

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: P311638

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CP125-W2A-U-5000K**

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: P311638
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: 24FCZ2-55HE-UNV-L82765-S-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5000K 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: 5364.0 lumens
Efficiency: N/A
Efficacy: 121.6 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

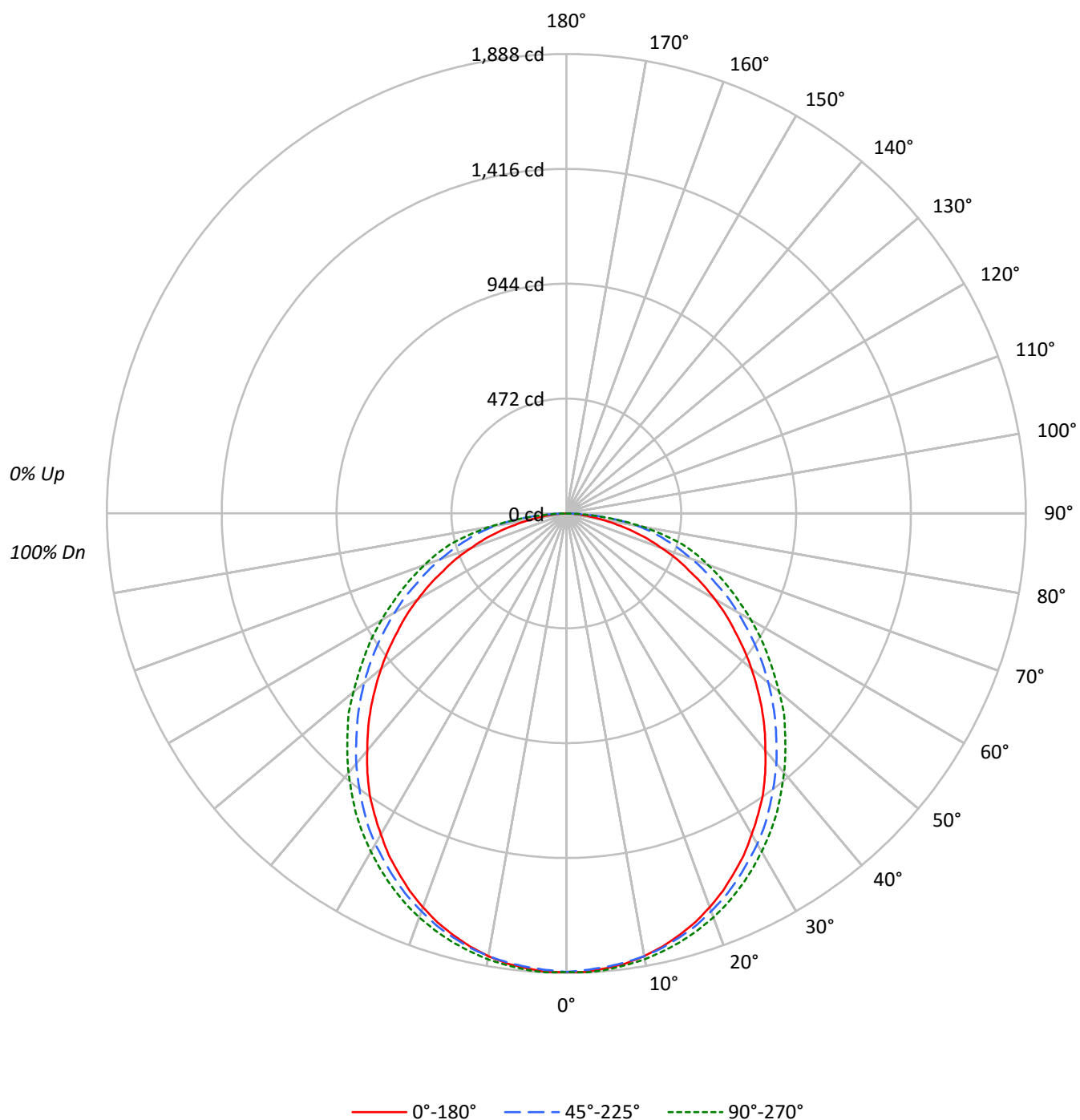
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2535	2535	2535
5°	2534	2527	2543
10°	2523	2523	2542
15°	2499	2511	2537
20°	2466	2491	2530
25°	2421	2466	2514
30°	2367	2438	2494
35°	2314	2398	2474
40°	2235	2358	2445
45°	2162	2312	2418
50°	2079	2268	2389
55°	1986	2226	2366
60°	1894	2192	2361
65°	1774	2153	2376
70°	1642	2165	2440
75°	1470	2205	2577
80°	1188	2337	2521
85°	894	2052	1999



