

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: P311006

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-CP125-W2A-U-4000K**

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: P311006
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 5378.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

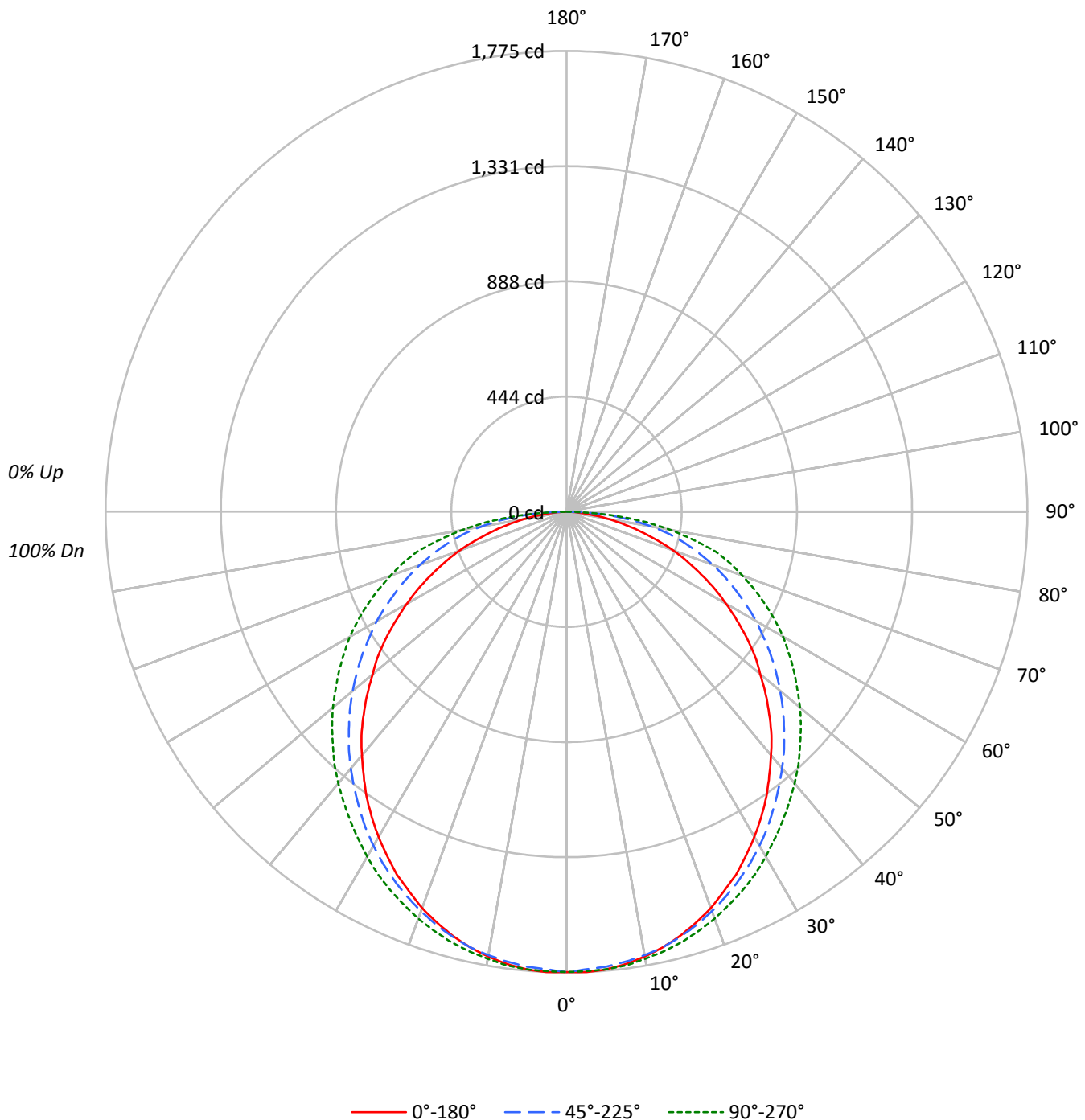
Input Watts (W): 48.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2386	2386	2386
5°	2391	2376	2391
10°	2377	2370	2389
15°	2356	2361	2391
20°	2327	2345	2389
25°	2291	2328	2387
30°	2248	2309	2384
35°	2204	2286	2386
40°	2153	2269	2401
45°	2102	2254	2421
50°	2039	2249	2458
55°	1988	2252	2507
60°	1911	2271	2593
65°	1824	2295	2687
70°	1727	2365	2836
75°	1540	2467	3098
80°	1313	2613	3166
85°	937	2589	3030



