

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: P314367

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CA08-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: P314367
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-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 5070.0 lumens
Efficiency: N/A
Efficacy: 129.0 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

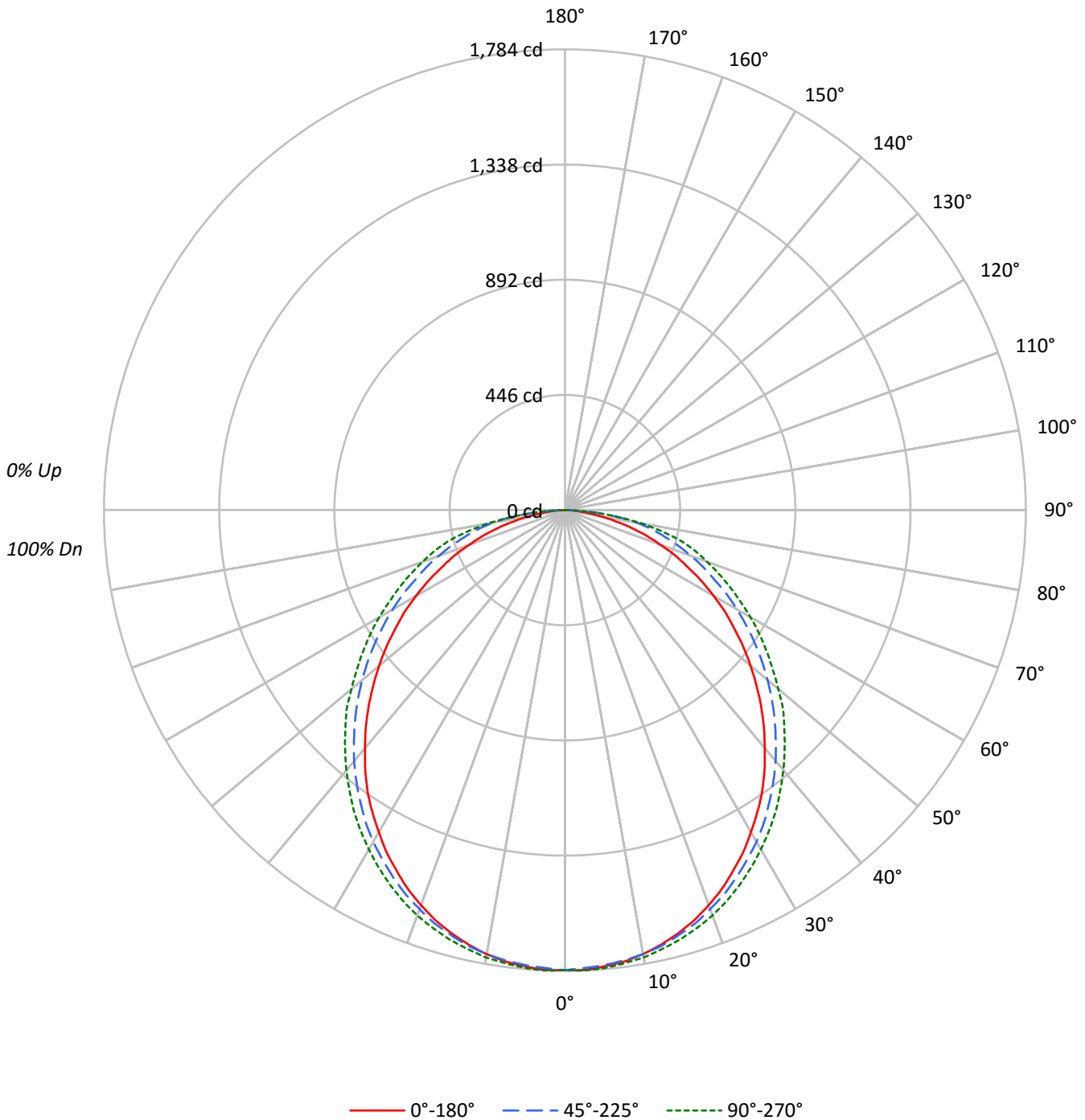
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2396	2396	2396
5°	2395	2388	2403
10°	2385	2385	2403
15°	2362	2373	2398
20°	2331	2354	2391
25°	2288	2331	2377
30°	2237	2304	2357
35°	2188	2267	2338
40°	2113	2229	2311
45°	2044	2185	2286
50°	1965	2144	2259
55°	1878	2104	2236
60°	1790	2072	2232
65°	1677	2035	2246
70°	1552	2046	2306
75°	1390	2085	2436
80°	1123	2208	2383
85°	846	1939	1890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.6	3.3
10°-20°	481.8	9.5
20°-30°	724.3	14.3
30°-40°	862.7	17.0
40°-50°	882.9	17.4
50°-60°	794.9	15.7
60°-70°	624.3	12.3
70°-80°	405.1	8.0
80°-90°	125.3	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°	1374.7	27.1
0°-40°	2237.4	44.1
0°-60°	3915.3	77.2
0°-90°	5070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1781	1781	1781	1781	1781	
5°	1773	1776	1768	1778	1780	168
15°	1696	1701	1704	1718	1722	478
25°	1541	1554	1570	1596	1601	710
35°	1332	1348	1380	1414	1424	831
45°	1074	1100	1148	1192	1201	828
55°	800	836	897	944	953	718
65°	527	567	639	692	705	524
75°	267	319	401	456	469	283
