

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: P311640

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-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: P311640
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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

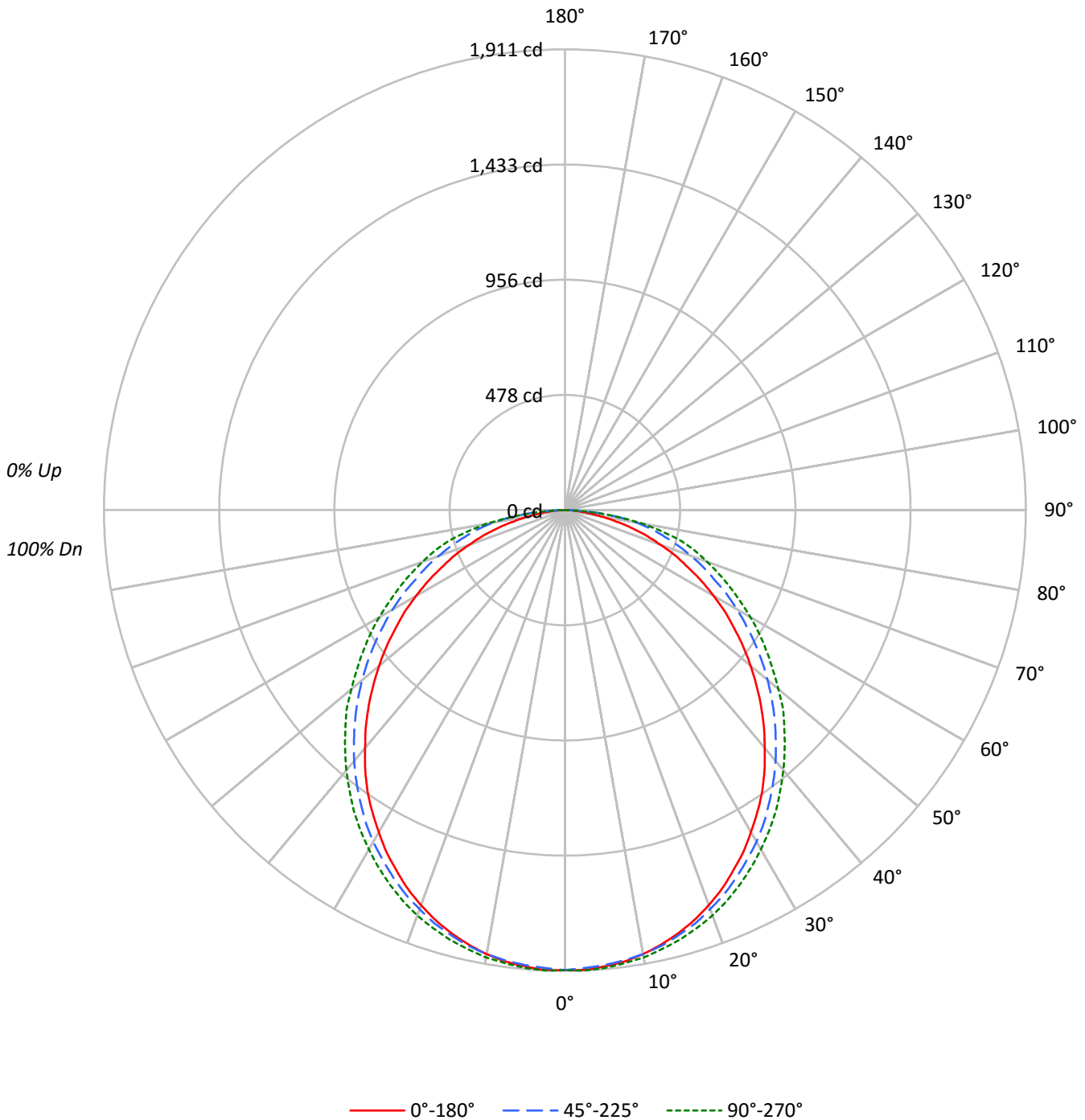
Lumens per Lamp: N/A
Luminaire Lumens: 5431.0 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44.3
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°	2567	2567	2567
5°	2565	2558	2575
10°	2555	2555	2574
15°	2530	2542	2569
20°	2497	2522	2561
25°	2451	2497	2546
30°	2396	2468	2525
35°	2343	2428	2505
40°	2263	2388	2475
45°	2189	2340	2449
50°	2105	2297	2419
55°	2011	2254	2396
60°	1917	2219	2391
65°	1796	2181	2406
70°	1662	2192	2470
75°	1489	2233	2610
80°	1203	2366	2553
85°	906	2078	2024