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.4	3.3
10°-20°	509.7	9.5
20°-30°	766.3	14.3
30°-40°	912.7	17.0
40°-50°	934.1	17.4
50°-60°	841.0	15.7
60°-70°	660.5	12.3
70°-80°	428.6	8.0
80°-90°	132.6	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°	1454.4	27.1
0°-40°	2367.2	44.1
0°-60°	4142.3	77.2
0°-90°	5364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1884	1884	1884	1884	1884	
5°	1876	1879	1871	1881	1883	178
15°	1794	1799	1803	1818	1821	506
25°	1630	1644	1661	1688	1694	751
35°	1409	1426	1460	1496	1506	879
45°	1136	1164	1215	1261	1271	876
55°	847	884	949	998	1009	759
65°	557	600	676	733	746	555
75°	283	337	424	482	496	299
85°	58	107	133	130	130	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1884.4	1884.4	1884.4	1884.4	1884.4
2.5°	1886.1	1886.1	1877.6	1886.1	1887.8
5°	1875.9	1879.3	1870.8	1881.0	1882.7
7.5°	1865.7	1865.7	1860.6	1870.8	1872.5
10°	1846.9	1848.6	1846.9	1858.9	1860.6
12.5°	1823.1	1826.5	1828.2	1840.1	1841.8
15°	1794.1	1799.2	1802.6	1818.0	1821.4
17.5°	1761.7	1766.8	1775.4	1792.4	1795.8
20°	1722.5	1729.4	1739.6	1761.7	1766.8
22.5°	1680.0	1686.8	1703.8	1724.3	1732.8
25°	1630.5	1644.2	1661.2	1688.5	1693.6
27.5°	1581.1	1593.1	1615.2	1644.2	1651.0
30°	1523.2	1541.9	1569.2	1598.2	1605.0
32.5°	1467.0	1485.7	1518.1	1548.8	1557.3
35°	1409.0	1426.1	1460.2	1495.9	1506.2
37.5°	1342.6	1364.7	1402.2	1438.0	1448.2
40°	1272.7	1300.0	1342.6	1380.1	1392.0
42.5°	1206.3	1235.3	1277.9	1318.7	1332.4
45°	1136.4	1163.7	1214.8	1260.8	1271.0
47.5°	1064.9	1095.5	1150.1	1196.1	1213.1
50°	993.3	1025.7	1083.6	1131.3	1141.5
52.5°	921.8	955.8	1017.2	1068.3	1073.4
55°	846.8	884.3	949.0	998.4	1008.7
57.5°	778.6	811.0	880.9	932.0	943.9
60°	703.7	739.5	814.4	862.1	877.5
62.5°	632.1	669.6	748.0	795.7	809.3
65°	557.1	599.7	676.4	732.6	746.3
67.5°	492.4	533.3	615.1	669.6	683.2
70°	417.4	463.4	550.3	606.6	620.2
72.5°	352.7	400.4	487.3	541.8	562.3
75°	282.8	337.4	424.2	482.2	495.8
77.5°	214.7	277.7	366.3	410.6	410.6
80°	153.3	219.8	301.6	322.0	325.4
82.5°	100.5	165.3	223.2	221.5	221.5
85°	57.9	107.3	132.9	129.5	129.5
87.5°	22.1	44.3	47.7	47.7	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)