85°	55	102	126	122	122	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1781.1	1781.1	1781.1	1781.1	1781.1
2.5°	1782.7	1782.7	1774.7	1782.7	1784.3
5°	1773.1	1776.3	1768.2	1777.9	1779.5
7.5°	1763.4	1763.4	1758.6	1768.2	1769.9
10°	1745.7	1747.3	1745.7	1757.0	1758.6
12.5°	1723.1	1726.4	1728.0	1739.3	1740.9
15°	1695.8	1700.6	1703.8	1718.3	1721.5
17.5°	1665.2	1670.0	1678.1	1694.2	1697.4
20°	1628.1	1634.6	1644.2	1665.2	1670.0
22.5°	1587.9	1594.3	1610.4	1629.7	1637.8
25°	1541.2	1554.1	1570.2	1595.9	1600.8
27.5°	1494.5	1505.7	1526.7	1554.1	1560.5
30°	1439.7	1457.4	1483.2	1510.6	1517.0
32.5°	1386.6	1404.3	1434.9	1463.9	1471.9
35°	1331.8	1347.9	1380.1	1413.9	1423.6
37.5°	1269.0	1289.9	1325.4	1359.2	1368.9
40°	1203.0	1228.8	1269.0	1304.4	1315.7
42.5°	1140.2	1167.6	1207.8	1246.5	1259.3
45°	1074.1	1099.9	1148.2	1191.7	1201.4
47.5°	1006.5	1035.5	1087.0	1130.5	1146.6
50°	938.9	969.5	1024.2	1069.3	1079.0
52.5°	871.2	903.4	961.4	1009.7	1014.6
55°	800.4	835.8	897.0	943.7	953.4
57.5°	736.0	766.6	832.6	880.9	892.2
60°	665.1	698.9	769.8	814.9	829.4
62.5°	597.5	632.9	707.0	752.1	764.9
65°	526.6	566.9	639.3	692.5	705.4
67.5°	465.4	504.1	581.4	632.9	645.8
70°	394.6	438.0	520.2	573.3	586.2
72.5°	333.4	378.4	460.6	512.1	531.4
75°	267.3	318.9	401.0	455.7	468.6
77.5°	202.9	262.5	346.2	388.1	388.1
80°	144.9	207.7	285.0	304.4	307.6
82.5°	95.0	156.2	211.0	209.4	209.4
85°	54.8	101.5	125.6	122.4	122.4
87.5°	20.9	41.9	45.1	45.1	43.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)