

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: P311656

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CP250-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: P311656
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 5095.0 lumens
Efficiency: N/A
Efficacy: 115.5 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

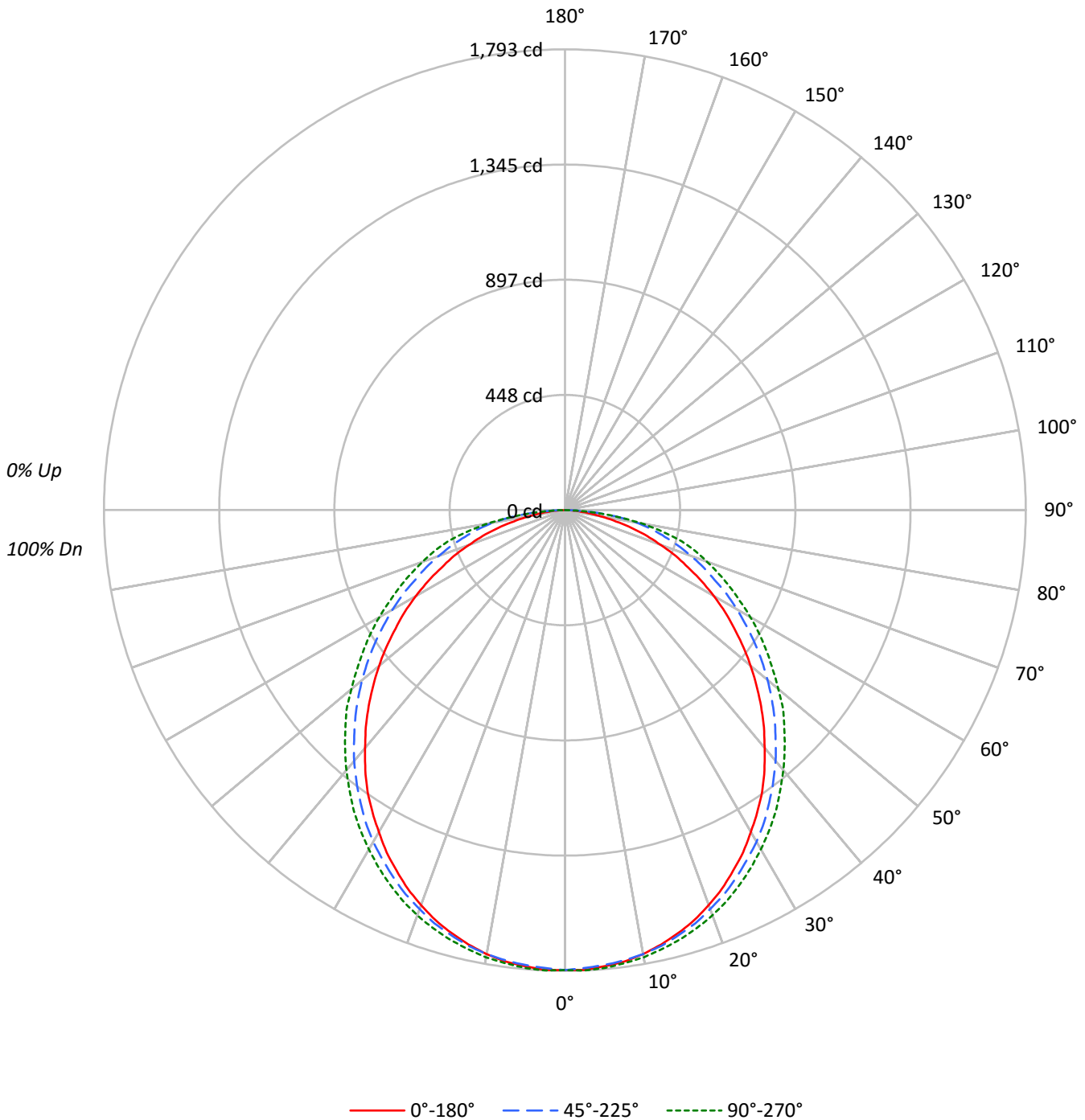
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2408	2408	2408
5°	2407	2400	2415
10°	2397	2397	2414
15°	2374	2385	2410
20°	2343	2366	2403
25°	2299	2343	2388
30°	2248	2316	2369
35°	2198	2278	2350
40°	2123	2240	2322
45°	2054	2196	2297
50°	1975	2155	2270
55°	1887	2114	2248
60°	1799	2082	2243
65°	1685	2046	2257
70°	1560	2056	2317
75°	1396	2095	2448
80°	1129	2219	2395
85°	849	1948	1899



