

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: P311547

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CP125-W2A-U-4500K**

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: P311547  
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-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4500K 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**

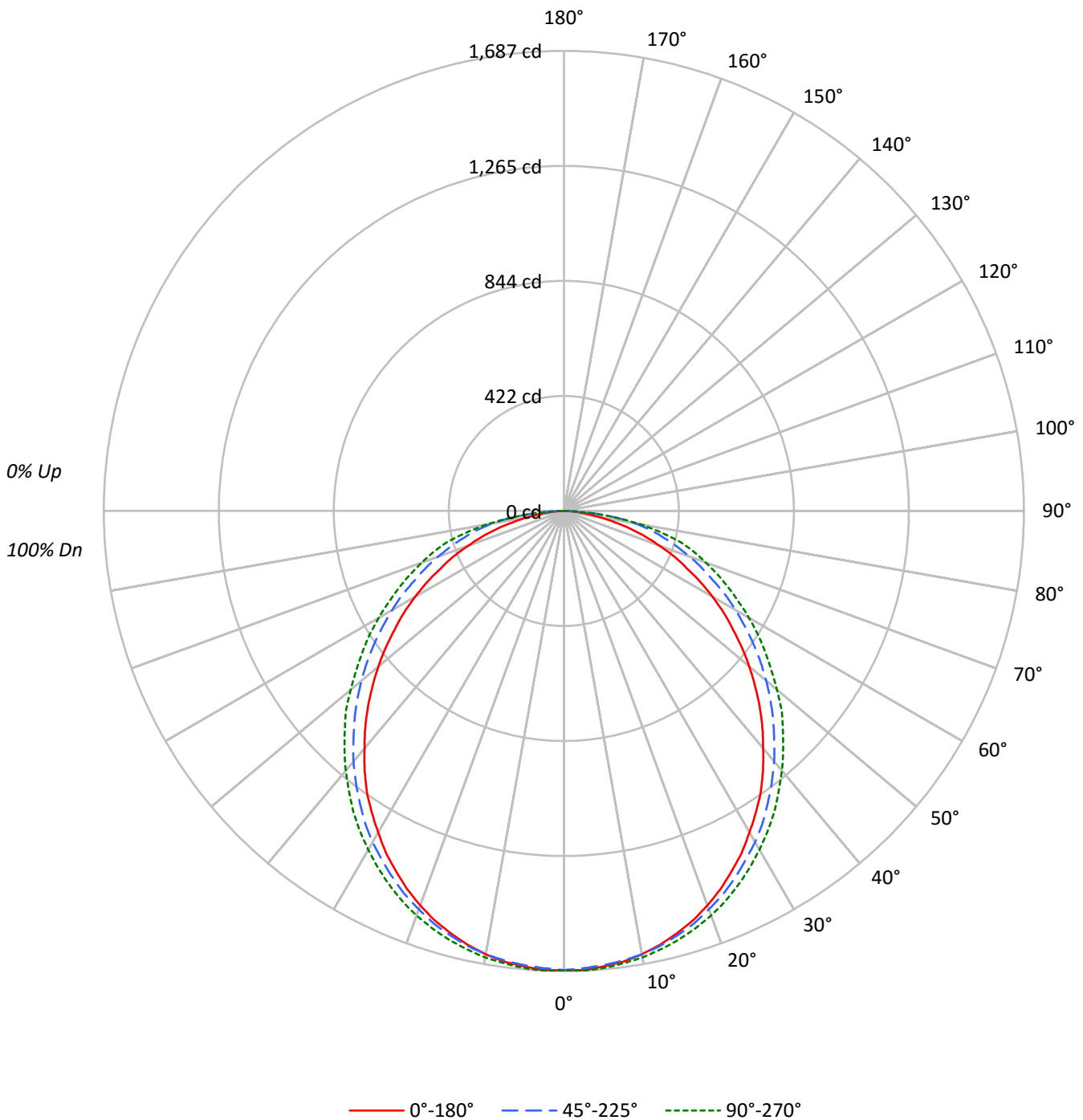
Lumens per Lamp: N/A  
Luminaire Lumens: 4793.0 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2266	2266	2266
5°	2264	2258	2272
10°	2255	2255	2271
15°	2233	2244	2267
20°	2204	2226	2261
25°	2163	2204	2247
30°	2115	2179	2228
35°	2068	2143	2211
40°	1998	2107	2185
45°	1932	2065	2161
50°	1858	2027	2135
55°	1775	1989	2114
60°	1692	1958	2110
65°	1585	1924	2123
70°	1467	1934	2180
75°	1314	1971	2303
80°	1062	2088	2253
85°	800	1832	1786



