

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: P311011

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-CP125-W2A-U-6500K**

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: P311011
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: 24FCZ2-60HE-UNV-L82765-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 6500K 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: 5632.0 lumens
Efficiency: N/A
Efficacy: 113.3 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

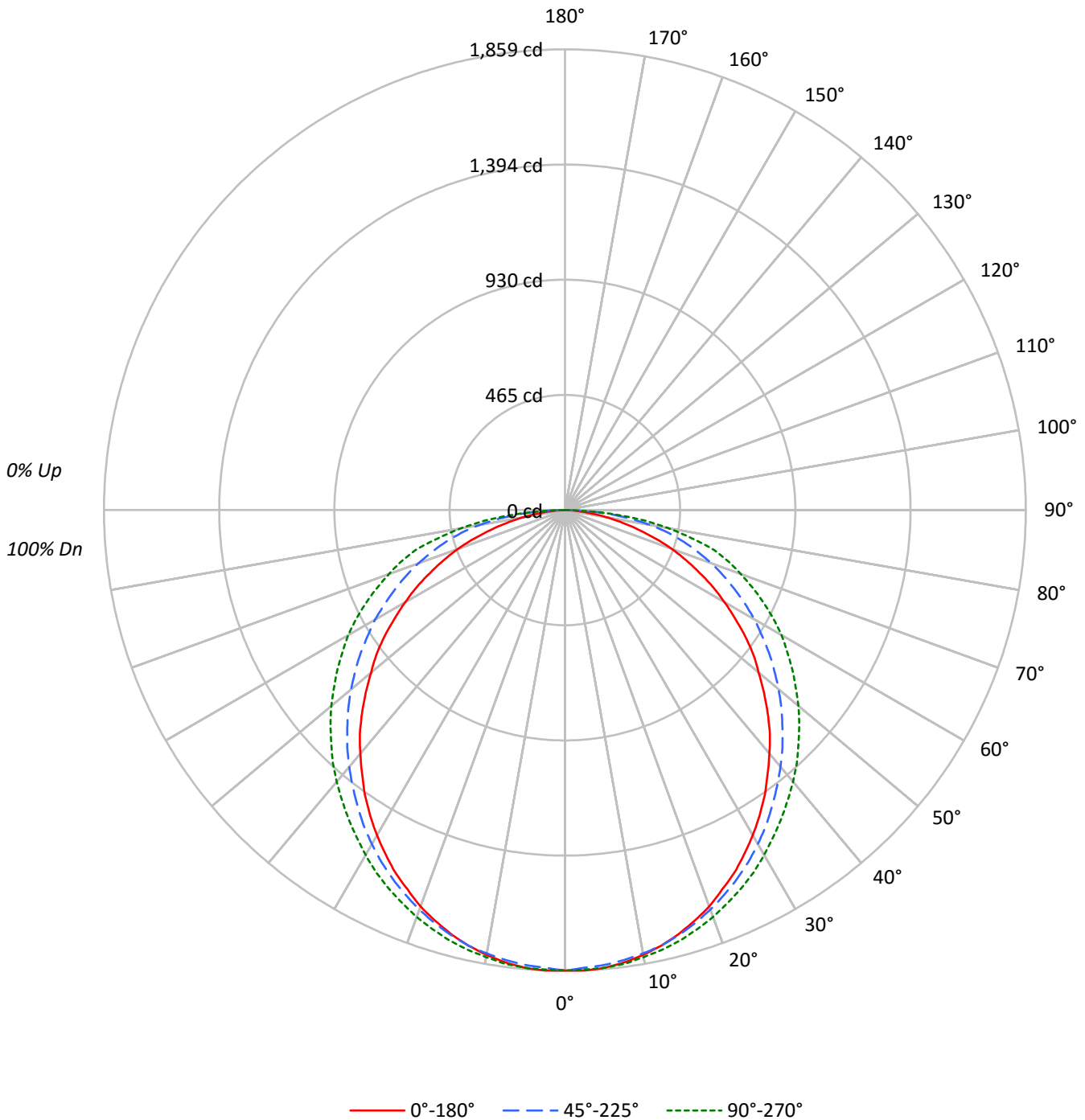
Input Watts (W): 49.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2499	2499	2499
5°	2504	2488	2504
10°	2489	2482	2502
15°	2467	2473	2504
20°	2437	2456	2502
25°	2400	2438	2499
30°	2354	2418	2497
35°	2308	2394	2498
40°	2255	2376	2514
45°	2201	2361	2535
50°	2136	2355	2574
55°	2082	2358	2626
60°	2001	2378	2715
65°	1910	2403	2814
70°	1808	2477	2970
75°	1613	2584	3244
80°	1375	2737	3316
85°	980	2711	3172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.8	3.1
10°-20°	502.6	8.9
20°-30°	759.2	13.5
30°-40°	915.0	16.2
40°-50°	960.6	17.1
50°-60°	898.6	16.0
60°-70°	742.1	13.2
70°-80°	505.7	9.0
80°-90°	172.5	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°	1437.6	25.5
0°-40°	2352.5	41.8
0°-60°	4211.7	74.8
0°-90°	5632.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5632.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1857	1857	1857	1857	1857	
5°	1854	1852	1842	1854	1854	176
15°	1771	1773	1775	1794	1798	499
25°	1616	1624	1642	1674	1684	744
35°	1405	1420	1458	1506	1521	878
45°	1157	1181	1241	1308	1332	892
