

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: P311010

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-CP125-W2A-U-5700K**

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: P311010
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-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5700K 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: 5618.0 lumens
Efficiency: N/A
Efficacy: 114.9 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

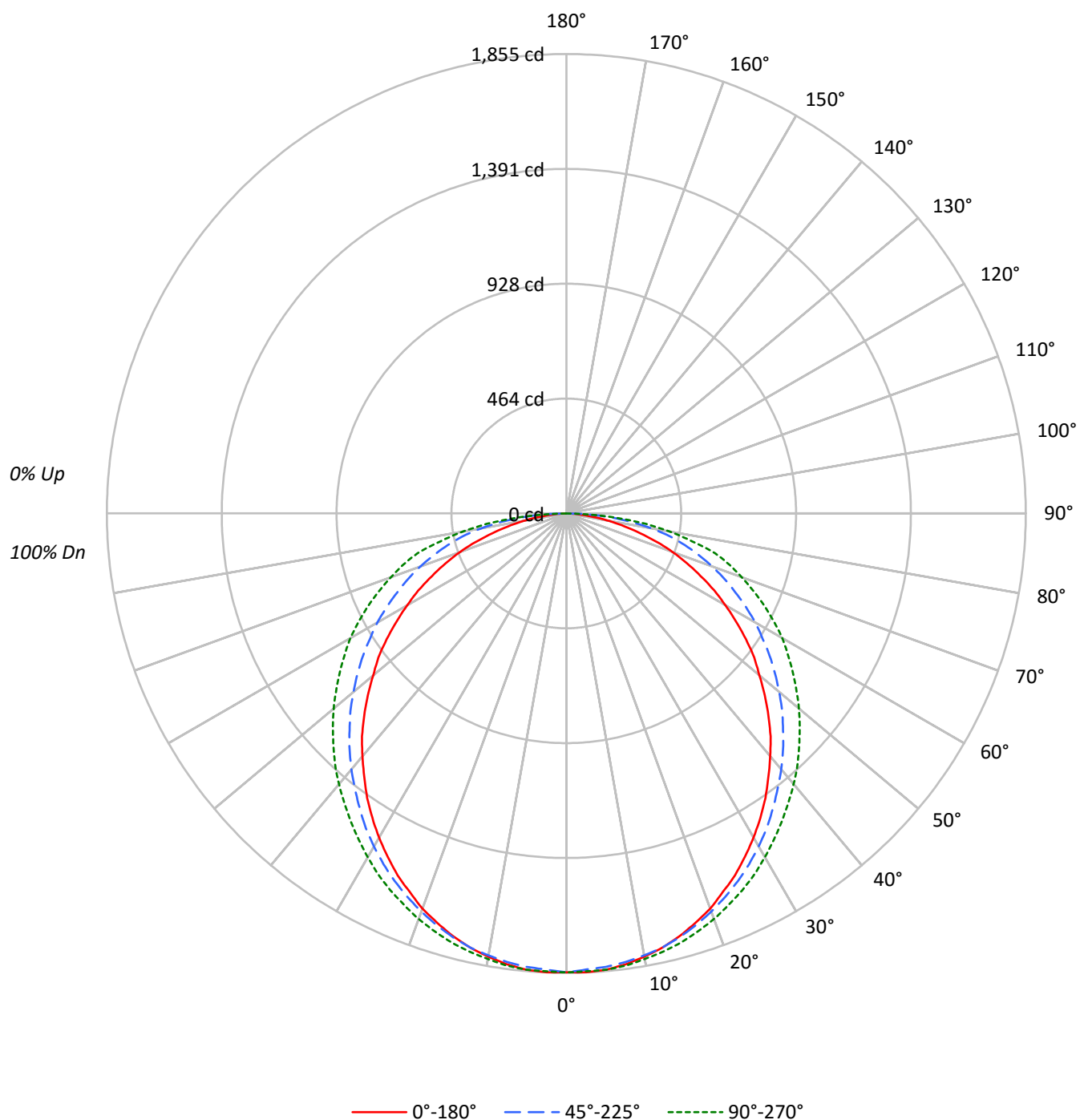
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	2493	2493	2493
5°	2497	2482	2497
10°	2483	2475	2496
15°	2461	2467	2498
20°	2431	2450	2495
25°	2394	2432	2493
30°	2349	2412	2490
35°	2302	2388	2492
40°	2249	2370	2508
45°	2195	2355	2529
50°	2130	2349	2567
55°	2077	2352	2619
60°	1996	2372	2708
65°	1905	2397	2807
70°	1804	2471	2962
75°	1608	2577	3237
80°	1372	2730	3307
85°	979	2705	3165



