

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: P314378

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CP125-W2A-U-4500K**

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: P314378
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-L83050-S-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 5000.0 lumens
Efficiency: N/A
Efficacy: 124.1 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

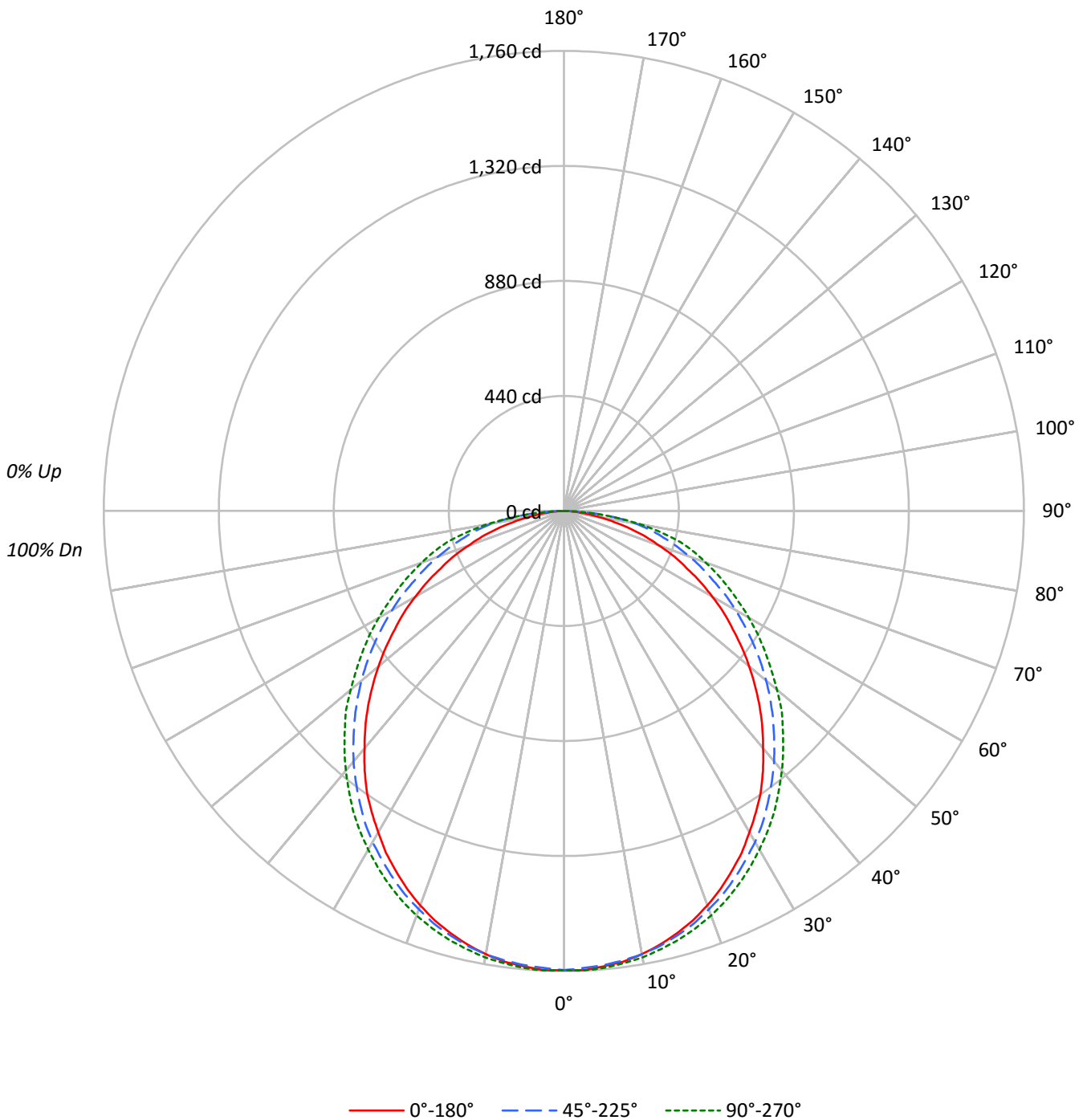
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2363	2363	2363
5°	2362	2355	2370
10°	2352	2352	2369
15°	2330	2341	2365
20°	2299	2322	2358
25°	2256	2299	2344
30°	2206	2273	2324
35°	2157	2236	2306
40°	2084	2198	2279
45°	2016	2155	2254
50°	1938	2114	2227
55°	1852	2075	2206
60°	1765	2043	2201
65°	1653	2007	2215
70°	1531	2018	2274
75°	1370	2056	2403
80°	1107	2178	2350
85°	834	1913	1863



