

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: P311236

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP125-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: P311236
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-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 2975.0 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

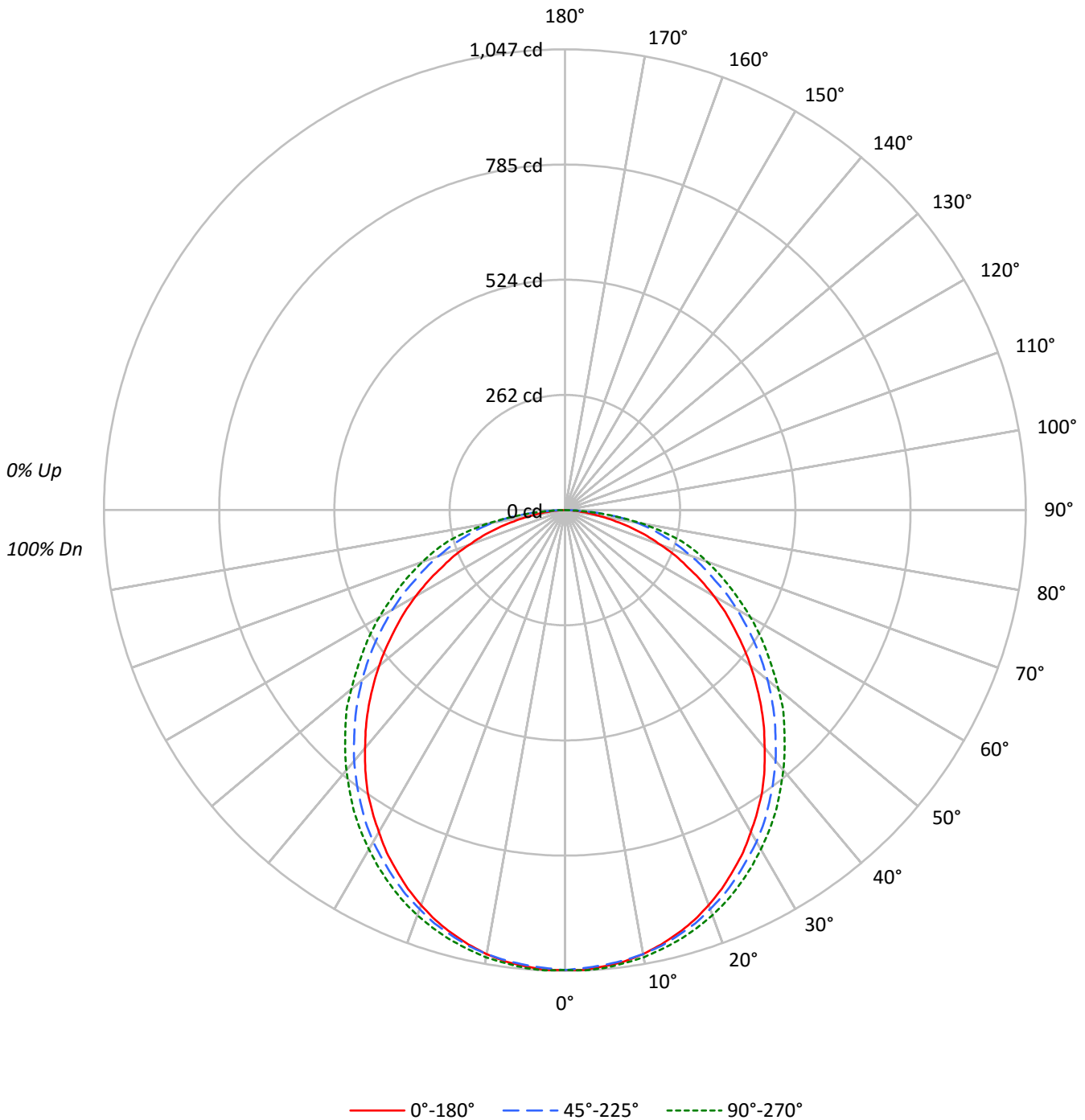
Input Watts (W): 24.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1406	1406	1406
5°	1405	1401	1410
10°	1399	1399	1410
15°	1386	1393	1407
20°	1368	1381	1403
25°	1343	1368	1394
30°	1313	1352	1383
35°	1284	1330	1372
40°	1240	1308	1356
45°	1199	1282	1341
50°	1153	1258	1325
55°	1102	1235	1312
60°	1050	1216	1310
65°	984	1195	1318
70°	911	1201	1353
75°	816	1223	1430
80°	659	1296	1399
85°	496	1138	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.9	3.3
10°-20°	282.7	9.5
20°-30°	425.0	14.3
30°-40°	506.2	17.0
40°-50°	518.1	17.4
50°-60°	466.4	15.7
60°-70°	366.3	12.3
70°-80°	237.7	8.0
80°-90°	73.5	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°	806.6	27.1
0°-40°	1312.9	44.1
0°-60°	2297.4	77.2
0°-90°	2975.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2975.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1045	1045	1045	1045	1045	
5°	1040	1042	1038	1043	1044	99
15°	995	998	1000	1008	1010	281
25°	904	912	921	936	939	417
35°	782	791	810	830	835	488
45°	630	645	674	699	705	486
55°	470	490	526	554	559	421
65°	309	333	375	406	414	308
75°	157	187	235	267	275	166
85°	32	60	74	72	72	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1045.1	1045.1	1045.1	1045.1	1045.1
2.5°	1046.1	1046.1	1041.4	1046.1	1047.0
5°	1040.4	1042.3	1037.6	1043.2	1044.2
7.5°	1034.7	1034.7	1031.9	1037.6	1038.5
10°	1024.3	1025.3	1024.3	1031.0	1031.9
12.5°	1011.1	1013.0	1014.0	1020.6	1021.5
15°	995.1	997.9	999.8	1008.3	1010.2
17.5°	977.1	979.9	984.7	994.1	996.0
20°	955.4	959.1	964.8	977.1	979.9
22.5°	931.7	935.5	945.0	956.3	961.0
25°	904.3	911.9	921.3	936.5	939.3
27.5°	876.9	883.5	895.8	911.9	915.7
30°	844.8	855.2	870.3	886.4	890.2
32.5°	813.6	824.0	842.0	859.0	863.7
35°	781.5	790.9	809.8	829.7	835.4
37.5°	744.6	756.9	777.7	797.6	803.2
40°	705.9	721.0	744.6	765.4	772.0
42.5°	669.0	685.1	708.7	731.4	739.0
45°	630.3	645.4	673.8	699.3	704.9
47.5°	590.6	607.6	637.9	663.4	672.8
50°	550.9	568.9	601.0	627.5	633.1
52.5°	511.2	530.1	564.1	592.5	595.3
55°	469.7	490.4	526.3	553.8	559.4
57.5°	431.9	449.8	488.5	516.9	523.5
60°	390.3	410.1	451.7	478.2	486.7
62.5°	350.6	371.4	414.8	441.3	448.9
65°	309.0	332.6	375.2	406.3	413.9
67.5°	273.1	295.8	341.1	371.4	378.9
70°	231.5	257.0	305.2	336.4	344.0
72.5°	195.6	222.1	270.3	300.5	311.8
75°	156.9	187.1	235.3	267.4	275.0
77.5°	119.1	154.0	203.2	227.7	227.7
80°	85.0	121.9	167.3	178.6	180.5
82.5°	55.8	91.7	123.8	122.8	122.8
85°	32.1	59.5	73.7	71.8	71.8
87.5°	12.3	24.6	26.5	26.5	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)