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.3	3.1
10°-20°	501.4	8.9
20°-30°	757.3	13.5
30°-40°	912.7	16.2
40°-50°	958.2	17.1
50°-60°	896.4	16.0
60°-70°	740.3	13.2
70°-80°	504.4	9.0
80°-90°	172.0	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°	1434.0	25.5
0°-40°	2346.7	41.8
0°-60°	4201.3	74.8
0°-90°	5618.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5618.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1853	1853	1853	1853	1853	
5°	1849	1847	1838	1849	1849	175
15°	1767	1769	1771	1789	1793	498
25°	1612	1620	1638	1670	1679	742
35°	1402	1417	1454	1502	1517	876
45°	1154	1178	1238	1305	1329	890
55°	885	921	1003	1085	1116	790
65°	598	649	753	848	882	593
75°	309	380	496	589	623	330
85°	63	125	175	198	205	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1852.8	1852.8	1852.8	1852.8	1852.8
2.5°	1854.6	1852.8	1843.4	1852.8	1850.9
5°	1849.0	1847.2	1837.9	1849.0	1849.0
7.5°	1836.0	1836.0	1826.7	1839.7	1841.6
10°	1817.4	1817.4	1811.8	1826.7	1826.7
12.5°	1795.0	1795.0	1795.0	1809.9	1811.8
15°	1767.0	1768.9	1770.8	1789.4	1793.1
17.5°	1733.5	1737.2	1742.8	1765.2	1768.9
20°	1698.1	1701.8	1711.1	1737.2	1742.8
22.5°	1653.3	1662.6	1675.7	1705.5	1711.1
25°	1612.3	1619.8	1638.4	1670.1	1679.4
27.5°	1562.0	1573.2	1597.4	1631.0	1644.0
30°	1511.7	1522.8	1552.7	1591.8	1603.0
32.5°	1457.6	1474.4	1506.1	1547.1	1560.1
35°	1401.7	1416.6	1453.9	1502.3	1517.3
37.5°	1340.2	1360.7	1401.7	1453.9	1472.5
40°	1280.5	1302.9	1349.5	1405.4	1427.8
42.5°	1220.9	1243.3	1295.4	1358.8	1381.2
45°	1153.8	1178.0	1237.7	1304.8	1329.0
47.5°	1086.7	1116.5	1181.7	1252.6	1278.7
50°	1017.7	1051.3	1122.1	1196.7	1226.5
52.5°	956.2	987.9	1062.5	1142.6	1170.6
55°	885.4	920.8	1002.8	1084.8	1116.5
57.5°	812.7	851.8	939.4	1028.9	1060.6
60°	741.9	784.7	881.6	971.1	1006.5
62.5°	672.9	715.8	816.4	909.6	945.0
65°	598.3	648.7	753.0	848.1	881.6
67.5°	527.5	581.6	691.5	784.7	818.3
70°	458.5	510.7	628.2	719.5	753.0
72.5°	384.0	443.6	561.0	656.1	691.5
75°	309.4	380.2	495.8	589.0	622.6
77.5°	240.4	313.1	428.7	505.1	521.9
80°	177.1	251.6	352.3	406.3	426.8
82.5°	113.7	188.3	268.4	307.6	324.3
85°	63.4	124.9	175.2	197.6	205.0
87.5°	26.1	54.1	70.8	80.1	80.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)