

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: P314387

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CP250-W2A-U-4000K**

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: P314387  
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: 24FCZ2-50HE-UNV-L83050-S-CP250-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 4000K 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**

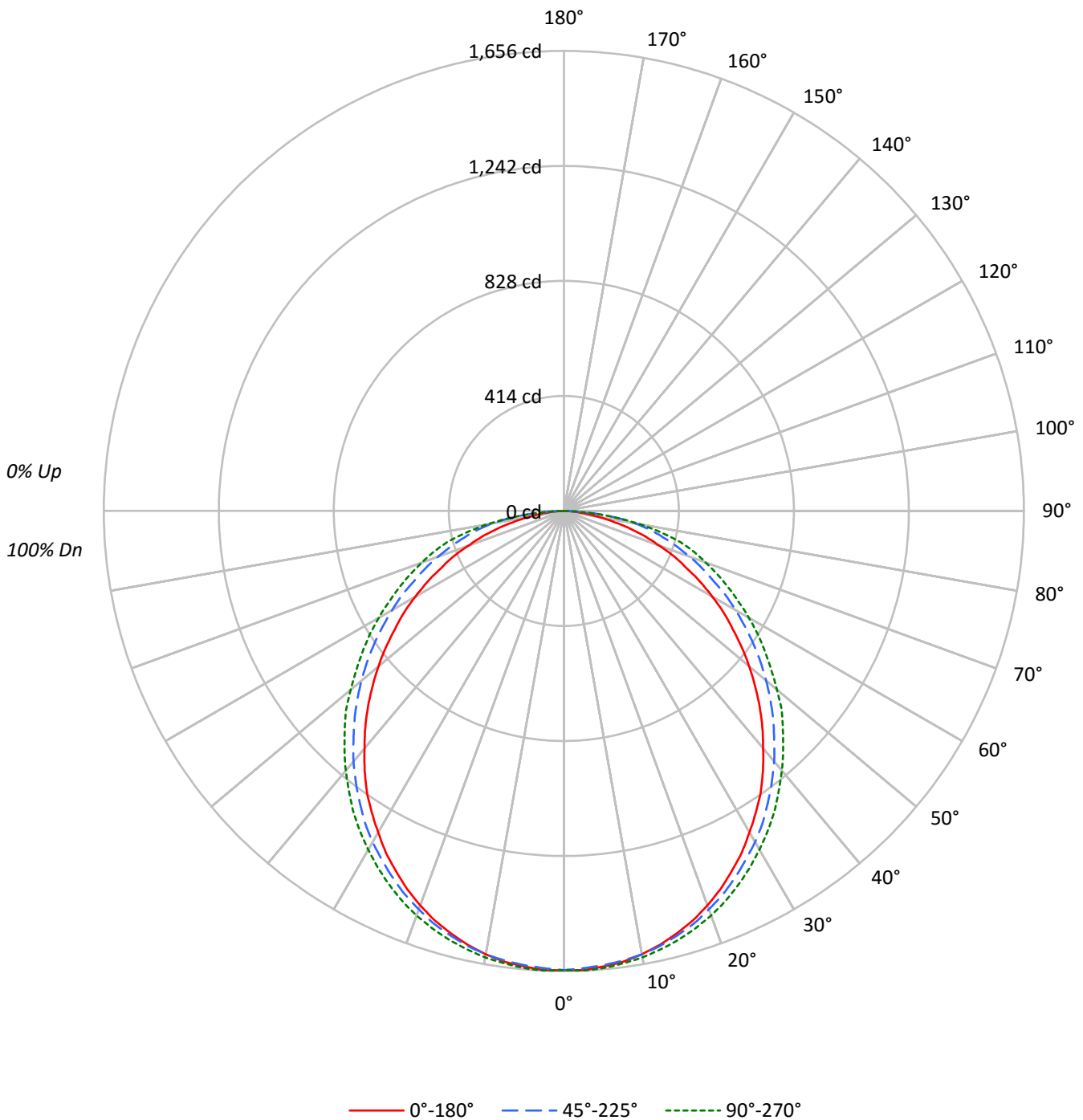
Lumens per Lamp: N/A  
Luminaire Lumens: 4705.0 lumens  
Efficiency: N/A  
Efficacy: 119.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2224	2224	2224
5°	2222	2216	2230
10°	2213	2213	2230
15°	2192	2203	2225
20°	2163	2185	2219
25°	2123	2163	2205
30°	2076	2138	2187
35°	2030	2104	2170
40°	1961	2069	2145
45°	1897	2028	2121
50°	1824	1990	2096
55°	1742	1953	2075
60°	1661	1922	2071
65°	1556	1889	2084
70°	1440	1899	2140
75°	1290	1934	2261
80°	1042	2049	2211
85°	784	1800	1754



