

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: P311527

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA08-W2A-U-3500K**

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: P311527  
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-L82765-S-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 3500K 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**

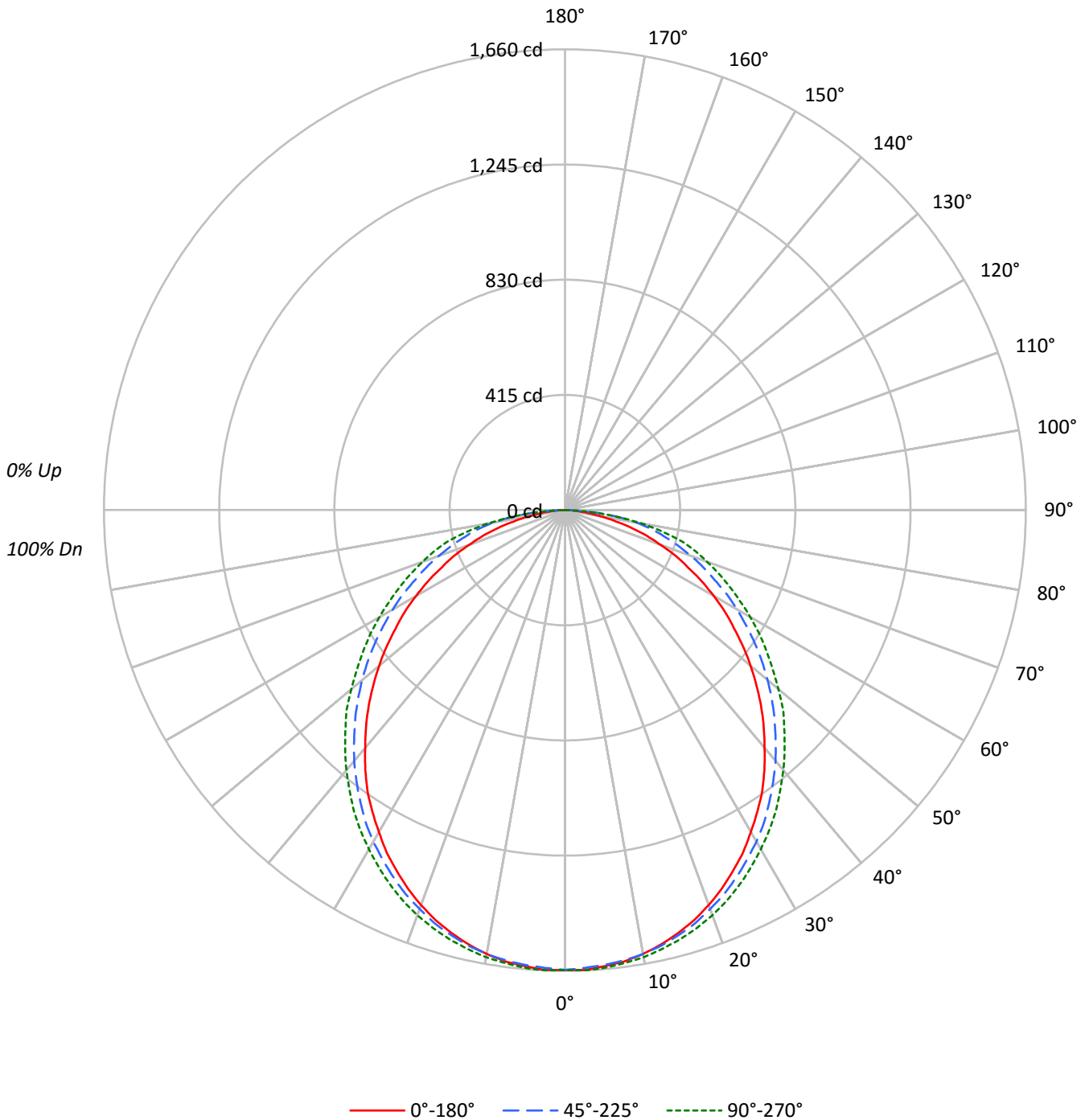
Lumens per Lamp: N/A  
Luminaire Lumens: 4716.0 lumens  
Efficiency: N/A  
Efficacy: 122.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2229	2229	2229
5°	2228	2222	2236
10°	2219	2219	2235
15°	2197	2208	2231
20°	2169	2190	2224
25°	2128	2168	2211
30°	2081	2143	2192
35°	2035	2109	2175
40°	1965	2073	2149
45°	1901	2032	2126
50°	1828	1994	2101
55°	1746	1957	2080
60°	1665	1927	2076
65°	1559	1893	2089
70°	1444	1903	2145
75°	1293	1939	2266
80°	1044	2054	2217
85°	786	1803	1757