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.5	3.3
10°-20°	484.2	9.5
20°-30°	727.8	14.3
30°-40°	867.0	17.0
40°-50°	887.3	17.4
50°-60°	798.8	15.7
60°-70°	627.3	12.3
70°-80°	407.1	8.0
80°-90°	125.9	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°	1381.5	27.1
0°-40°	2248.4	44.1
0°-60°	3934.6	77.2
0°-90°	5095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5095.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1790	1790	1790	1790	1790	
5°	1782	1785	1777	1787	1788	169
15°	1704	1709	1712	1727	1730	481
25°	1549	1562	1578	1604	1609	713
35°	1338	1355	1387	1421	1431	835
45°	1079	1105	1154	1198	1207	832
55°	804	840	901	948	958	721
65°	529	570	642	696	709	527
75°	269	320	403	458	471	284
85°	55	102	126	123	123	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1789.9	1789.9	1789.9	1789.9	1789.9
2.5°	1791.5	1791.5	1783.4	1791.5	1793.1
5°	1781.8	1785.1	1777.0	1786.7	1788.3
7.5°	1772.1	1772.1	1767.2	1777.0	1778.6
10°	1754.3	1755.9	1754.3	1765.6	1767.2
12.5°	1731.6	1734.9	1736.5	1747.8	1749.4
15°	1704.1	1709.0	1712.2	1726.8	1730.0
17.5°	1673.4	1678.2	1686.3	1702.5	1705.8
20°	1636.2	1642.6	1652.3	1673.4	1678.2
22.5°	1595.7	1602.2	1618.4	1637.8	1645.9
25°	1548.8	1561.7	1577.9	1603.8	1608.7
27.5°	1501.8	1513.2	1534.2	1561.7	1568.2
30°	1446.8	1464.6	1490.5	1518.0	1524.5
32.5°	1393.4	1411.2	1442.0	1471.1	1479.2
35°	1338.4	1354.6	1386.9	1420.9	1430.6
37.5°	1275.3	1296.3	1331.9	1365.9	1375.6
40°	1208.9	1234.8	1275.3	1310.9	1322.2
42.5°	1145.8	1173.3	1213.8	1252.6	1265.6
45°	1079.4	1105.3	1153.9	1197.6	1207.3
47.5°	1011.5	1040.6	1092.4	1136.1	1152.3
50°	943.5	974.3	1029.3	1074.6	1084.3
52.5°	875.5	907.9	966.2	1014.7	1019.6
55°	804.3	839.9	901.4	948.4	958.1
57.5°	739.6	770.3	836.7	885.2	896.6
60°	668.4	702.4	773.6	818.9	833.5
62.5°	600.4	636.0	710.5	755.8	768.7
65°	529.2	569.7	642.5	695.9	708.8
67.5°	467.7	506.5	584.2	636.0	649.0
70°	396.5	440.2	522.7	576.1	589.1
72.5°	335.0	380.3	462.9	514.6	534.1
75°	268.6	320.4	403.0	458.0	470.9
77.5°	203.9	263.8	347.9	390.0	390.0
80°	145.7	208.8	286.4	305.9	309.1
82.5°	95.5	157.0	212.0	210.4	210.4
85°	55.0	102.0	126.2	123.0	123.0
87.5°	21.0	42.1	45.3	45.3	43.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)