

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: P311658

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CP250-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: P311658
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-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 5159.0 lumens
Efficiency: N/A
Efficacy: 116.5 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

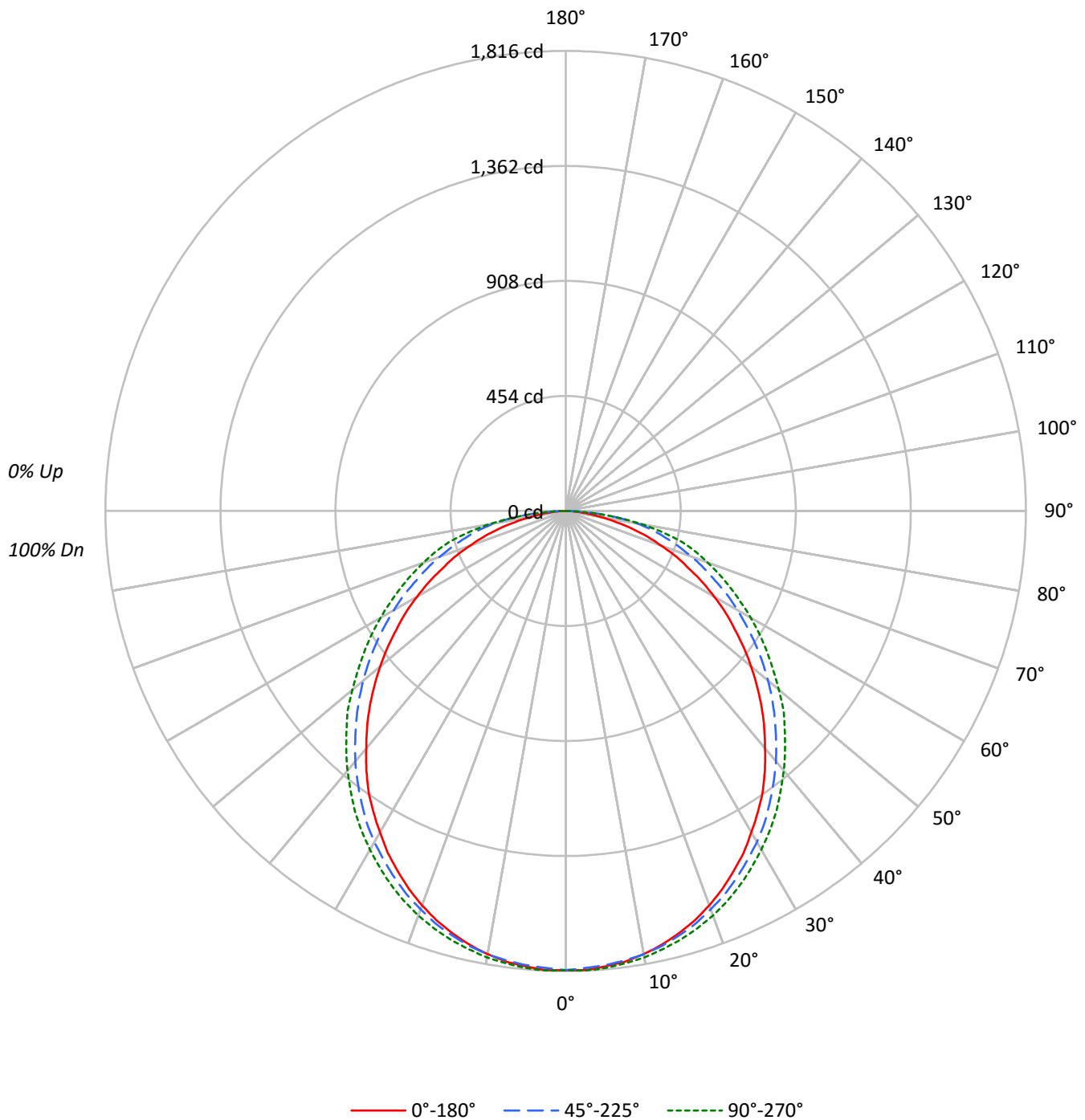
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2439	2439	2439
5°	2437	2430	2446
10°	2427	2427	2445
15°	2404	2415	2440
20°	2372	2396	2433
25°	2328	2372	2418
30°	2276	2345	2398
35°	2226	2307	2379
40°	2150	2268	2351
45°	2080	2223	2326
50°	2000	2182	2298
55°	1910	2141	2276
60°	1821	2108	2271
65°	1706	2071	2285
70°	1579	2082	2347
75°	1414	2121	2479
80°	1143	2247	2425
85°	860	1973	1922