55°	888	923	1005	1088	1119	792
65°	600	650	755	850	884	595
75°	310	381	497	590	624	331
85°	64	125	176	198	206	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1857.4	1857.4	1857.4	1857.4	1857.4
2.5°	1859.3	1857.4	1848.0	1857.4	1855.5
5°	1853.6	1851.8	1842.4	1853.6	1853.6
7.5°	1840.6	1840.6	1831.2	1844.3	1846.2
10°	1821.9	1821.9	1816.3	1831.2	1831.2
12.5°	1799.5	1799.5	1799.5	1814.4	1816.3
15°	1771.4	1773.3	1775.2	1793.9	1797.6
17.5°	1737.8	1741.5	1747.1	1769.6	1773.3
20°	1702.3	1706.0	1715.4	1741.5	1747.1
22.5°	1657.4	1666.8	1679.9	1709.8	1715.4
25°	1616.3	1623.8	1642.5	1674.3	1683.6
27.5°	1565.9	1577.1	1601.4	1635.0	1648.1
30°	1515.4	1526.6	1556.5	1595.8	1607.0
32.5°	1461.2	1478.1	1509.8	1550.9	1564.0
35°	1405.2	1420.1	1457.5	1506.1	1521.0
37.5°	1343.5	1364.1	1405.2	1457.5	1476.2
40°	1283.7	1306.1	1352.9	1408.9	1431.3
42.5°	1223.9	1246.4	1298.7	1362.2	1384.6
45°	1156.7	1181.0	1240.7	1308.0	1332.3
47.5°	1089.4	1119.3	1184.7	1255.7	1281.9
50°	1020.3	1053.9	1124.9	1199.6	1229.5
52.5°	958.6	990.4	1065.1	1145.4	1173.5
55°	887.6	923.1	1005.3	1087.5	1119.3
57.5°	814.7	853.9	941.8	1031.5	1063.2
60°	743.7	786.7	883.8	973.5	1009.0
62.5°	674.6	717.5	818.4	911.9	947.4
65°	599.8	650.3	754.9	850.2	883.8
67.5°	528.8	583.0	693.2	786.7	820.3
70°	459.7	512.0	629.7	721.3	754.9
72.5°	384.9	444.7	562.4	657.7	693.2
75°	310.2	381.2	497.0	590.5	624.1
77.5°	241.0	313.9	429.8	506.4	523.2
80°	177.5	252.3	353.2	407.4	427.9
82.5°	114.0	188.7	269.1	308.3	325.1
85°	63.5	125.2	175.6	198.1	205.5
87.5°	26.2	54.2	71.0	80.3	80.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)