

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: P310870

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP125-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: P310870
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 4385.0 lumens
Efficiency: N/A
Efficacy: 113.6 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

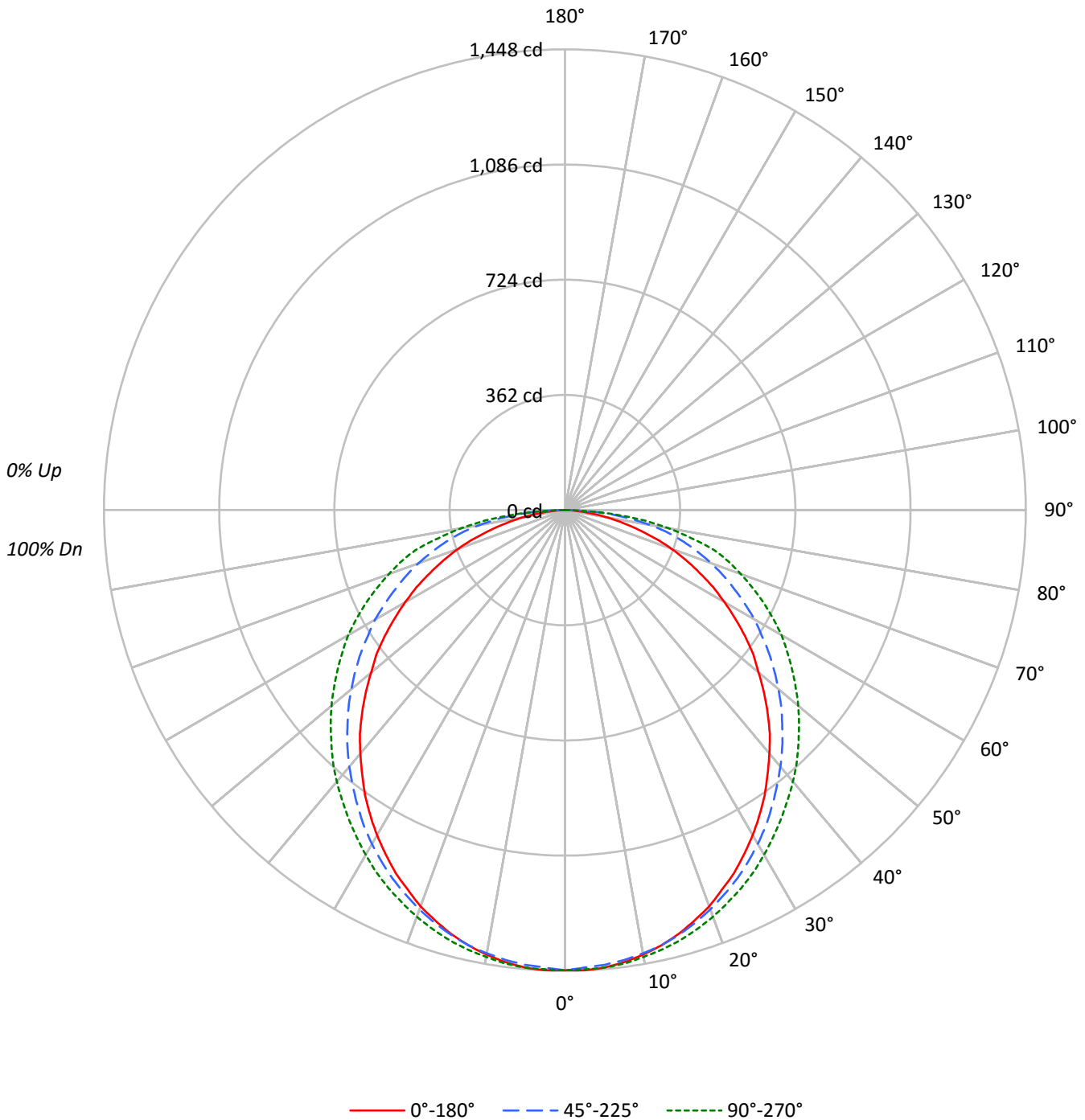
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1946	1946	1946
5°	1949	1937	1949
10°	1938	1932	1948
15°	1921	1925	1950
20°	1898	1912	1948
25°	1868	1898	1946
30°	1833	1883	1944
35°	1797	1864	1945
40°	1756	1850	1957
45°	1714	1838	1974
50°	1663	1833	2004
55°	1621	1836	2044
60°	1558	1852	2114
65°	1487	1871	2191
70°	1408	1929	2312
75°	1255	2012	2526
80°	1071	2131	2582
85°	764	2112	2470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.9	3.1
10°-20°	391.3	8.9
20°-30°	591.1	13.5
30°-40°	712.4	16.2
40°-50°	747.9	17.1
50°-60°	699.7	16.0
60°-70°	577.8	13.2
70°-80°	393.7	9.0
80°-90°	134.3	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°	1119.3	25.5
0°-40°	1831.6	41.8
0°-60°	3279.2	74.8
0°-90°	4385.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4385.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1446	1446	1446	1446	1446	
5°	1443	1442	1434	1443	1443	137
15°	1379	1381	1382	1397	1400	389
25°	1258	1264	1279	1304	1311	579
35°	1094	1106	1135	1173	1184	684
45°	901	920	966	1018	1037	695
55°	691	719	783	847	872	617
65°	467	506	588	662	688	463
75°	242	297	387	460	486	258
