

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: P310669

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP250-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: P310669
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-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 3155.0 lumens
Efficiency: N/A
Efficacy: 108.0 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

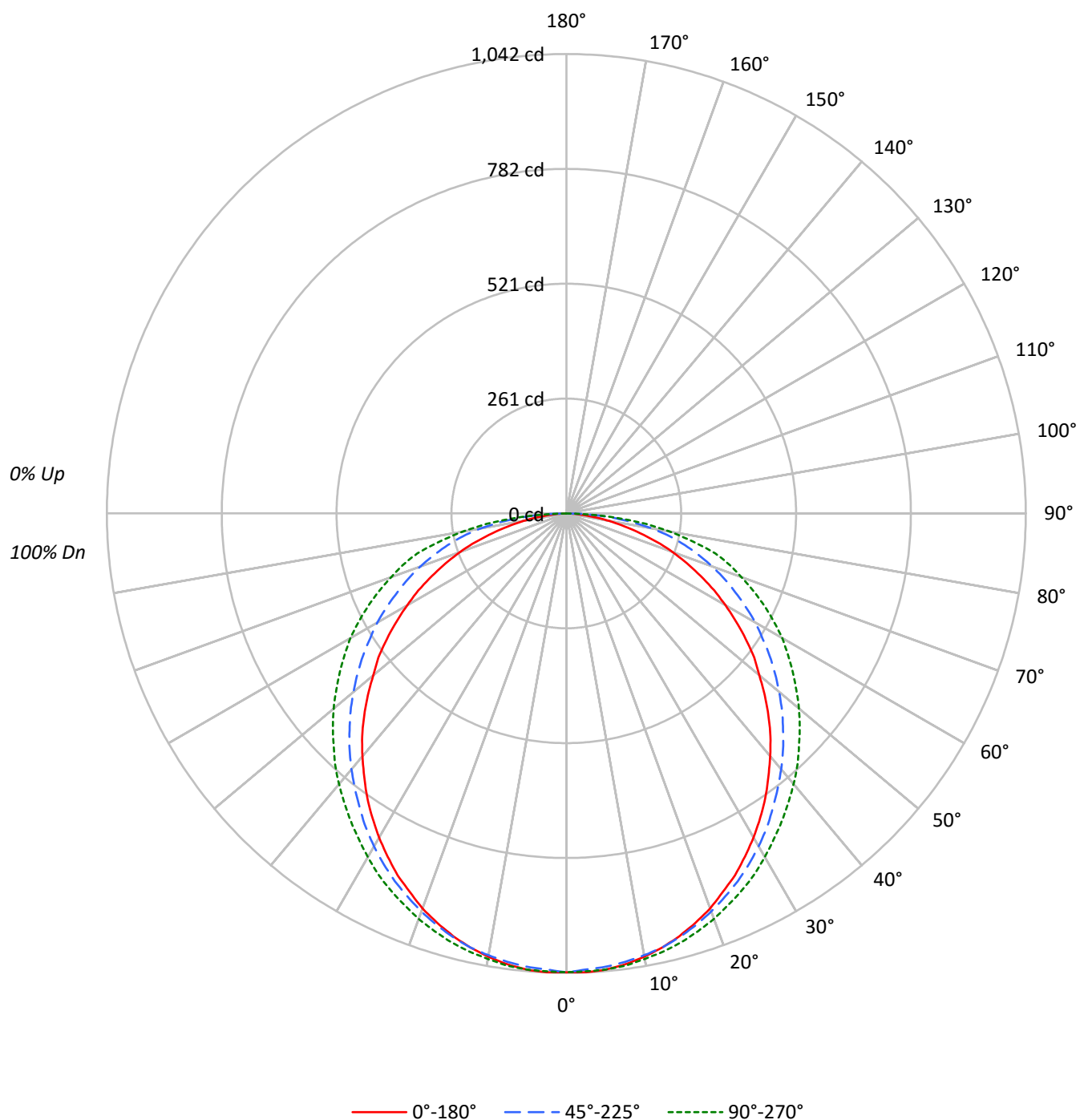
Input Watts (W): 29.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1400	1400	1400
5°	1402	1394	1402
10°	1394	1390	1401
15°	1382	1385	1403
20°	1365	1376	1401
25°	1344	1366	1400
30°	1319	1355	1399
35°	1293	1341	1400
40°	1263	1331	1408
45°	1233	1323	1420
50°	1196	1319	1442
55°	1166	1321	1471
60°	1121	1332	1521
65°	1070	1346	1576
70°	1013	1388	1664
75°	904	1447	1817
80°	770	1533	1857
85°	550	1519	1777



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.5	3.1
10°-20°	281.6	8.9
20°-30°	425.3	13.5
30°-40°	512.6	16.2
40°-50°	538.1	17.1
50°-60°	503.4	16.0
60°-70°	415.7	13.2
70°-80°	283.3	9.0
80°-90°	96.6	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°	805.3	25.5
0°-40°	1317.9	41.8
0°-60°	2359.4	74.8
0°-90°	3155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3155.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1040	1040	1040	1040	1040	
5°	1038	1037	1032	1038	1038	99
15°	992	993	994	1005	1007	280
25°	906	910	920	938	943	417
35°	787	796	816	844	852	492
45°	648	662	695	733	746	500
55°	497	517	563	609	627	444
65°	336	364	423	476	495	333
75°	174	214	278	331	350	185
85°	36	70	98	111	115	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1040.5	1040.5	1040.5	1040.5	1040.5
2.5°	1041.5	1040.5	1035.3	1040.5	1039.4
5°	1038.4	1037.4	1032.1	1038.4	1038.4
7.5°	1031.1	1031.1	1025.8	1033.2	1034.2
10°	1020.6	1020.6	1017.5	1025.8	1025.8
12.5°	1008.0	1008.0	1008.0	1016.4	1017.5
15°	992.3	993.4	994.4	1004.9	1007.0
17.5°	973.5	975.6	978.7	991.3	993.4
20°	953.6	955.7	960.9	975.6	978.7
22.5°	928.5	933.7	941.0	957.8	960.9
25°	905.5	909.6	920.1	937.9	943.1
27.5°	877.2	883.5	897.1	915.9	923.3
30°	848.9	855.2	872.0	893.9	900.2
32.5°	818.6	828.0	845.8	868.8	876.1
35°	787.2	795.5	816.5	843.7	852.1
37.5°	752.6	764.1	787.2	816.5	827.0
40°	719.1	731.7	757.9	789.3	801.8
42.5°	685.6	698.2	727.5	763.1	775.7
45°	648.0	661.6	695.1	732.7	746.3
47.5°	610.3	627.0	663.7	703.4	718.1
50°	571.5	590.4	630.2	672.0	688.8
52.5°	537.0	554.8	596.7	641.7	657.4
55°	497.2	517.1	563.2	609.2	627.0
57.5°	456.4	478.4	527.6	577.8	595.6
60°	416.6	440.7	495.1	545.4	565.3
62.5°	377.9	402.0	458.5	510.8	530.7
65°	336.0	364.3	422.9	476.3	495.1
67.5°	296.2	326.6	388.4	440.7	459.5
70°	257.5	286.8	352.8	404.1	422.9
72.5°	215.6	249.1	315.1	368.5	388.4
75°	173.8	213.5	278.4	330.8	349.6
77.5°	135.0	175.9	240.8	283.7	293.1
80°	99.4	141.3	197.8	228.2	239.7
82.5°	63.9	105.7	150.7	172.7	182.1
85°	35.6	70.1	98.4	111.0	115.1
87.5°	14.7	30.4	39.8	45.0	45.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)