

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: P314376

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-S-CP125-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: P314376
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 4717.0 lumens
Efficiency: N/A
Efficacy: 122.8 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

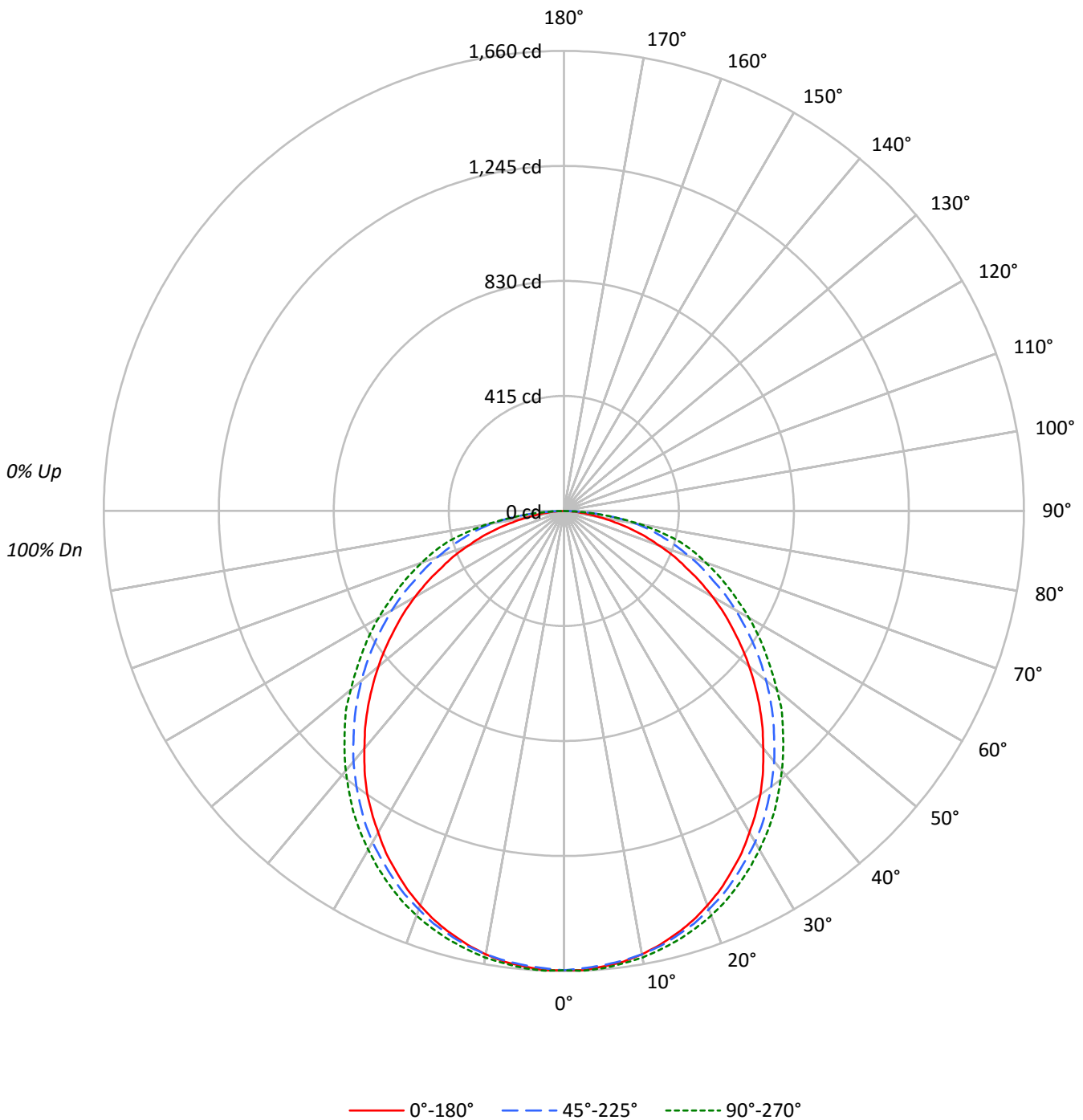
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2230	2230	2230
5°	2228	2222	2236
10°	2219	2219	2235
15°	2198	2208	2231
20°	2169	2190	2225
25°	2129	2169	2211
30°	2081	2144	2193
35°	2035	2109	2176
40°	1966	2074	2150
45°	1902	2033	2127
50°	1828	1995	2101
55°	1747	1958	2081
60°	1665	1927	2076
65°	1560	1894	2089
70°	1444	1904	2146
75°	1293	1940	2267
80°	1044	2055	2218
85°	786	1805	1758



