

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: P310637

Luminaire Tested: **24FCZ2-35-UNV-L82765-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: P310637
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-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 3235.0 lumens
Efficiency: N/A
Efficacy: 114.3 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

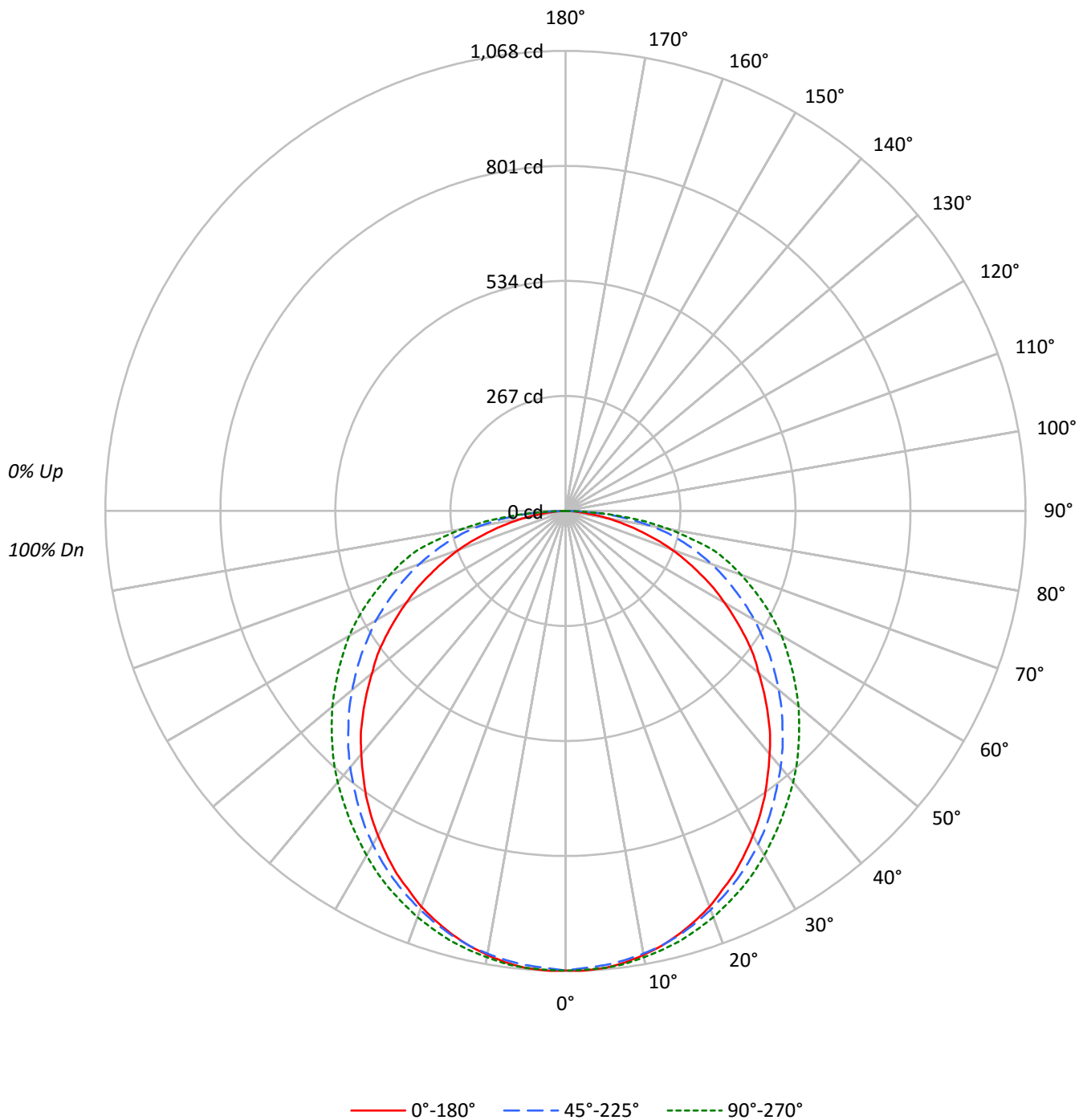
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1436	1436	1436
5°	1438	1429	1438
10°	1430	1425	1437
15°	1417	1420	1438
20°	1400	1411	1437
25°	1378	1401	1436
30°	1352	1389	1434
35°	1326	1375	1435
40°	1295	1365	1444
45°	1264	1356	1456
50°	1227	1352	1478
55°	1196	1354	1508
60°	1150	1366	1560
65°	1097	1380	1616
70°	1039	1423	1706
75°	926	1484	1864
80°	790	1572	1905
85°	563	1558	1823



