

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: P314450

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-S-CP125-W2A-U-3000K**

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: P314450
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: 24FCZ2-60HE-UNV-L83050-S-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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

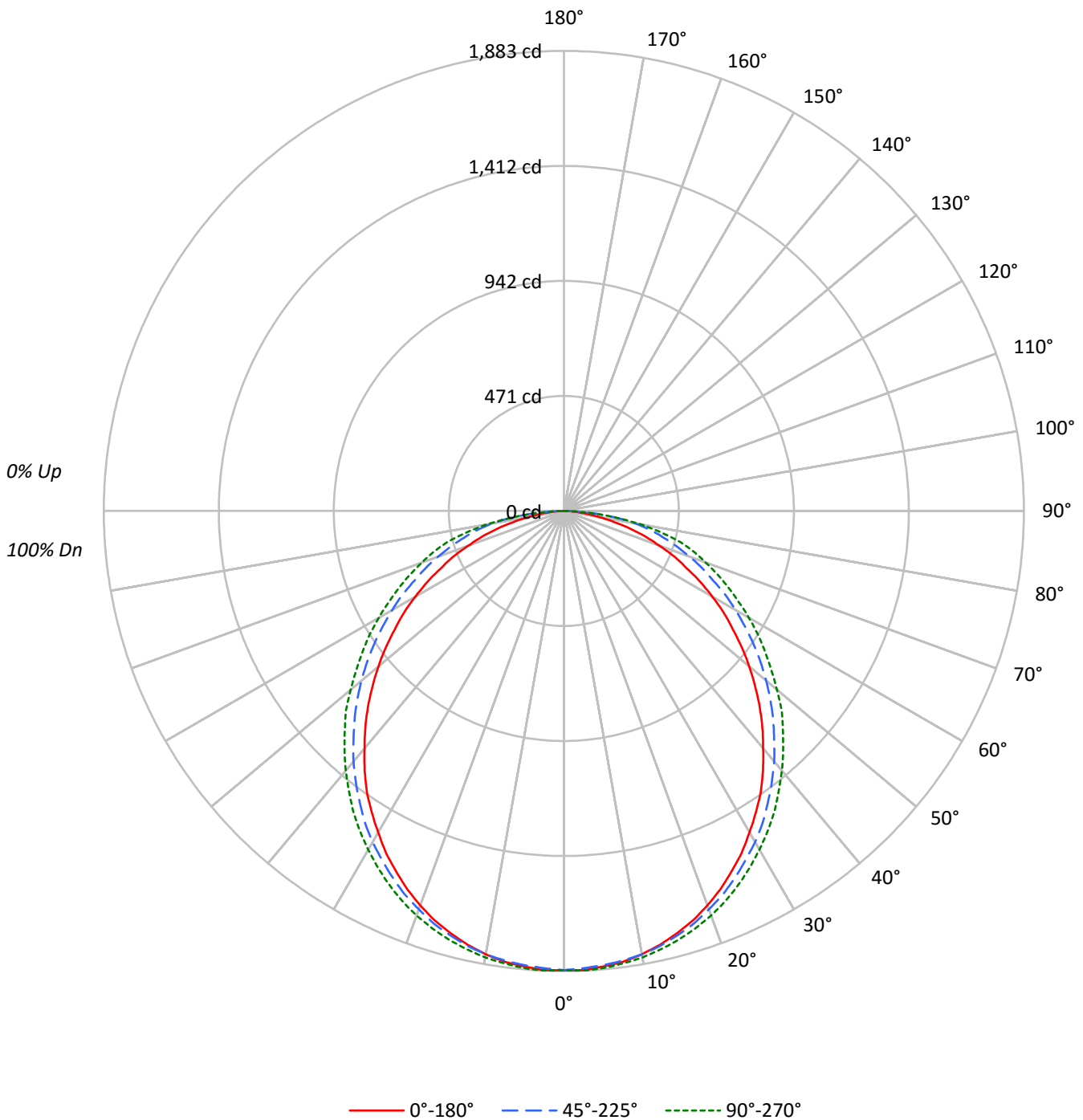
Lumens per Lamp: N/A
Luminaire Lumens: 5350.0 lumens
Efficiency: N/A
Efficacy: 112.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 47.5
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°	2529	2529	2529
5°	2527	2520	2536
10°	2517	2517	2535
15°	2493	2504	2530
20°	2460	2484	2523
25°	2414	2460	2508
30°	2360	2432	2487
35°	2308	2392	2467
40°	2230	2352	2439
45°	2157	2305	2412
50°	2074	2262	2383
55°	1981	2220	2360
60°	1889	2186	2355
65°	1769	2148	2370
70°	1638	2159	2434
75°	1467	2200	2571
80°	1185	2331	2515
85°	892	2046	1995



