

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: P310658

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP187-W2A-U-5500K**

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: P310658
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-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5500K 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: 3165.0 lumens
Efficiency: N/A
Efficacy: 109.9 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

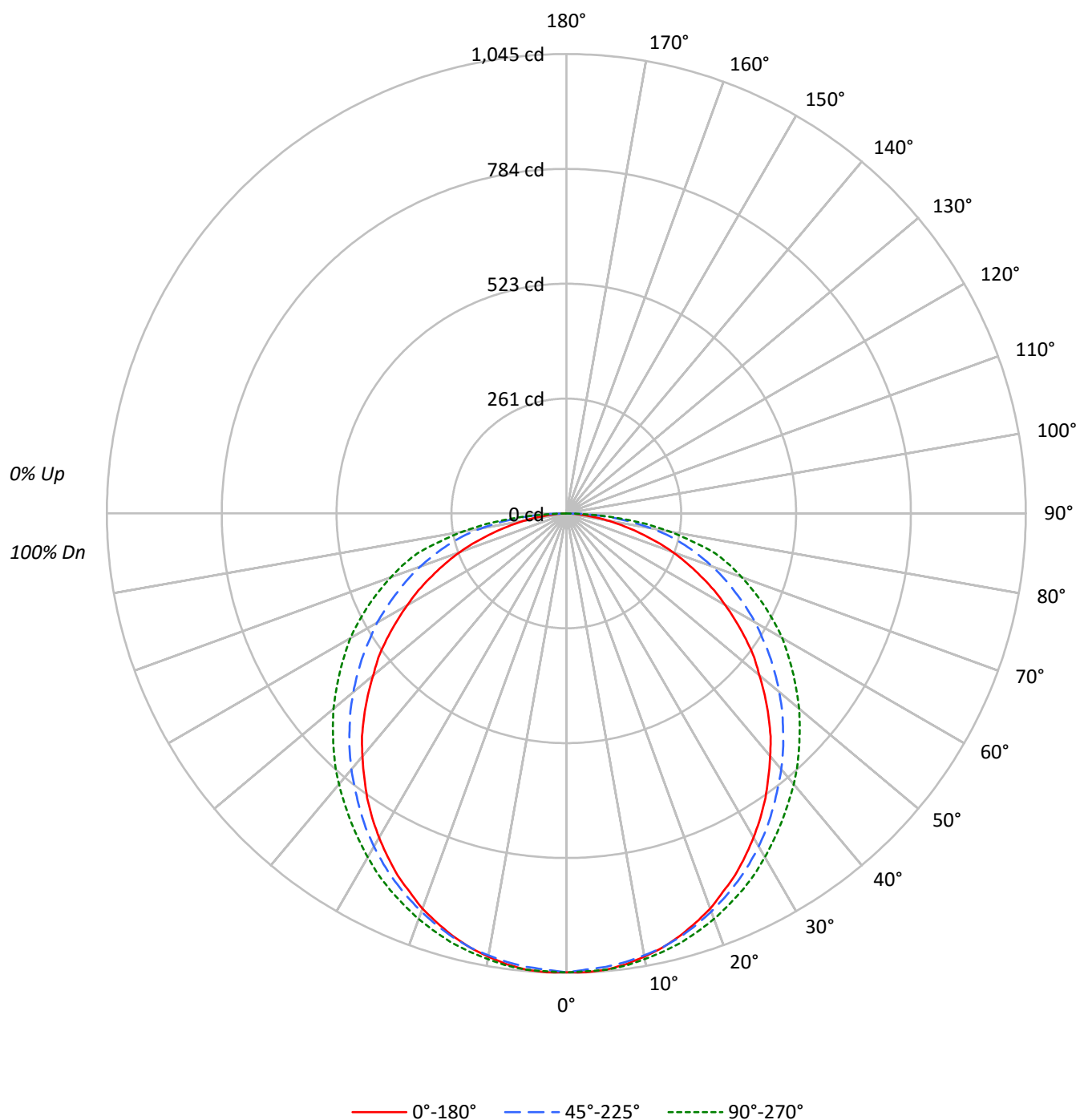
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1404	1404	1404
5°	1407	1398	1407
10°	1399	1395	1406
15°	1387	1390	1407
20°	1370	1380	1406
25°	1348	1370	1405
30°	1323	1359	1403
35°	1297	1345	1404
40°	1267	1335	1413
45°	1237	1327	1425
50°	1200	1323	1446
55°	1170	1325	1476
60°	1125	1337	1526
65°	1073	1351	1581
70°	1016	1392	1669
75°	906	1452	1823
80°	773	1538	1863
85°	551	1524	1783



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	3.1
10°-20°	282.5	8.9
20°-30°	426.6	13.5
30°-40°	514.2	16.2
40°-50°	539.8	17.1
50°-60°	505.0	16.0
60°-70°	417.0	13.2
70°-80°	284.2	9.0
80°-90°	96.9	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°	807.9	25.5
0°-40°	1322.0	41.8
0°-60°	2366.9	74.8
0°-90°	3165.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3165.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1044	1044	1044	1044	1044	
5°	1042	1041	1035	1042	1042	99
15°	996	996	998	1008	1010	281
25°	908	912	923	941	946	418
35°	790	798	819	846	855	493
45°	650	664	697	735	749	501
55°	499	519	565	611	629	445
65°	337	365	424	478	497	334
75°	174	214	279	332	351	186
85°	36	70	99	111	116	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1043.8	1043.8	1043.8	1043.8	1043.8
2.5°	1044.8	1043.8	1038.5	1043.8	1042.7
5°	1041.7	1040.6	1035.4	1041.7	1041.7
7.5°	1034.3	1034.3	1029.1	1036.4	1037.5
10°	1023.8	1023.8	1020.7	1029.1	1029.1
12.5°	1011.2	1011.2	1011.2	1019.6	1020.7
15°	995.5	996.5	997.6	1008.1	1010.2
17.5°	976.6	978.7	981.8	994.4	996.5
20°	956.6	958.7	964.0	978.7	981.8
22.5°	931.4	936.7	944.0	960.8	964.0
25°	908.3	912.5	923.0	940.9	946.1
27.5°	880.0	886.3	899.9	918.8	926.2
30°	851.6	857.9	874.7	896.8	903.1
32.5°	821.2	830.6	848.5	871.6	878.9
35°	789.7	798.1	819.1	846.4	854.8
37.5°	755.0	766.6	789.7	819.1	829.6
40°	721.4	734.0	760.3	791.8	804.4
42.5°	687.8	700.4	729.8	765.5	778.1
45°	650.0	663.7	697.3	735.1	748.7
47.5°	612.2	629.0	665.8	705.7	720.4
50°	573.3	592.3	632.2	674.2	691.0
52.5°	538.7	556.5	598.6	643.7	659.5
55°	498.8	518.7	564.9	611.2	629.0
57.5°	457.8	479.9	529.2	579.6	597.5
60°	417.9	442.1	496.7	547.1	567.0
62.5°	379.1	403.2	459.9	512.4	532.4
65°	337.1	365.4	424.2	477.8	496.7
67.5°	297.2	327.6	389.6	442.1	461.0
70°	258.3	287.7	353.9	405.3	424.2
72.5°	216.3	249.9	316.1	369.6	389.6
75°	174.3	214.2	279.3	331.8	350.7
77.5°	135.5	176.4	241.5	284.6	294.0
80°	99.8	141.8	198.5	228.9	240.5
82.5°	64.1	106.1	151.2	173.3	182.7
85°	35.7	70.4	98.7	111.3	115.5
87.5°	14.7	30.5	39.9	45.2	45.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)