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.3	3.3
10°-20°	475.2	9.5
20°-30°	714.3	14.3
30°-40°	850.8	17.0
40°-50°	870.8	17.4
50°-60°	783.9	15.7
60°-70°	615.6	12.3
70°-80°	399.6	8.0
80°-90°	123.6	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°	1355.7	27.1
0°-40°	2206.5	44.1
0°-60°	3861.2	77.2
0°-90°	5000.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5000.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1756	1756	1756	1756	1756	
5°	1749	1752	1744	1753	1755	166
15°	1672	1677	1680	1695	1698	472
25°	1520	1533	1548	1574	1579	700
35°	1313	1329	1361	1394	1404	819
45°	1059	1085	1132	1175	1185	817
55°	789	824	885	931	940	708
65°	519	559	630	683	696	517
75°	264	314	396	450	462	279
85°	54	100	124	121	121	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1756.5	1756.5	1756.5	1756.5	1756.5
2.5°	1758.1	1758.1	1750.2	1758.1	1759.7
5°	1748.6	1751.8	1743.8	1753.4	1754.9
7.5°	1739.1	1739.1	1734.3	1743.8	1745.4
10°	1721.6	1723.2	1721.6	1732.7	1734.3
12.5°	1699.4	1702.5	1704.1	1715.2	1716.8
15°	1672.4	1677.1	1680.3	1694.6	1697.8
17.5°	1642.2	1646.9	1654.9	1670.8	1673.9
20°	1605.7	1612.0	1621.5	1642.2	1646.9
22.5°	1566.0	1572.3	1588.2	1607.2	1615.2
25°	1519.9	1532.6	1548.5	1573.9	1578.7
27.5°	1473.8	1485.0	1505.6	1532.6	1539.0
30°	1419.8	1437.3	1462.7	1489.7	1496.1
32.5°	1367.4	1384.9	1415.1	1443.7	1451.6
35°	1313.4	1329.3	1361.1	1394.4	1404.0
37.5°	1251.5	1272.1	1307.1	1340.4	1350.0
40°	1186.4	1211.8	1251.5	1286.4	1297.5
42.5°	1124.4	1151.4	1191.1	1229.3	1242.0
45°	1059.3	1084.7	1132.4	1175.3	1184.8
47.5°	992.6	1021.2	1072.0	1114.9	1130.8
50°	925.9	956.1	1010.1	1054.6	1064.1
52.5°	859.2	891.0	948.1	995.8	1000.6
55°	789.3	824.3	884.6	930.7	940.2
57.5°	725.8	756.0	821.1	868.7	879.9
60°	655.9	689.3	759.2	803.6	817.9
62.5°	589.2	624.2	697.2	741.7	754.4
65°	519.3	559.0	630.5	682.9	695.6
67.5°	459.0	497.1	573.3	624.2	636.9
70°	389.1	432.0	513.0	565.4	578.1
72.5°	328.8	373.2	454.2	505.0	524.1
75°	263.6	314.5	395.5	449.5	462.2
77.5°	200.1	258.9	341.5	382.8	382.8
80°	142.9	204.9	281.1	300.2	303.3
82.5°	93.7	154.1	208.1	206.5	206.5
85°	54.0	100.1	123.9	120.7	120.7
87.5°	20.6	41.3	44.5	44.5	42.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)