

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: P310646

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP125-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: P310646
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB 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: 3172.0 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

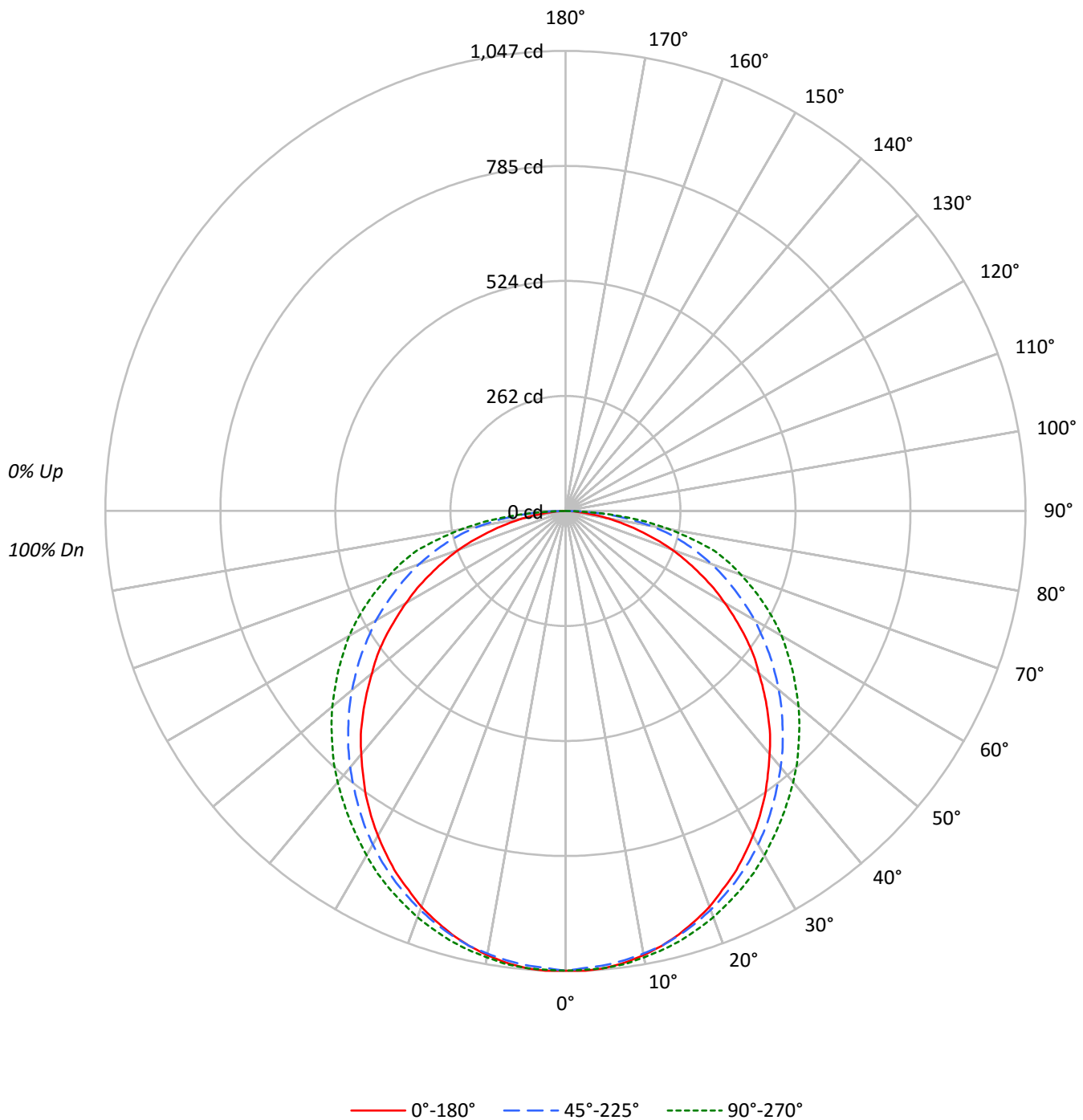
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1408	1408	1408
5°	1410	1402	1410
10°	1402	1398	1409
15°	1390	1393	1410
20°	1373	1383	1409
25°	1351	1373	1408
30°	1326	1362	1406
35°	1300	1348	1407
40°	1270	1338	1416
45°	1239	1330	1428
50°	1203	1326	1450
55°	1173	1328	1479
60°	1127	1340	1529
65°	1075	1354	1585
70°	1018	1395	1673
75°	908	1455	1827
80°	775	1541	1867
85°	553	1527	1788



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	3.1
10°-20°	283.1	8.9
20°-30°	427.6	13.5
30°-40°	515.3	16.2
40°-50°	541.0	17.1
50°-60°	506.1	16.0
60°-70°	418.0	13.2
70°-80°	284.8	9.0
80°-90°	97.1	3.1
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°	809.6	25.5
0°-40°	1325.0	41.8
0°-60°	2372.1	74.8
0°-90°	3172.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3172.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1046	1046	1046	1046	1046	
5°	1044	1043	1038	1044	1044	99
15°	998	999	1000	1010	1012	281
25°	910	914	925	943	948	419
35°	791	800	821	848	857	495
45°	651	665	699	737	750	502
55°	500	520	566	612	630	446
65°	338	366	425	479	498	335
75°	175	215	280	333	352	186
85°	36	70	99	112	116	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1046.1	1046.1	1046.1	1046.1	1046.1
2.5°	1047.2	1046.1	1040.8	1046.1	1045.0
5°	1044.0	1042.9	1037.7	1044.0	1044.0
7.5°	1036.6	1036.6	1031.4	1038.7	1039.8
10°	1026.1	1026.1	1022.9	1031.4	1031.4
12.5°	1013.5	1013.5	1013.5	1021.9	1022.9
15°	997.7	998.7	999.8	1010.3	1012.4
17.5°	978.7	980.8	984.0	996.6	998.7
20°	958.7	960.9	966.1	980.8	984.0
22.5°	933.5	938.8	946.1	963.0	966.1
25°	910.3	914.5	925.1	943.0	948.2
27.5°	881.9	888.2	901.9	920.9	928.2
30°	853.5	859.8	876.7	898.8	905.1
32.5°	823.0	832.5	850.3	873.5	880.9
35°	791.4	799.8	820.9	848.2	856.7
37.5°	756.7	768.3	791.4	820.9	831.4
40°	723.0	735.6	761.9	793.5	806.1
42.5°	689.3	702.0	731.4	767.2	779.8
45°	651.4	665.1	698.8	736.7	750.4
47.5°	613.6	630.4	667.2	707.2	722.0
50°	574.6	593.6	633.6	675.6	692.5
52.5°	539.9	557.8	599.9	645.1	660.9
55°	499.9	519.9	566.2	612.5	630.4
57.5°	458.9	481.0	530.4	580.9	598.8
60°	418.9	443.1	497.8	548.3	568.3
62.5°	379.9	404.1	461.0	513.6	533.6
65°	337.8	366.2	425.2	478.8	497.8
67.5°	297.8	328.4	390.4	443.1	462.0
70°	258.9	288.4	354.7	406.2	425.2
72.5°	216.8	250.5	316.8	370.4	390.4
75°	174.7	214.7	279.9	332.6	351.5
77.5°	135.8	176.8	242.1	285.2	294.7
80°	100.0	142.1	198.9	229.4	241.0
82.5°	64.2	106.3	151.5	173.6	183.1
85°	35.8	70.5	98.9	111.6	115.8
87.5°	14.7	30.5	40.0	45.3	45.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)