

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: P310851

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CA08-W2A-U-3000K**

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: P310851
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-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3000K 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: 4338.0 lumens
Efficiency: N/A
Efficacy: 113.9 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

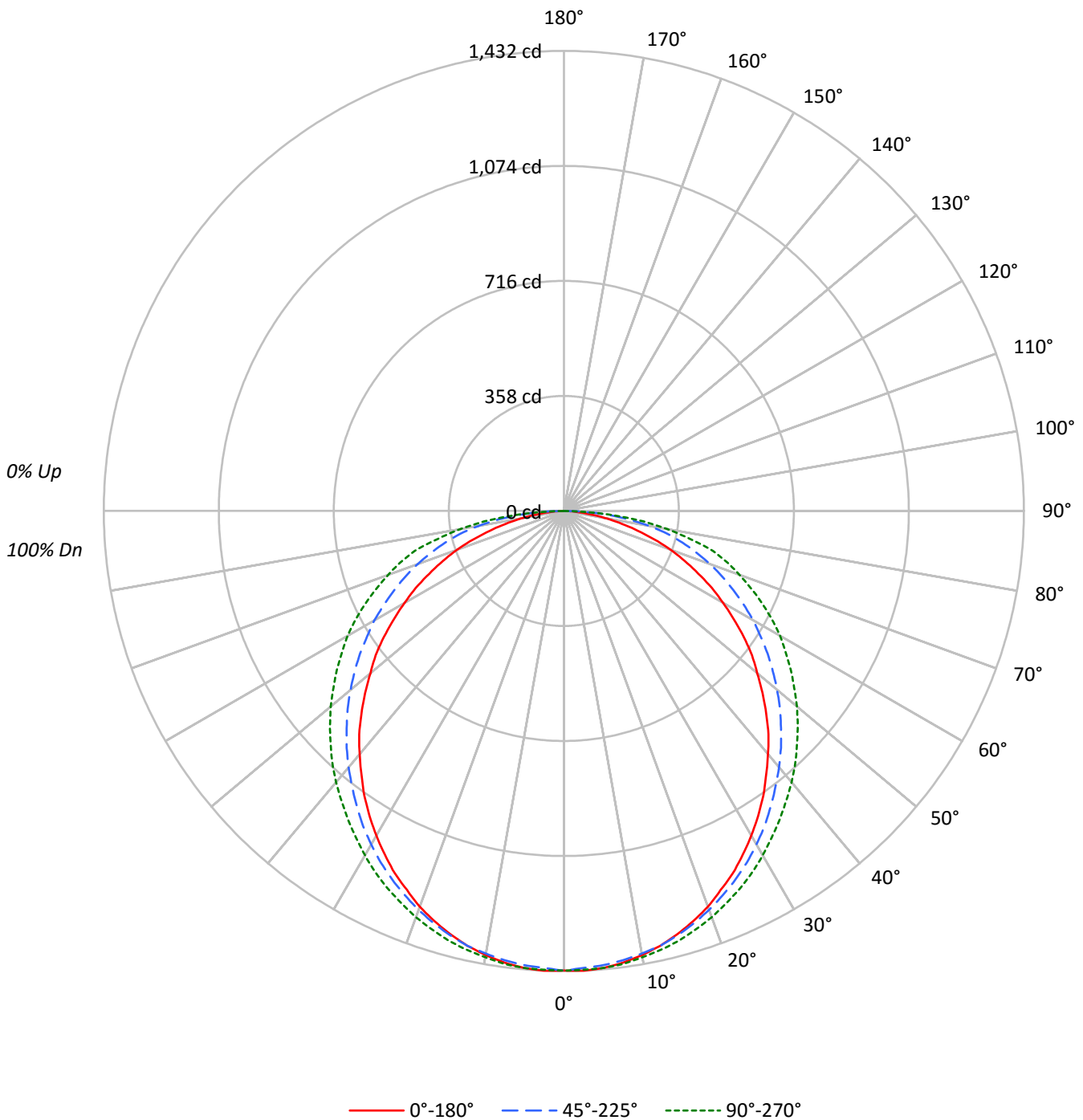
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1925	1925	1925
5°	1928	1917	1928
10°	1917	1911	1927
15°	1901	1905	1929
20°	1877	1892	1927
25°	1848	1878	1925
30°	1813	1863	1923
35°	1778	1844	1924
40°	1737	1830	1936
45°	1695	1819	1953
50°	1645	1814	1982
55°	1604	1816	2022
60°	1541	1832	2091
65°	1471	1851	2167
70°	1393	1908	2288
75°	1242	1990	2499
80°	1059	2108	2554
85°	755	2089	2444



