

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: P310879

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP187-W2A-U-3500K**

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: P310879
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: 24FCZ2-50HE-UNV-L82765-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 4200.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

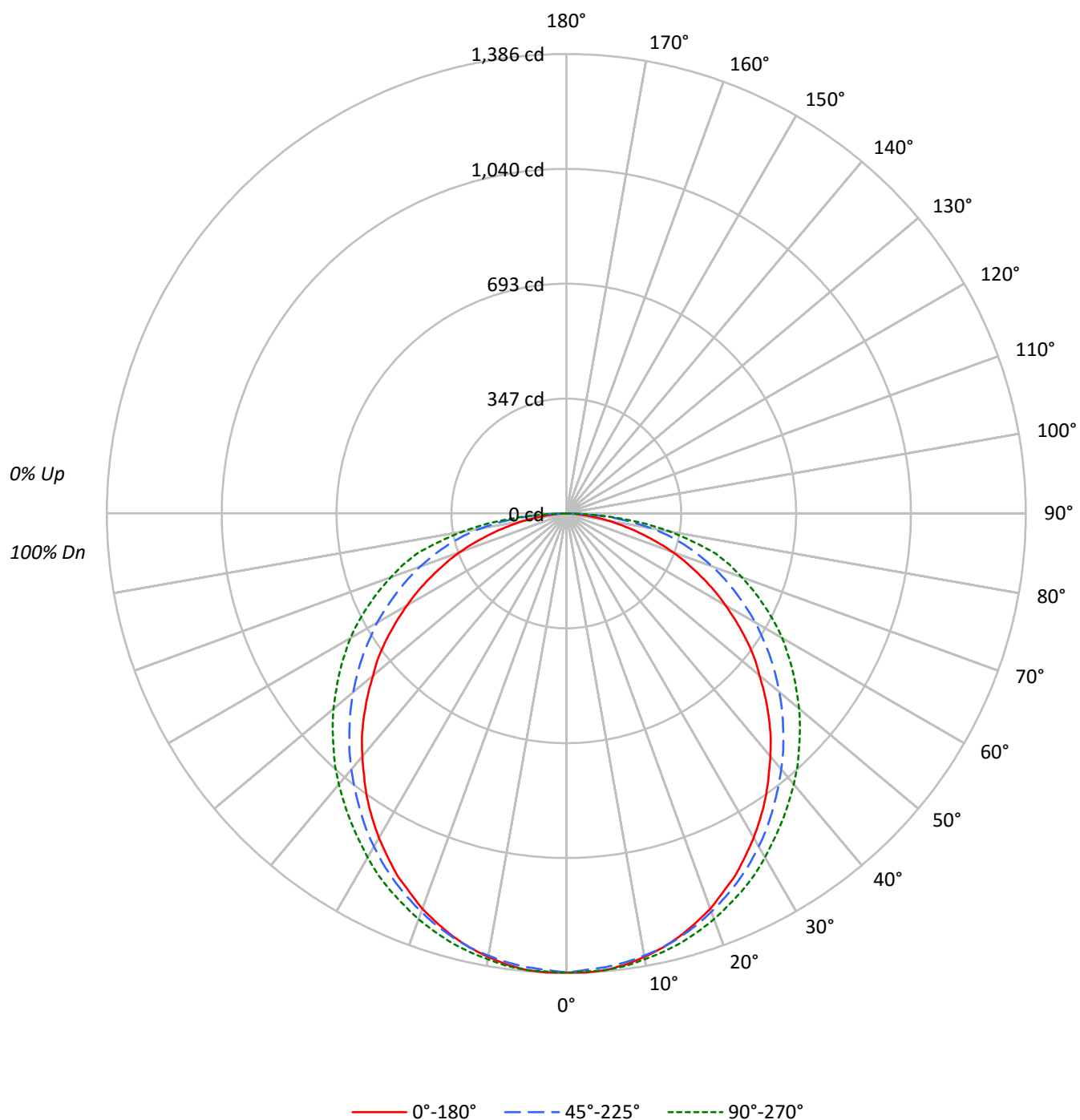
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1864	1864	1864
5°	1867	1856	1867
10°	1856	1851	1866
15°	1840	1844	1867
20°	1818	1832	1866
25°	1790	1818	1864
30°	1756	1803	1862
35°	1721	1785	1863
40°	1681	1772	1875
45°	1641	1761	1891
50°	1593	1756	1919
55°	1553	1759	1958
60°	1492	1774	2025
65°	1424	1792	2098
70°	1349	1847	2215
75°	1202	1927	2419
80°	1026	2041	2473
85°	732	2022	2367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	3.1
10°-20°	374.8	8.9
20°-30°	566.1	13.5
30°-40°	682.3	16.2
40°-50°	716.3	17.1
50°-60°	670.2	16.0
60°-70°	553.4	13.2
70°-80°	377.1	9.0
80°-90°	128.6	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°	1072.0	25.5
0°-40°	1754.4	41.8
0°-60°	3140.8	74.8
0°-90°	4200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1385	1385	1385	1385	1385	
5°	1382	1381	1374	1382	1382	131
15°	1321	1322	1324	1338	1340	372
25°	1205	1211	1225	1249	1256	555
35°	1048	1059	1087	1123	1134	655
45°	863	881	925	975	994	665
55°	662	688	750	811	835	591
65°	447	485	563	634	659	444
75°	231	284	371	440	465	247