85°	50	98	137	154	160	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1446.1	1446.1	1446.1	1446.1	1446.1
2.5°	1447.6	1446.1	1438.9	1446.1	1444.7
5°	1443.2	1441.8	1434.5	1443.2	1443.2
7.5°	1433.0	1433.0	1425.8	1436.0	1437.4
10°	1418.5	1418.5	1414.1	1425.8	1425.8
12.5°	1401.0	1401.0	1401.0	1412.7	1414.1
15°	1379.2	1380.7	1382.1	1396.7	1399.6
17.5°	1353.0	1355.9	1360.3	1377.8	1380.7
20°	1325.4	1328.3	1335.6	1355.9	1360.3
22.5°	1290.5	1297.7	1307.9	1331.2	1335.6
25°	1258.5	1264.3	1278.8	1303.6	1310.8
27.5°	1219.2	1227.9	1246.8	1273.0	1283.2
30°	1179.9	1188.6	1211.9	1242.5	1251.2
32.5°	1137.7	1150.8	1175.5	1207.5	1217.7
35°	1094.1	1105.7	1134.8	1172.6	1184.3
37.5°	1046.0	1062.1	1094.1	1134.8	1149.3
40°	999.5	1016.9	1053.3	1097.0	1114.4
42.5°	952.9	970.4	1011.1	1060.6	1078.1
45°	900.6	919.5	966.0	1018.4	1037.3
47.5°	848.2	871.5	922.4	977.7	998.0
50°	794.4	820.5	875.8	934.0	957.3
52.5°	746.3	771.1	829.3	891.8	913.7
55°	691.1	718.7	782.7	846.7	871.5
57.5°	634.3	664.9	733.3	803.1	827.8
60°	579.0	612.5	688.2	758.0	785.6
62.5°	525.2	558.7	637.2	710.0	737.6
65°	467.0	506.3	587.8	662.0	688.2
67.5°	411.7	453.9	539.8	612.5	638.7
70°	357.9	398.6	490.3	561.6	587.8
72.5°	299.7	346.3	437.9	512.1	539.8
75°	241.5	296.8	387.0	459.7	485.9
77.5°	187.7	244.4	334.6	394.3	407.4
80°	138.2	196.4	275.0	317.2	333.2
82.5°	88.7	146.9	209.5	240.1	253.1
85°	49.5	97.5	136.8	154.2	160.0
87.5°	20.4	42.2	55.3	62.6	62.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)