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.4	3.1
10°-20°	387.1	8.9
20°-30°	584.7	13.5
30°-40°	704.7	16.2
40°-50°	739.8	17.1
50°-60°	692.2	16.0
60°-70°	571.6	13.2
70°-80°	389.5	9.0
80°-90°	132.8	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°	1107.3	25.5
0°-40°	1812.0	41.8
0°-60°	3244.0	74.8
0°-90°	4338.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4338.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1431	1431	1431	1431	1431	
5°	1428	1426	1419	1428	1428	135
15°	1364	1366	1367	1382	1385	385
25°	1245	1251	1265	1290	1297	573
35°	1082	1094	1123	1160	1172	676
45°	891	910	956	1008	1026	687
55°	684	711	774	838	862	610
65°	462	501	582	655	681	458
75°	239	294	383	455	481	255
85°	49	96	135	153	158	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1430.6	1430.6	1430.6	1430.6	1430.6
2.5°	1432.1	1430.6	1423.4	1430.6	1429.2
5°	1427.8	1426.3	1419.1	1427.8	1427.8
7.5°	1417.7	1417.7	1410.5	1420.6	1422.0
10°	1403.3	1403.3	1399.0	1410.5	1410.5
12.5°	1386.0	1386.0	1386.0	1397.5	1399.0
15°	1364.4	1365.9	1367.3	1381.7	1384.6
17.5°	1338.5	1341.4	1345.7	1363.0	1365.9
20°	1311.2	1314.1	1321.3	1341.4	1345.7
22.5°	1276.6	1283.8	1293.9	1316.9	1321.3
25°	1245.0	1250.7	1265.1	1289.6	1296.8
27.5°	1206.1	1214.7	1233.5	1259.4	1269.4
30°	1167.2	1175.9	1198.9	1229.1	1237.8
32.5°	1125.5	1138.5	1162.9	1194.6	1204.7
35°	1082.3	1093.8	1122.6	1160.1	1171.6
37.5°	1034.8	1050.7	1082.3	1122.6	1137.0
40°	988.8	1006.0	1042.0	1085.2	1102.5
42.5°	942.7	960.0	1000.3	1049.2	1066.5
45°	890.9	909.6	955.7	1007.5	1026.2
47.5°	839.1	862.1	912.5	967.2	987.3
50°	785.8	811.7	866.4	924.0	947.0
52.5°	738.3	762.8	820.4	882.3	903.9
55°	683.7	711.0	774.3	837.7	862.1
57.5°	627.5	657.7	725.4	794.5	818.9
60°	572.8	605.9	680.8	749.9	777.2
62.5°	519.6	552.7	630.4	702.4	729.7
65°	462.0	500.9	581.5	654.9	680.8
67.5°	407.3	449.1	534.0	605.9	631.8
70°	354.1	394.4	485.0	555.6	581.5
72.5°	296.5	342.5	433.2	506.6	534.0
75°	238.9	293.6	382.8	454.8	480.7
77.5°	185.7	241.8	331.0	390.0	403.0
80°	136.7	194.3	272.0	313.8	329.6
82.5°	87.8	145.4	207.3	237.5	250.4
85°	48.9	96.4	135.3	152.6	158.3
87.5°	20.1	41.7	54.7	61.9	61.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)