

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: P311548

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CP125-W2A-U-5000K**

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: P311548
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5000K 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: 4857.0 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

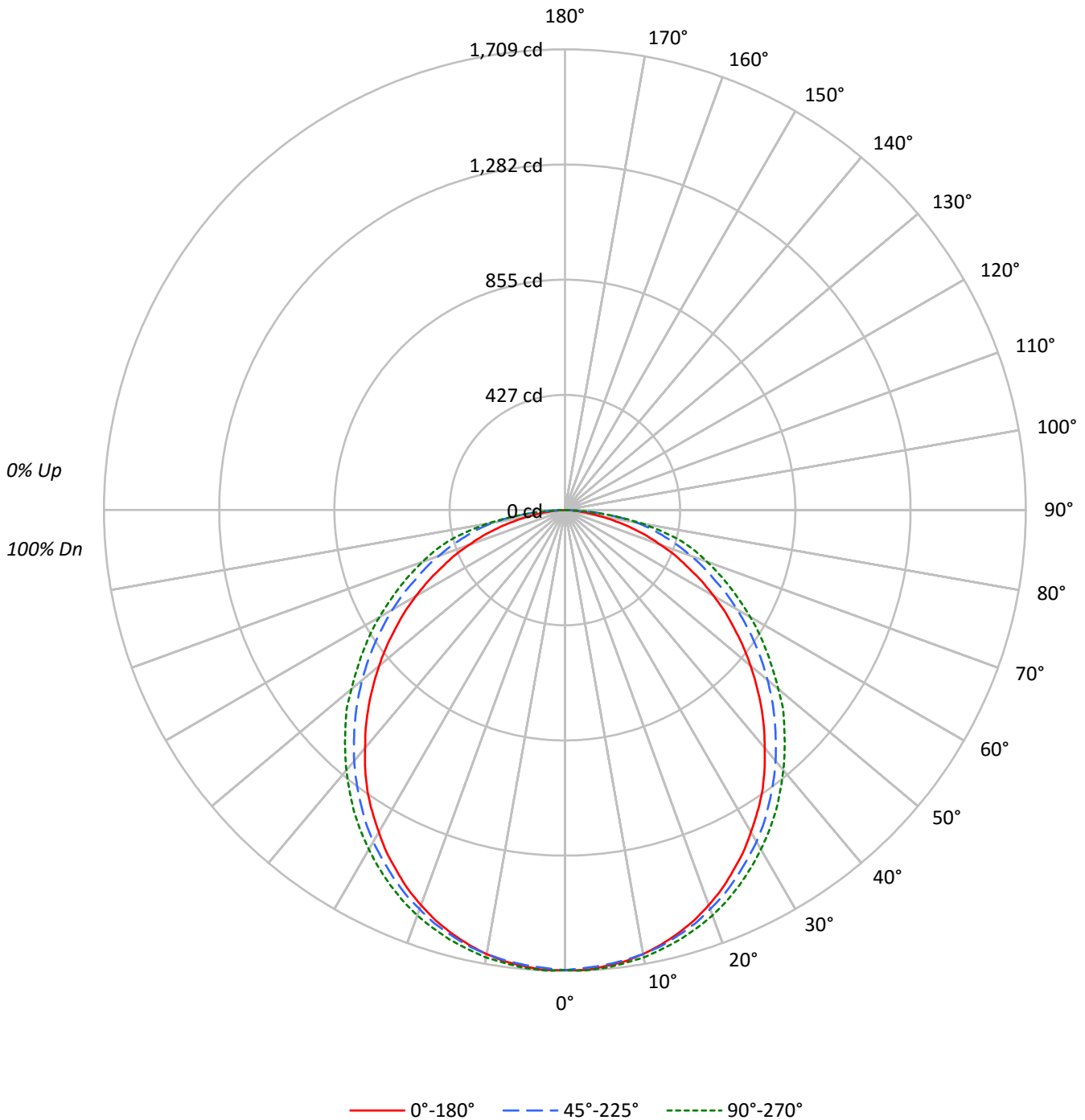
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2296	2296	2296
5°	2294	2288	2303
10°	2285	2285	2302
15°	2263	2274	2297
20°	2233	2255	2291
25°	2192	2233	2277
30°	2143	2208	2258
35°	2096	2172	2240
40°	2024	2135	2214
45°	1958	2093	2190
50°	1883	2054	2164
55°	1799	2016	2142
60°	1715	1984	2138
65°	1606	1950	2151
70°	1487	1960	2209
75°	1331	1997	2334
80°	1075	2116	2283
85°	810	1857	1809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.5	3.3
10°-20°	461.6	9.5
20°-30°	693.8	14.3
30°-40°	826.5	17.0
40°-50°	845.9	17.4
50°-60°	761.5	15.7
60°-70°	598.0	12.3
70°-80°	388.1	8.0
80°-90°	120.0	2.5
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°	1316.9	27.1
0°-40°	2143.4	44.1
0°-60°	3750.8	77.2
0°-90°	4857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1706	1706	1706	1706	1706	
5°	1699	1702	1694	1703	1705	161
15°	1624	1629	1632	1646	1649	458
25°	1476	1489	1504	1529	1534	680
35°	1276	1291	1322	1354	1364	796
45°	1029	1054	1100	1142	1151	793
55°	767	801	859	904	913	687
65°	504	543	612	663	676	502
75°	256	306	384	437	449	271
