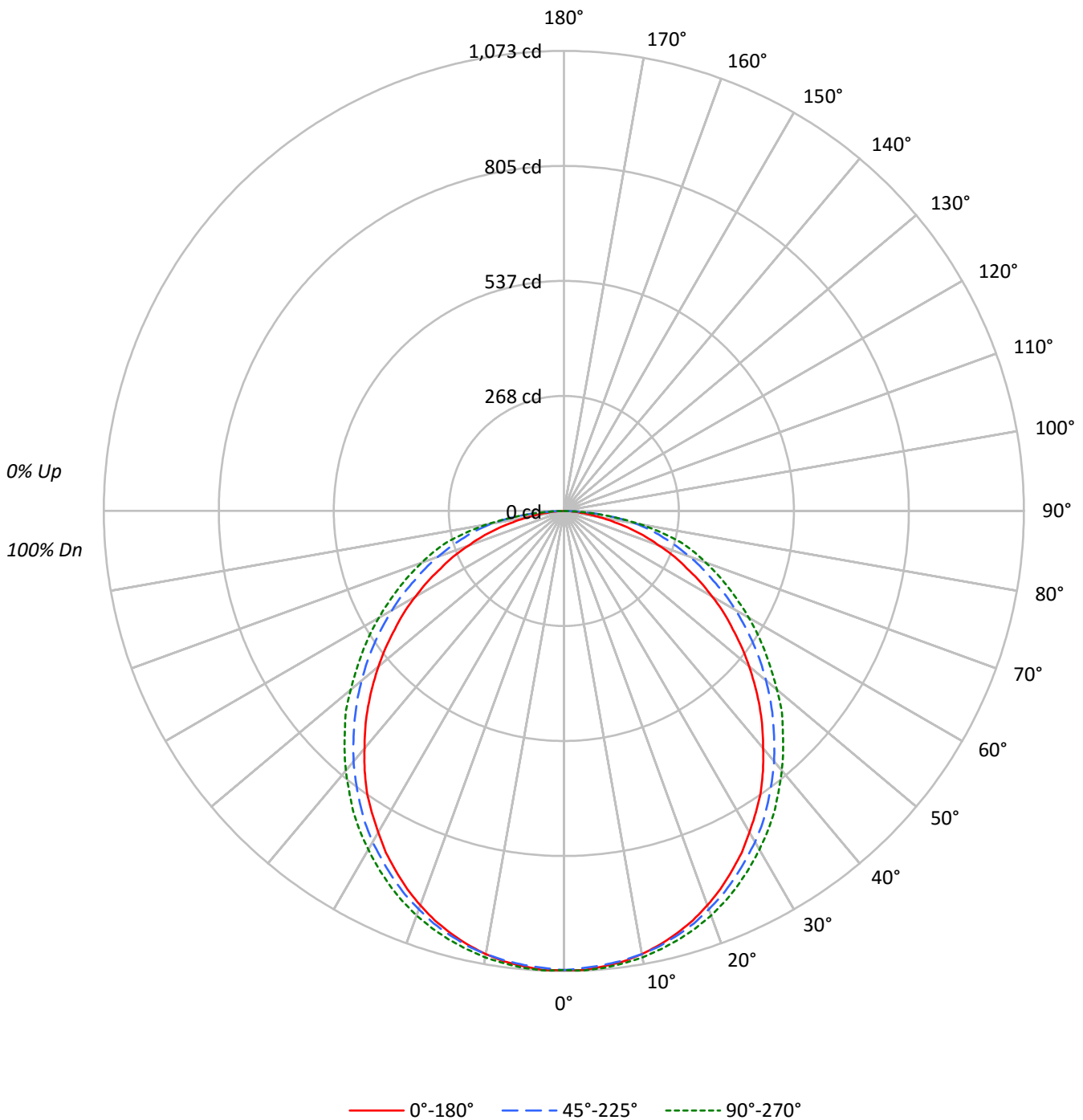
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1441	1441	1441
5°	1440	1436	1445
10°	1434	1434	1444
15°	1420	1427	1442
20°	1401	1415	1438
25°	1375	1401	1429
30°	1345	1385	1417
35°	1315	1363	1406
40°	1270	1340	1389
45°	1229	1314	1374
50°	1181	1289	1358
55°	1129	1265	1344
60°	1076	1245	1342
65°	1008	1224	1350
70°	933	1230	1386
75°	835	1253	1464
80°	675	1328	1433
85°	508	1166	1136



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.4	3.3
10°-20°	289.7	9.5
20°-30°	435.4	14.3
30°-40°	518.6	17.0
40°-50°	530.8	17.4
50°-60°	477.9	15.7
60°-70°	375.3	12.3
70°-80°	243.6	8.0
80°-90°	75.3	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°	826.4	27.1
0°-40°	1345.1	44.1
0°-60°	2353.8	77.2
0°-90°	3048.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3048.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1071	1071	1071	1071	1071	
5°	1066	1068	1063	1069	1070	101
15°	1020	1022	1024	1033	1035	287
25°	926	934	944	959	962	427
35°	801	810	830	850	856	499
45°	646	661	690	716	722	498
55°	481	502	539	567	573	431
65°	317	341	384	416	424	315
75°	161	192	241	274	282	170
85°	33	61	76	74	74	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1070.8	1070.8	1070.8	1070.8	1070.8
2.5°	1071.8	1071.8	1066.9	1071.8	1072.7
5°	1065.9	1067.9	1063.0	1068.8	1069.8
7.5°	1060.1	1060.1	1057.2	1063.0	1064.0
10°	1049.5	1050.5	1049.5	1056.3	1057.2
12.5°	1035.9	1037.9	1038.8	1045.6	1046.6
15°	1019.5	1022.4	1024.3	1033.0	1035.0
17.5°	1001.1	1004.0	1008.8	1018.5	1020.4
20°	978.8	982.7	988.5	1001.1	1004.0
22.5°	954.6	958.5	968.2	979.8	984.6
25°	926.5	934.3	944.0	959.4	962.3
27.5°	898.5	905.2	917.8	934.3	938.1
30°	865.5	876.2	891.7	908.1	912.0
32.5°	833.6	844.2	862.6	880.1	884.9
35°	800.7	810.3	829.7	850.0	855.9
37.5°	762.9	775.5	796.8	817.1	822.9
40°	723.2	738.7	762.9	784.2	791.0
42.5°	685.5	701.9	726.1	749.4	757.1
45°	645.8	661.3	690.3	716.4	722.2
47.5°	605.1	622.5	653.5	679.6	689.3
50°	564.4	582.8	615.7	642.9	648.7
52.5°	523.8	543.1	578.0	607.0	609.9
55°	481.2	502.5	539.3	567.3	573.1
57.5°	442.4	460.8	500.5	529.6	536.4
60°	399.8	420.2	462.8	489.9	498.6
62.5°	359.2	380.5	425.0	452.1	459.9
65°	316.6	340.8	384.4	416.3	424.1
67.5°	279.8	303.0	349.5	380.5	388.2
70°	237.2	263.3	312.7	344.7	352.4
72.5°	200.4	227.5	276.9	307.9	319.5
75°	160.7	191.7	241.1	274.0	281.7
77.5°	122.0	157.8	208.2	233.3	233.3
80°	87.1	124.9	171.4	183.0	184.9
82.5°	57.1	93.9	126.8	125.9	125.9
85°	32.9	61.0	75.5	73.6	73.6
87.5°	12.6	25.2	27.1	27.1	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)