

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: P314439

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-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: P314439
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-L83050-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: 5245.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

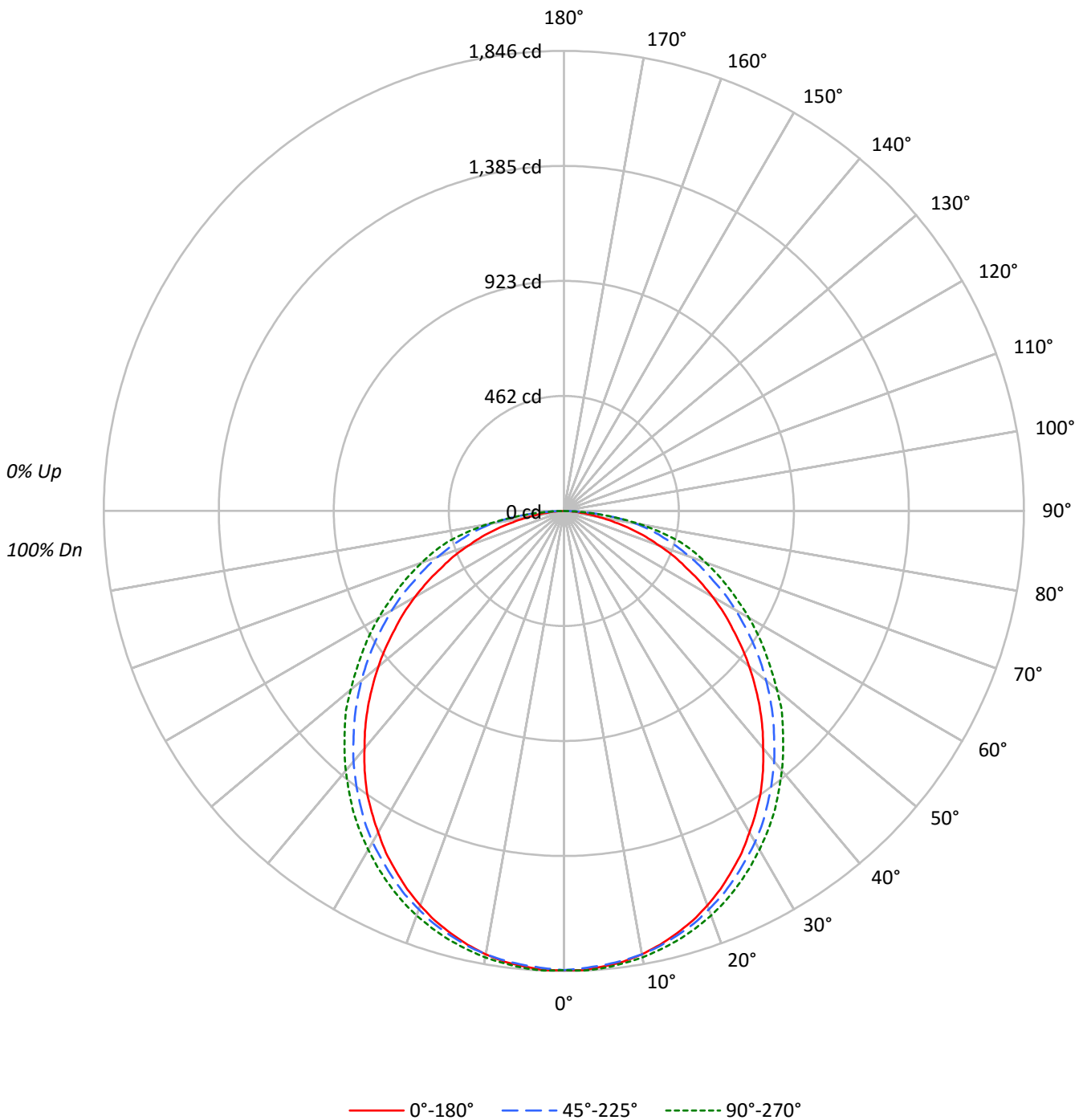
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2479	2479	2479
5°	2477	2471	2486
10°	2467	2467	2486
15°	2444	2455	2481
20°	2412	2436	2474
25°	2367	2412	2458
30°	2314	2384	2438
35°	2263	2345	2419
40°	2186	2306	2391
45°	2114	2260	2365
50°	2033	2218	2336
55°	1942	2177	2314
60°	1852	2143	2309
65°	1734	2106	2323
70°	1606	2117	2386
75°	1438	2156	2520
80°	1161	2285	2466
85°	874	2005	1954