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	3.1
10°-20°	288.7	8.9
20°-30°	436.1	13.5
30°-40°	525.6	16.2
40°-50°	551.7	17.1
50°-60°	516.2	16.0
60°-70°	426.3	13.2
70°-80°	290.5	9.0
80°-90°	99.1	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°	825.7	25.5
0°-40°	1351.3	41.8
0°-60°	2419.2	74.8
0°-90°	3235.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3235.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1067	1067	1067	1067	1067	
5°	1065	1064	1058	1065	1065	101
15°	1018	1019	1020	1030	1032	287
25°	928	933	943	962	967	427
35°	807	816	837	865	874	504
45°	664	678	713	751	765	512
55°	510	530	577	625	643	455
65°	344	374	434	488	508	342
75°	178	219	286	339	358	190
85°	36	72	101	114	118	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1066.9	1066.9	1066.9	1066.9	1066.9
2.5°	1067.9	1066.9	1061.5	1066.9	1065.8
5°	1064.7	1063.7	1058.3	1064.7	1064.7
7.5°	1057.2	1057.2	1051.8	1059.4	1060.4
10°	1046.5	1046.5	1043.3	1051.8	1051.8
12.5°	1033.6	1033.6	1033.6	1042.2	1043.3
15°	1017.5	1018.6	1019.6	1030.4	1032.5
17.5°	998.2	1000.3	1003.5	1016.4	1018.6
20°	977.8	979.9	985.3	1000.3	1003.5
22.5°	952.0	957.4	964.9	982.1	985.3
25°	928.4	932.7	943.4	961.7	967.1
27.5°	899.4	905.9	919.8	939.2	946.7
30°	870.5	876.9	894.1	916.6	923.1
32.5°	839.3	849.0	867.2	890.9	898.4
35°	807.1	815.7	837.2	865.1	873.7
37.5°	771.7	783.5	807.1	837.2	847.9
40°	737.4	750.2	777.1	809.3	822.2
42.5°	703.0	715.9	746.0	782.4	795.3
45°	664.4	678.3	712.7	751.3	765.3
47.5°	625.7	642.9	680.5	721.3	736.3
50°	586.0	605.3	646.1	689.1	706.2
52.5°	550.6	568.9	611.8	657.9	674.0
55°	509.8	530.2	577.4	624.7	642.9
57.5°	468.0	490.5	541.0	592.5	610.7
60°	427.2	451.9	507.7	559.2	579.6
62.5°	387.5	412.2	470.1	523.8	544.2
65°	344.5	373.5	433.6	488.4	507.7
67.5°	303.7	334.9	398.2	451.9	471.2
70°	264.0	294.1	361.7	414.3	433.6
72.5°	221.1	255.4	323.1	377.8	398.2
75°	178.2	219.0	285.5	339.2	358.5
77.5°	138.5	180.3	246.9	290.9	300.5
80°	102.0	144.9	202.9	234.0	245.8
82.5°	65.5	108.4	154.6	177.1	186.8
85°	36.5	71.9	100.9	113.8	118.1
87.5°	15.0	31.1	40.8	46.2	46.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)