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.4	3.3
10°-20°	455.5	9.5
20°-30°	684.7	14.3
30°-40°	815.6	17.0
40°-50°	834.7	17.4
50°-60°	751.5	15.7
60°-70°	590.1	12.3
70°-80°	383.0	8.0
80°-90°	118.5	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°	1299.6	27.1
0°-40°	2115.2	44.1
0°-60°	3701.4	77.2
0°-90°	4793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4793.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1684	1684	1684	1684	1684	
5°	1676	1679	1672	1681	1682	159
15°	1603	1608	1611	1624	1628	452
25°	1457	1469	1484	1509	1513	671
35°	1259	1274	1305	1337	1346	785
45°	1016	1040	1086	1127	1136	783
55°	757	790	848	892	901	678
65°	498	536	604	655	667	496
75°	253	301	379	431	443	267
85°	52	96	119	116	116	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1683.8	1683.8	1683.8	1683.8	1683.8
2.5°	1685.3	1685.3	1677.7	1685.3	1686.9
5°	1676.2	1679.2	1671.6	1680.8	1682.3
7.5°	1667.1	1667.1	1662.5	1671.6	1673.2
10°	1650.3	1651.8	1650.3	1661.0	1662.5
12.5°	1629.0	1632.0	1633.6	1644.2	1645.8
15°	1603.1	1607.7	1610.7	1624.4	1627.5
17.5°	1574.2	1578.8	1586.4	1601.6	1604.6
20°	1539.2	1545.3	1554.4	1574.2	1578.8
22.5°	1501.1	1507.2	1522.4	1540.7	1548.3
25°	1457.0	1469.1	1484.4	1508.7	1513.3
27.5°	1412.8	1423.5	1443.3	1469.1	1475.2
30°	1361.1	1377.8	1402.2	1428.0	1434.1
32.5°	1310.8	1327.6	1356.5	1383.9	1391.5
35°	1259.1	1274.3	1304.7	1336.7	1345.8
37.5°	1199.7	1219.5	1253.0	1284.9	1294.1
40°	1137.3	1161.6	1199.7	1233.2	1243.8
42.5°	1077.9	1103.8	1141.8	1178.4	1190.5
45°	1015.5	1039.8	1085.5	1126.6	1135.7
47.5°	951.5	978.9	1027.6	1068.7	1084.0
50°	887.6	916.5	968.3	1010.9	1020.0
52.5°	823.6	854.1	908.9	954.6	959.1
55°	756.6	790.1	848.0	892.1	901.3
57.5°	695.8	724.7	787.1	832.8	843.4
60°	628.8	660.7	727.7	770.4	784.1
62.5°	564.8	598.3	668.3	711.0	723.2
65°	497.8	535.9	604.4	654.6	666.8
67.5°	440.0	476.5	549.6	598.3	610.5
70°	373.0	414.1	491.7	542.0	554.2
72.5°	315.1	357.8	435.4	484.1	502.4
75°	252.7	301.4	379.1	430.8	443.0
77.5°	191.8	248.2	327.3	366.9	366.9
80°	137.0	196.4	269.5	287.7	290.8
82.5°	89.8	147.7	199.4	197.9	197.9
85°	51.8	95.9	118.7	115.7	115.7
87.5°	19.8	39.6	42.6	42.6	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)