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.4	3.3
10°-20°	498.4	9.5
20°-30°	749.3	14.3
30°-40°	892.5	17.0
40°-50°	913.4	17.4
50°-60°	822.4	15.7
60°-70°	645.8	12.3
70°-80°	419.2	8.0
80°-90°	129.6	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°	1422.1	27.1
0°-40°	2314.6	44.1
0°-60°	4050.4	77.2
0°-90°	5245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5245.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1843	1843	1843	1843	1843	
5°	1834	1838	1829	1839	1841	174
15°	1754	1759	1763	1778	1781	495
25°	1594	1608	1624	1651	1656	734
35°	1378	1394	1428	1463	1473	860
45°	1111	1138	1188	1233	1243	857
55°	828	865	928	976	986	742
65°	545	586	661	716	730	542
75°	277	330	415	472	485	293
85°	57	105	130	127	127	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1842.6	1842.6	1842.6	1842.6	1842.6
2.5°	1844.3	1844.3	1835.9	1844.3	1845.9
5°	1834.3	1837.6	1829.3	1839.3	1840.9
7.5°	1824.3	1824.3	1819.3	1829.3	1830.9
10°	1806.0	1807.6	1806.0	1817.6	1819.3
12.5°	1782.6	1786.0	1787.6	1799.3	1801.0
15°	1754.3	1759.3	1762.6	1777.6	1781.0
17.5°	1722.7	1727.6	1736.0	1752.6	1756.0
20°	1684.3	1691.0	1701.0	1722.7	1727.6
22.5°	1642.7	1649.3	1666.0	1686.0	1694.3
25°	1594.4	1607.7	1624.4	1651.0	1656.0
27.5°	1546.1	1557.7	1579.4	1607.7	1614.4
30°	1489.4	1507.7	1534.4	1562.7	1569.4
32.5°	1434.4	1452.8	1484.4	1514.4	1522.7
35°	1377.8	1394.4	1427.8	1462.8	1472.7
37.5°	1312.8	1334.5	1371.1	1406.1	1416.1
40°	1244.5	1271.2	1312.8	1349.5	1361.1
42.5°	1179.5	1207.9	1249.5	1289.5	1302.8
45°	1111.2	1137.9	1187.9	1232.8	1242.8
47.5°	1041.3	1071.2	1124.6	1169.5	1186.2
50°	971.3	1002.9	1059.6	1106.2	1116.2
52.5°	901.3	934.6	994.6	1044.6	1049.6
55°	828.0	864.7	928.0	976.3	986.3
57.5°	761.4	793.0	861.3	911.3	923.0
60°	688.1	723.0	796.4	843.0	858.0
62.5°	618.1	654.7	731.4	778.0	791.4
65°	544.8	586.4	661.4	716.4	729.7
67.5°	481.5	521.5	601.4	654.7	668.1
70°	408.2	453.2	538.1	593.1	606.4
72.5°	344.9	391.5	476.5	529.8	549.8
75°	276.6	329.9	414.8	471.5	484.8
77.5°	209.9	271.6	358.2	401.5	401.5
80°	149.9	214.9	294.9	314.9	318.2
82.5°	98.3	161.6	218.2	216.6	216.6
85°	56.6	105.0	129.9	126.6	126.6
87.5°	21.7	43.3	46.6	46.6	45.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)