

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: P311218

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CA08-W2A-U-6500K**

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: P311218
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-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 6500K 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

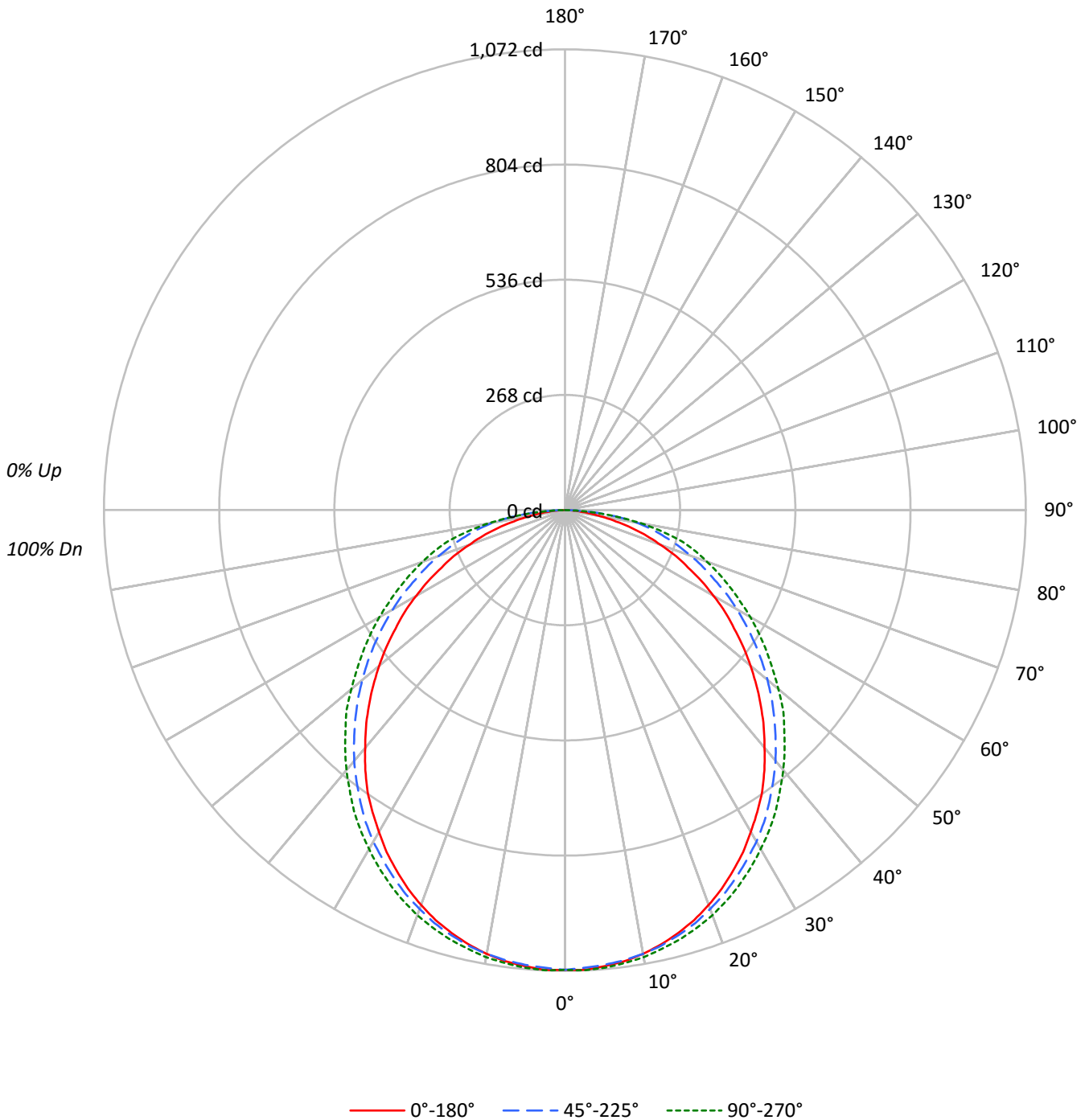
Lumens per Lamp: N/A
Luminaire Lumens: 3045.0 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 24.4
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°	1439	1439	1439
5°	1438	1434	1444
10°	1432	1432	1443
15°	1419	1425	1440
20°	1400	1414	1436
25°	1374	1400	1427
30°	1343	1384	1416
35°	1314	1362	1404
40°	1269	1339	1388
45°	1228	1312	1373
50°	1180	1288	1356
55°	1128	1264	1343
60°	1075	1244	1340
65°	1007	1223	1349
70°	932	1229	1385
75°	835	1252	1463
80°	674	1327	1431
85°	508	1164	1135



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	3.3
10°-20°	289.4	9.5
20°-30°	435.0	14.3
30°-40°	518.1	17.0
40°-50°	530.3	17.4
50°-60°	477.4	15.7
60°-70°	374.9	12.3
70°-80°	243.3	8.0
80°-90°	75.2	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°	825.6	27.1
0°-40°	1343.8	44.1
0°-60°	2351.5	77.2
0°-90°	3045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3045.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1065	1067	1062	1068	1069	101
15°	1018	1021	1023	1032	1034	287
25°	926	933	943	958	961	426
35°	800	810	829	849	855	499
45°	645	661	690	716	722	497
55°	481	502	539	567	573	431
65°	316	340	384	416	424	315
75°	161	192	241	274	282	170
85°	33	61	75	74	74	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1069.7	1069.7	1069.7	1069.7	1069.7
2.5°	1070.7	1070.7	1065.9	1070.7	1071.7
5°	1064.9	1066.8	1062.0	1067.8	1068.8
7.5°	1059.1	1059.1	1056.2	1062.0	1063.0
10°	1048.4	1049.4	1048.4	1055.2	1056.2
12.5°	1034.9	1036.8	1037.8	1044.6	1045.5
15°	1018.5	1021.4	1023.3	1032.0	1033.9
17.5°	1000.1	1003.0	1007.8	1017.5	1019.4
20°	977.8	981.7	987.5	1000.1	1003.0
22.5°	953.7	957.5	967.2	978.8	983.6
25°	925.6	933.4	943.0	958.5	961.4
27.5°	897.6	904.3	916.9	933.4	937.2
30°	864.7	875.3	890.8	907.2	911.1
32.5°	832.8	843.4	861.8	879.2	884.0
35°	799.9	809.6	828.9	849.2	855.0
37.5°	762.2	774.7	796.0	816.3	822.1
40°	722.5	738.0	762.2	783.4	790.2
42.5°	684.8	701.2	725.4	748.6	756.4
45°	645.1	660.6	689.6	715.7	721.5
47.5°	604.5	621.9	652.9	679.0	688.6
50°	563.9	582.3	615.1	642.2	648.0
52.5°	523.3	542.6	577.4	606.4	609.3
55°	480.7	502.0	538.7	566.8	572.6
57.5°	442.0	460.4	500.0	529.1	535.8
60°	399.5	419.8	462.3	489.4	498.1
62.5°	358.8	380.1	424.6	451.7	459.4
65°	316.3	340.5	384.0	415.9	423.6
67.5°	279.5	302.7	349.2	380.1	387.8
70°	237.0	263.1	312.4	344.3	352.1
72.5°	200.2	227.3	276.6	307.6	319.2
75°	160.6	191.5	240.8	273.7	281.5
77.5°	121.9	157.7	207.9	233.1	233.1
80°	87.0	124.8	171.2	182.8	184.7
82.5°	57.1	93.8	126.7	125.7	125.7
85°	32.9	60.9	75.4	73.5	73.5
87.5°	12.6	25.1	27.1	27.1	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)