

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: P313401

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-HRP-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: P313401
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-75HE-UNV-L83050-HRP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 5231.0 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

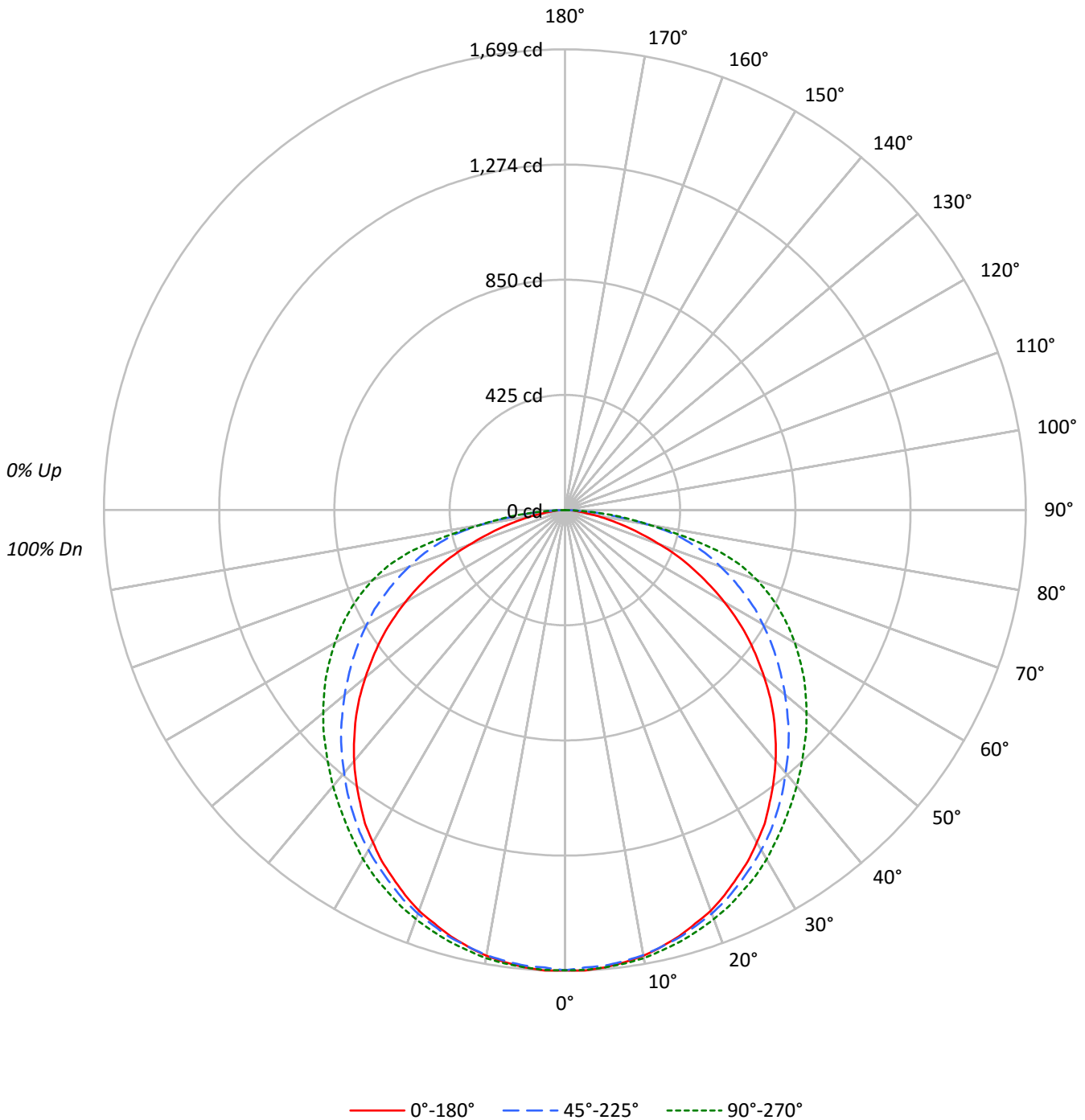
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2284	2284	2284
5°	2286	2278	2286
10°	2280	2277	2292
15°	2266	2273	2294
20°	2251	2267	2298
25°	2224	2256	2302
30°	2198	2249	2310
35°	2162	2237	2313
40°	2123	2223	2335
45°	2075	2221	2371
50°	2008	2219	2434
55°	1937	2235	2522
60°	1827	2269	2634
65°	1687	2322	2782
70°	1473	2404	2963
75°	1195	2528	3062
80°	883	2477	2477
85°	676	1826	2062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.8	3.1
10°-20°	461.7	8.8
20°-30°	702.9	13.4
30°-40°	853.5	16.3
40°-50°	901.7	17.2
50°-60°	850.8	16.3
60°-70°	707.4	13.5
70°-80°	465.4	8.9
80°-90°	126.9	2.4
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°	1325.3	25.3
0°-40°	2178.8	41.7
0°-60°	3931.3	75.2
0°-90°	5231.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5231.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1697	1697	1697	1697	1697	
5°	1693	1693	1686	1693	1693	161
15°	1627	1629	1632	1647	1647	459
25°	1498	1507	1520	1546	1550	691
35°	1316	1332	1362	1397	1408	824
45°	1091	1112	1167	1224	1246	840
55°	826	861	953	1042	1075	735
65°	530	591	729	837	874	524