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.6	3.3
10°-20°	516.1	9.5
20°-30°	775.8	14.3
30°-40°	924.1	17.0
40°-50°	945.8	17.4
50°-60°	851.5	15.7
60°-70°	668.7	12.3
70°-80°	434.0	8.0
80°-90°	134.2	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°	1472.6	27.1
0°-40°	2396.7	44.1
0°-60°	4194.1	77.2
0°-90°	5431.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5431.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1908	1908	1908	1908	1908	
5°	1899	1903	1894	1904	1906	180
15°	1816	1822	1825	1841	1844	512
25°	1651	1665	1682	1710	1715	761
35°	1427	1444	1478	1515	1525	890
45°	1151	1178	1230	1277	1287	887
55°	857	895	961	1011	1021	769
65°	564	607	685	742	756	562
75°	286	342	430	488	502	303
85°	59	109	135	131	131	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1907.9	1907.9	1907.9	1907.9	1907.9
2.5°	1909.7	1909.7	1901.0	1909.7	1911.4
5°	1899.3	1902.8	1894.1	1904.5	1906.2
7.5°	1889.0	1889.0	1883.8	1894.1	1895.9
10°	1870.0	1871.7	1870.0	1882.1	1883.8
12.5°	1845.8	1849.3	1851.0	1863.1	1864.8
15°	1816.5	1821.7	1825.1	1840.7	1844.1
17.5°	1783.7	1788.9	1797.5	1814.8	1818.2
20°	1744.1	1751.0	1761.3	1783.7	1788.9
22.5°	1700.9	1707.8	1725.1	1745.8	1754.4
25°	1650.9	1664.7	1682.0	1709.6	1714.7
27.5°	1600.9	1613.0	1635.4	1664.7	1671.6
30°	1542.2	1561.2	1588.8	1618.1	1625.0
32.5°	1485.3	1504.3	1537.1	1568.1	1576.7
35°	1426.6	1443.9	1478.4	1514.6	1525.0
37.5°	1359.4	1381.8	1419.7	1456.0	1466.3
40°	1288.6	1316.2	1359.4	1397.3	1409.4
42.5°	1221.4	1250.7	1293.8	1335.2	1349.0
45°	1150.6	1178.2	1230.0	1276.6	1286.9
47.5°	1078.2	1109.2	1164.4	1211.0	1228.3
50°	1005.7	1038.5	1097.2	1145.5	1155.8
52.5°	933.3	967.8	1029.9	1081.6	1086.8
55°	857.4	895.3	960.9	1010.9	1021.3
57.5°	788.4	821.1	891.9	943.6	955.7
60°	712.5	748.7	824.6	872.9	888.4
62.5°	640.0	678.0	757.3	805.6	819.4
65°	564.1	607.2	684.9	741.8	755.6
67.5°	498.6	540.0	622.8	678.0	691.8
70°	422.6	469.2	557.2	614.1	627.9
72.5°	357.1	405.4	493.4	548.6	569.3
75°	286.4	341.6	429.5	488.2	502.0
77.5°	217.4	281.2	370.9	415.7	415.7
80°	155.3	222.5	305.3	326.0	329.5
82.5°	101.8	167.3	226.0	224.3	224.3
85°	58.7	108.7	134.6	131.1	131.1
87.5°	22.4	44.9	48.3	48.3	46.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)