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.8	3.3
10°-20°	448.2	9.5
20°-30°	673.7	14.3
30°-40°	802.5	17.0
40°-50°	821.3	17.4
50°-60°	739.4	15.7
60°-70°	580.7	12.3
70°-80°	376.9	8.0
80°-90°	116.5	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°	1278.7	27.1
0°-40°	2081.2	44.1
0°-60°	3641.9	77.2
0°-90°	4716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4716.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1657	1657	1657	1657	1657	
5°	1649	1652	1645	1654	1655	157
15°	1577	1582	1585	1598	1601	445
25°	1434	1446	1460	1484	1489	660
35°	1239	1254	1284	1315	1324	773
45°	999	1023	1068	1108	1118	770
55°	744	777	834	878	887	667
65°	490	527	595	644	656	488
75°	249	297	373	424	436	263
85°	51	94	117	114	114	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1656.8	1656.8	1656.8	1656.8	1656.8
2.5°	1658.3	1658.3	1650.8	1658.3	1659.8
5°	1649.3	1652.3	1644.8	1653.8	1655.3
7.5°	1640.3	1640.3	1635.8	1644.8	1646.3
10°	1623.8	1625.3	1623.8	1634.3	1635.8
12.5°	1602.8	1605.8	1607.3	1617.8	1619.3
15°	1577.4	1581.9	1584.9	1598.3	1601.3
17.5°	1548.9	1553.4	1560.9	1575.9	1578.9
20°	1514.5	1520.4	1529.4	1548.9	1553.4
22.5°	1477.0	1483.0	1498.0	1516.0	1523.4
25°	1433.6	1445.5	1460.5	1484.5	1489.0
27.5°	1390.1	1400.6	1420.1	1445.5	1451.5
30°	1339.2	1355.7	1379.6	1405.1	1411.1
32.5°	1289.8	1306.2	1334.7	1361.7	1369.2
35°	1238.8	1253.8	1283.8	1315.2	1324.2
37.5°	1180.4	1199.9	1232.8	1264.3	1273.3
40°	1119.0	1143.0	1180.4	1213.4	1223.8
42.5°	1060.6	1086.0	1123.5	1159.4	1171.4
45°	999.2	1023.1	1068.1	1108.5	1117.5
47.5°	936.2	963.2	1011.1	1051.6	1066.6
50°	873.3	901.8	952.7	994.7	1003.6
52.5°	810.4	840.4	894.3	939.2	943.7
55°	744.5	777.4	834.4	877.8	886.8
57.5°	684.6	713.0	774.5	819.4	829.9
60°	618.7	650.1	716.0	758.0	771.5
62.5°	555.7	588.7	657.6	699.6	711.5
65°	489.8	527.3	594.7	644.1	656.1
67.5°	432.9	468.9	540.8	588.7	600.7
70°	367.0	407.4	483.8	533.3	545.3
72.5°	310.1	352.0	428.4	476.4	494.3
75°	248.7	296.6	373.0	423.9	435.9
77.5°	188.7	244.2	322.1	361.0	361.0
80°	134.8	193.2	265.1	283.1	286.1
82.5°	88.4	145.3	196.2	194.7	194.7
85°	50.9	94.4	116.8	113.8	113.8
87.5°	19.5	38.9	41.9	41.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)