85°	52	97	120	117	117	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1706.3	1706.3	1706.3	1706.3	1706.3
2.5°	1707.8	1707.8	1700.1	1707.8	1709.4
5°	1698.6	1701.7	1694.0	1703.2	1704.8
7.5°	1689.3	1689.3	1684.7	1694.0	1695.5
10°	1672.4	1673.9	1672.4	1683.2	1684.7
12.5°	1650.8	1653.8	1655.4	1666.2	1667.7
15°	1624.5	1629.2	1632.2	1646.1	1649.2
17.5°	1595.2	1599.8	1607.6	1623.0	1626.1
20°	1559.7	1565.9	1575.2	1595.2	1599.8
22.5°	1521.2	1527.3	1542.8	1561.3	1569.0
25°	1476.4	1488.8	1504.2	1528.9	1533.5
27.5°	1431.7	1442.5	1462.5	1488.8	1494.9
30°	1379.2	1396.2	1420.9	1447.1	1453.3
32.5°	1328.3	1345.3	1374.6	1402.4	1410.1
35°	1275.9	1291.3	1322.1	1354.5	1363.8
37.5°	1215.7	1235.8	1269.7	1302.1	1311.3
40°	1152.4	1177.1	1215.7	1249.6	1260.4
42.5°	1092.3	1118.5	1157.1	1194.1	1206.4
45°	1029.0	1053.7	1100.0	1141.6	1150.9
47.5°	964.2	992.0	1041.4	1083.0	1098.4
50°	899.4	928.7	981.2	1024.4	1033.7
52.5°	834.6	865.5	921.0	967.3	971.9
55°	766.8	800.7	859.3	904.1	913.3
57.5°	705.0	734.4	797.6	843.9	854.7
60°	637.2	669.6	737.4	780.6	794.5
62.5°	572.4	606.3	677.3	720.5	732.8
65°	504.5	543.1	612.5	663.4	675.7
67.5°	445.9	482.9	556.9	606.3	618.6
70°	378.0	419.6	498.3	549.2	561.6
72.5°	319.4	362.5	441.2	490.6	509.1
75°	256.1	305.5	384.1	436.6	448.9
77.5°	194.4	251.5	331.7	371.8	371.8
80°	138.8	199.0	273.1	291.6	294.7
82.5°	91.0	149.6	202.1	200.6	200.6
85°	52.5	97.2	120.3	117.2	117.2
87.5°	20.1	40.1	43.2	43.2	41.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)