85°	47	93	131	148	153	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1385.1	1385.1	1385.1	1385.1	1385.1
2.5°	1386.5	1385.1	1378.2	1385.1	1383.7
5°	1382.3	1380.9	1374.0	1382.3	1382.3
7.5°	1372.6	1372.6	1365.6	1375.4	1376.8
10°	1358.6	1358.6	1354.5	1365.6	1365.6
12.5°	1341.9	1341.9	1341.9	1353.1	1354.5
15°	1321.0	1322.4	1323.8	1337.7	1340.5
17.5°	1295.9	1298.7	1302.9	1319.6	1322.4
20°	1269.5	1272.3	1279.2	1298.7	1302.9
22.5°	1236.0	1243.0	1252.7	1275.0	1279.2
25°	1205.4	1210.9	1224.9	1248.6	1255.5
27.5°	1167.7	1176.1	1194.2	1219.3	1229.1
30°	1130.1	1138.5	1160.8	1190.0	1198.4
32.5°	1089.7	1102.2	1125.9	1156.6	1166.3
35°	1047.9	1059.0	1086.9	1123.1	1134.3
37.5°	1001.9	1017.2	1047.9	1086.9	1100.9
40°	957.3	974.0	1008.9	1050.7	1067.4
42.5°	912.7	929.5	968.5	1015.9	1032.6
45°	862.6	880.7	925.3	975.4	993.6
47.5°	812.4	834.7	883.5	936.4	955.9
50°	760.8	785.9	838.9	894.6	916.9
52.5°	714.9	738.5	794.3	854.2	875.1
55°	661.9	688.4	749.7	811.0	834.7
57.5°	607.6	636.8	702.3	769.2	792.9
60°	554.6	586.7	659.1	726.0	752.5
62.5°	503.0	535.1	610.3	680.0	706.5
65°	447.3	484.9	563.0	634.0	659.1
67.5°	394.4	434.8	517.0	586.7	611.7
70°	342.8	381.8	469.6	537.9	563.0
72.5°	287.1	331.6	419.4	490.5	517.0
75°	231.3	284.3	370.7	440.3	465.4
77.5°	179.8	234.1	320.5	377.6	390.2
80°	132.4	188.1	263.4	303.8	319.1
82.5°	85.0	140.7	200.7	229.9	242.5
85°	47.4	93.4	131.0	147.7	153.3
87.5°	19.5	40.4	53.0	59.9	59.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)