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.9	3.3
10°-20°	448.3	9.5
20°-30°	673.8	14.3
30°-40°	802.6	17.0
40°-50°	821.5	17.4
50°-60°	739.6	15.7
60°-70°	580.8	12.3
70°-80°	376.9	8.0
80°-90°	116.6	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°	1279.0	27.1
0°-40°	2081.6	44.1
0°-60°	3642.7	77.2
0°-90°	4717.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4717.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1657	1657	1657	1657	1657	
5°	1650	1653	1645	1654	1656	157
15°	1578	1582	1585	1599	1602	445
25°	1434	1446	1461	1485	1489	661
35°	1239	1254	1284	1316	1324	773
45°	999	1023	1068	1109	1118	770
55°	745	778	834	878	887	668
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°	1657.1	1657.1	1657.1	1657.1	1657.1
2.5°	1658.6	1658.6	1651.1	1658.6	1660.1
5°	1649.6	1652.6	1645.1	1654.1	1655.6
7.5°	1640.6	1640.6	1636.1	1645.1	1646.6
10°	1624.2	1625.6	1624.2	1634.6	1636.1
12.5°	1603.2	1606.2	1607.7	1618.2	1619.7
15°	1577.7	1582.2	1585.2	1598.7	1601.7
17.5°	1549.2	1553.7	1561.2	1576.2	1579.2
20°	1514.8	1520.8	1529.8	1549.2	1553.7
22.5°	1477.3	1483.3	1498.3	1516.3	1523.8
25°	1433.9	1445.9	1460.8	1484.8	1489.3
27.5°	1390.4	1400.9	1420.4	1445.9	1451.8
30°	1339.5	1356.0	1379.9	1405.4	1411.4
32.5°	1290.0	1306.5	1335.0	1361.9	1369.4
35°	1239.1	1254.1	1284.0	1315.5	1324.5
37.5°	1180.7	1200.1	1233.1	1264.6	1273.5
40°	1119.2	1143.2	1180.7	1213.6	1224.1
42.5°	1060.8	1086.3	1123.7	1159.7	1171.7
45°	999.4	1023.3	1068.3	1108.7	1117.7
47.5°	936.4	963.4	1011.3	1051.8	1066.8
50°	873.5	902.0	952.9	994.9	1003.9
52.5°	810.6	840.5	894.5	939.4	943.9
55°	744.7	777.6	834.5	878.0	887.0
57.5°	684.7	713.2	774.6	819.6	830.1
60°	618.8	650.3	716.2	758.1	771.6
62.5°	555.9	588.8	657.8	699.7	711.7
65°	489.9	527.4	594.8	644.3	656.3
67.5°	433.0	469.0	540.9	588.8	600.8
70°	367.1	407.5	483.9	533.4	545.4
72.5°	310.1	352.1	428.5	476.5	494.4
75°	248.7	296.7	373.1	424.0	436.0
77.5°	188.8	244.2	322.1	361.1	361.1
80°	134.8	193.3	265.2	283.2	286.2
82.5°	88.4	145.3	196.3	194.8	194.8
85°	50.9	94.4	116.9	113.9	113.9
87.5°	19.5	39.0	42.0	42.0	40.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)