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.9	3.3
10°-20°	508.4	9.5
20°-30°	764.3	14.3
30°-40°	910.4	17.0
40°-50°	931.7	17.4
50°-60°	838.8	15.7
60°-70°	658.7	12.3
70°-80°	427.5	8.0
80°-90°	132.2	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°	1450.6	27.1
0°-40°	2361.0	44.1
0°-60°	4131.5	77.2
0°-90°	5350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5350.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1880	1880	1880	1880	1880	
5°	1871	1874	1866	1876	1878	178
15°	1789	1794	1798	1813	1817	505
25°	1626	1640	1657	1684	1689	749
35°	1405	1422	1456	1492	1502	877
45°	1134	1161	1212	1258	1268	874
55°	845	882	946	996	1006	757
65°	556	598	675	731	744	553
75°	282	336	423	481	494	299
85°	58	107	132	129	129	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1879.5	1879.5	1879.5	1879.5	1879.5
2.5°	1881.2	1881.2	1872.7	1881.2	1882.9
5°	1871.0	1874.4	1865.9	1876.1	1877.8
7.5°	1860.8	1860.8	1855.7	1865.9	1867.6
10°	1842.1	1843.8	1842.1	1854.0	1855.7
12.5°	1818.3	1821.7	1823.4	1835.3	1837.0
15°	1789.4	1794.5	1797.9	1813.2	1816.6
17.5°	1757.1	1762.2	1770.7	1787.7	1791.1
20°	1718.1	1724.8	1735.0	1757.1	1762.2
22.5°	1675.6	1682.4	1699.4	1719.8	1728.2
25°	1626.3	1639.9	1656.9	1684.1	1689.2
27.5°	1577.0	1588.9	1611.0	1639.9	1646.7
30°	1519.2	1537.9	1565.1	1594.0	1600.8
32.5°	1463.1	1481.8	1514.1	1544.7	1553.2
35°	1405.4	1422.4	1456.3	1492.0	1502.2
37.5°	1339.1	1361.2	1398.6	1434.3	1444.5
40°	1269.4	1296.6	1339.1	1376.5	1388.4
42.5°	1203.1	1232.0	1274.5	1315.3	1328.9
45°	1133.5	1160.7	1211.6	1257.5	1267.7
47.5°	1062.1	1092.7	1147.1	1192.9	1209.9
50°	990.7	1023.0	1080.8	1128.4	1138.6
52.5°	919.4	953.3	1014.5	1065.5	1070.6
55°	844.6	882.0	946.5	995.8	1006.0
57.5°	776.6	808.9	878.6	929.5	941.4
60°	701.8	737.5	812.3	859.9	875.2
62.5°	630.5	667.8	746.0	793.6	807.2
65°	555.7	598.2	674.6	730.7	744.3
67.5°	491.1	531.9	613.5	667.8	681.4
70°	416.3	462.2	548.9	605.0	618.6
72.5°	351.8	399.3	486.0	540.4	560.8
75°	282.1	336.5	423.1	480.9	494.5
77.5°	214.1	277.0	365.4	409.5	409.5
80°	152.9	219.2	300.8	321.2	324.6
82.5°	100.3	164.8	222.6	220.9	220.9
85°	57.8	107.1	132.5	129.2	129.2
87.5°	22.1	44.2	47.6	47.6	45.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)