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.5	3.3
10°-20°	447.1	9.5
20°-30°	672.1	14.3
30°-40°	800.6	17.0
40°-50°	819.4	17.4
50°-60°	737.7	15.7
60°-70°	579.3	12.3
70°-80°	376.0	8.0
80°-90°	116.3	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°	1275.7	27.1
0°-40°	2076.3	44.1
0°-60°	3633.4	77.2
0°-90°	4705.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4705.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1653	1653	1653	1653	1653	
5°	1645	1648	1641	1650	1651	156
15°	1574	1578	1581	1595	1598	444
25°	1430	1442	1457	1481	1486	659
35°	1236	1251	1281	1312	1321	771
45°	997	1021	1066	1106	1115	769
55°	743	776	832	876	885	666
65°	489	526	593	643	655	486
75°	248	296	372	423	435	263
85°	51	94	117	114	114	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1652.9	1652.9	1652.9	1652.9	1652.9
2.5°	1654.4	1654.4	1646.9	1654.4	1655.9
5°	1645.4	1648.4	1640.9	1649.9	1651.4
7.5°	1636.5	1636.5	1632.0	1640.9	1642.4
10°	1620.0	1621.5	1620.0	1630.5	1632.0
12.5°	1599.1	1602.1	1603.6	1614.0	1615.5
15°	1573.7	1578.2	1581.2	1594.6	1597.6
17.5°	1545.3	1549.8	1557.3	1572.2	1575.2
20°	1510.9	1516.9	1525.9	1545.3	1549.8
22.5°	1473.6	1479.5	1494.5	1512.4	1519.9
25°	1430.2	1442.2	1457.1	1481.0	1485.5
27.5°	1386.9	1397.3	1416.8	1442.2	1448.2
30°	1336.1	1352.5	1376.4	1401.8	1407.8
32.5°	1286.7	1303.2	1331.6	1358.5	1366.0
35°	1235.9	1250.9	1280.8	1312.2	1321.1
37.5°	1177.7	1197.1	1230.0	1261.3	1270.3
40°	1116.4	1140.3	1177.7	1210.5	1221.0
42.5°	1058.1	1083.5	1120.9	1156.7	1168.7
45°	996.8	1020.7	1065.6	1105.9	1114.9
47.5°	934.1	961.0	1008.8	1049.1	1064.1
50°	871.3	899.7	950.5	992.3	1001.3
52.5°	808.5	838.4	892.2	937.0	941.5
55°	742.8	775.6	832.4	875.8	884.7
57.5°	683.0	711.4	772.6	817.5	827.9
60°	617.2	648.6	714.4	756.2	769.7
62.5°	554.5	587.3	656.1	697.9	709.9
65°	488.7	526.1	593.3	642.6	654.6
67.5°	431.9	467.8	539.5	587.3	599.3
70°	366.1	406.5	482.7	532.0	544.0
72.5°	309.4	351.2	427.4	475.2	493.2
75°	248.1	295.9	372.1	422.9	434.9
77.5°	188.3	243.6	321.3	360.2	360.2
80°	134.5	192.8	264.5	282.5	285.4
82.5°	88.2	145.0	195.8	194.3	194.3
85°	50.8	94.2	116.6	113.6	113.6
87.5°	19.4	38.9	41.8	41.8	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)