75°	230	335	486	576	589	248
85°	44	96	118	131	134	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1697.2	1697.2	1697.2	1697.2	1697.2
2.5°	1699.4	1697.2	1688.4	1697.2	1697.2
5°	1692.8	1692.8	1686.3	1692.8	1692.8
7.5°	1681.9	1681.9	1677.5	1686.3	1686.3
10°	1668.7	1668.7	1666.5	1677.5	1677.5
12.5°	1649.0	1651.2	1649.0	1662.2	1662.2
15°	1627.1	1629.3	1631.5	1646.8	1646.8
17.5°	1598.7	1603.0	1607.4	1624.9	1627.1
20°	1572.4	1574.6	1583.3	1603.0	1605.2
22.5°	1537.3	1543.9	1554.9	1574.6	1581.1
25°	1497.9	1506.7	1519.8	1546.1	1550.5
27.5°	1460.7	1467.3	1484.8	1513.2	1522.0
30°	1414.7	1425.6	1447.5	1476.0	1487.0
32.5°	1370.9	1381.9	1408.1	1438.8	1447.5
35°	1316.2	1331.5	1362.1	1397.2	1408.1
37.5°	1263.6	1278.9	1316.2	1355.6	1368.7
40°	1208.8	1226.4	1265.8	1311.8	1329.3
42.5°	1149.7	1173.8	1217.6	1268.0	1287.7
45°	1090.6	1112.5	1167.2	1224.2	1246.1
47.5°	1027.1	1053.4	1112.5	1180.4	1206.7
50°	959.2	992.0	1059.9	1134.4	1162.9
52.5°	891.3	928.5	1005.2	1088.4	1119.1
55°	825.6	860.6	952.6	1042.4	1075.3
57.5°	753.3	797.1	897.9	994.2	1027.1
60°	678.9	727.1	843.1	943.9	978.9
62.5°	604.4	659.2	790.6	891.3	928.5
65°	530.0	591.3	729.2	836.6	873.8
67.5°	457.7	525.6	672.3	779.6	816.8
70°	374.5	459.9	611.0	716.1	753.3
72.5°	297.8	396.4	551.9	650.4	683.3
75°	229.9	335.1	486.2	576.0	589.1
77.5°	168.6	273.7	418.3	448.9	451.1
80°	113.9	219.0	319.7	315.4	319.7
82.5°	74.5	164.2	201.5	225.6	227.8
85°	43.8	96.4	118.3	131.4	133.6
87.5°	21.9	32.8	41.6	43.8	48.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)