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.9	3.1
10°-20°	480.0	8.9
20°-30°	724.9	13.5
30°-40°	873.7	16.2
40°-50°	917.2	17.1
50°-60°	858.1	16.0
60°-70°	708.6	13.2
70°-80°	482.9	9.0
80°-90°	164.7	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°	1372.7	25.5
0°-40°	2246.4	41.8
0°-60°	4021.8	74.8
0°-90°	5378.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5378.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1774	1774	1774	1774	1774	
5°	1770	1768	1759	1770	1770	168
15°	1692	1693	1695	1713	1716	477
25°	1543	1551	1568	1599	1608	710
35°	1342	1356	1392	1438	1452	839
45°	1104	1128	1185	1249	1272	852
55°	848	882	960	1038	1069	757
65°	573	621	721	812	844	568
75°	296	364	475	564	596	316
85°	61	120	168	189	196	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1773.6	1773.6	1773.6	1773.6	1773.6
2.5°	1775.4	1773.6	1764.7	1773.6	1771.8
5°	1770.0	1768.3	1759.3	1770.0	1770.0
7.5°	1757.6	1757.6	1748.6	1761.1	1762.9
10°	1739.7	1739.7	1734.4	1748.6	1748.6
12.5°	1718.3	1718.3	1718.3	1732.6	1734.4
15°	1691.5	1693.3	1695.1	1713.0	1716.5
17.5°	1659.4	1663.0	1668.3	1689.8	1693.3
20°	1625.5	1629.1	1638.0	1663.0	1668.3
22.5°	1582.7	1591.6	1604.1	1632.7	1638.0
25°	1543.4	1550.6	1568.4	1598.8	1607.7
27.5°	1495.3	1506.0	1529.2	1561.3	1573.8
30°	1447.1	1457.8	1486.3	1523.8	1534.5
32.5°	1395.3	1411.4	1441.7	1481.0	1493.5
35°	1341.8	1356.1	1391.8	1438.2	1452.4
37.5°	1282.9	1302.6	1341.8	1391.8	1409.6
40°	1225.8	1247.2	1291.9	1345.4	1366.8
42.5°	1168.7	1190.1	1240.1	1300.8	1322.2
45°	1104.5	1127.7	1184.8	1249.0	1272.2
47.5°	1040.3	1068.8	1131.3	1199.1	1224.0
50°	974.2	1006.4	1074.2	1145.5	1174.1
52.5°	915.4	945.7	1017.1	1093.8	1120.6
55°	847.6	881.5	960.0	1038.5	1068.8
57.5°	778.0	815.4	899.3	984.9	1015.3
60°	710.2	751.2	844.0	929.6	963.5
62.5°	644.1	685.2	781.5	870.7	904.7
65°	572.8	620.9	720.9	811.9	844.0
67.5°	505.0	556.7	662.0	751.2	783.3
70°	438.9	488.9	601.3	688.7	720.9
72.5°	367.6	424.7	537.1	628.1	662.0
75°	296.2	364.0	474.6	563.8	596.0
77.5°	230.2	299.8	410.4	483.6	499.6
80°	169.5	240.9	337.2	389.0	408.6
82.5°	108.8	180.2	256.9	294.4	310.5
85°	60.7	119.5	167.7	189.1	196.3
87.5°	25.0	51.7	67.8	76.7	76.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)