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.6	3.3
10°-20°	490.3	9.5
20°-30°	737.0	14.3
30°-40°	877.9	17.0
40°-50°	898.4	17.4
50°-60°	808.9	15.7
60°-70°	635.2	12.3
70°-80°	412.3	8.0
80°-90°	127.5	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°	1398.8	27.1
0°-40°	2276.7	44.1
0°-60°	3984.0	77.2
0°-90°	5159.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5159.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1812	1812	1812	1812	1812	
5°	1804	1808	1799	1809	1811	171
15°	1726	1730	1734	1748	1752	487
25°	1568	1581	1598	1624	1629	722
35°	1355	1372	1404	1439	1449	845
45°	1093	1119	1168	1213	1222	843
55°	814	850	913	960	970	730
65°	536	577	651	705	718	533
75°	272	324	408	464	477	288
85°	56	103	128	124	124	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1812.4	1812.4	1812.4	1812.4	1812.4
2.5°	1814.0	1814.0	1805.8	1814.0	1815.7
5°	1804.2	1807.5	1799.3	1809.1	1810.8
7.5°	1794.4	1794.4	1789.4	1799.3	1800.9
10°	1776.3	1778.0	1776.3	1787.8	1789.4
12.5°	1753.4	1756.7	1758.3	1769.8	1771.4
15°	1725.5	1730.5	1733.7	1748.5	1751.8
17.5°	1694.4	1699.3	1707.5	1723.9	1727.2
20°	1656.7	1663.3	1673.1	1694.4	1699.3
22.5°	1615.7	1622.3	1638.7	1658.4	1666.5
25°	1568.2	1581.3	1597.7	1623.9	1628.9
27.5°	1520.7	1532.2	1553.5	1581.3	1587.9
30°	1465.0	1483.0	1509.2	1537.1	1543.6
32.5°	1410.9	1428.9	1460.1	1489.6	1497.8
35°	1355.2	1371.6	1404.4	1438.8	1448.6
37.5°	1291.3	1312.6	1348.6	1383.1	1392.9
40°	1224.1	1250.3	1291.3	1327.3	1338.8
42.5°	1160.2	1188.0	1229.0	1268.3	1281.5
45°	1093.0	1119.2	1168.4	1212.6	1222.5
47.5°	1024.2	1053.7	1106.1	1150.4	1166.7
50°	955.4	986.5	1042.2	1088.1	1097.9
52.5°	886.5	919.3	978.3	1027.5	1032.4
55°	814.4	850.5	912.7	960.3	970.1
57.5°	748.9	780.0	847.2	896.4	907.8
60°	676.8	711.2	783.3	829.2	843.9
62.5°	608.0	644.0	719.4	765.3	778.4
65°	535.9	576.8	650.6	704.6	717.7
67.5°	473.6	512.9	591.6	644.0	657.1
70°	401.5	445.7	529.3	583.4	596.5
72.5°	339.2	385.1	468.7	521.1	540.8
75°	272.0	324.5	408.0	463.7	476.9
77.5°	206.5	267.1	352.3	394.9	394.9
80°	147.5	211.4	290.0	309.7	313.0
82.5°	96.7	159.0	214.7	213.0	213.0
85°	55.7	103.2	127.8	124.5	124.5
87.5°	21.3	42.6	45.9	45.9	44.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)