

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: P309775

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-5000K**

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: P309775
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-L82765-HRP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5000K 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: 5383.0 lumens
Efficiency: N/A
Efficacy: 83.7 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

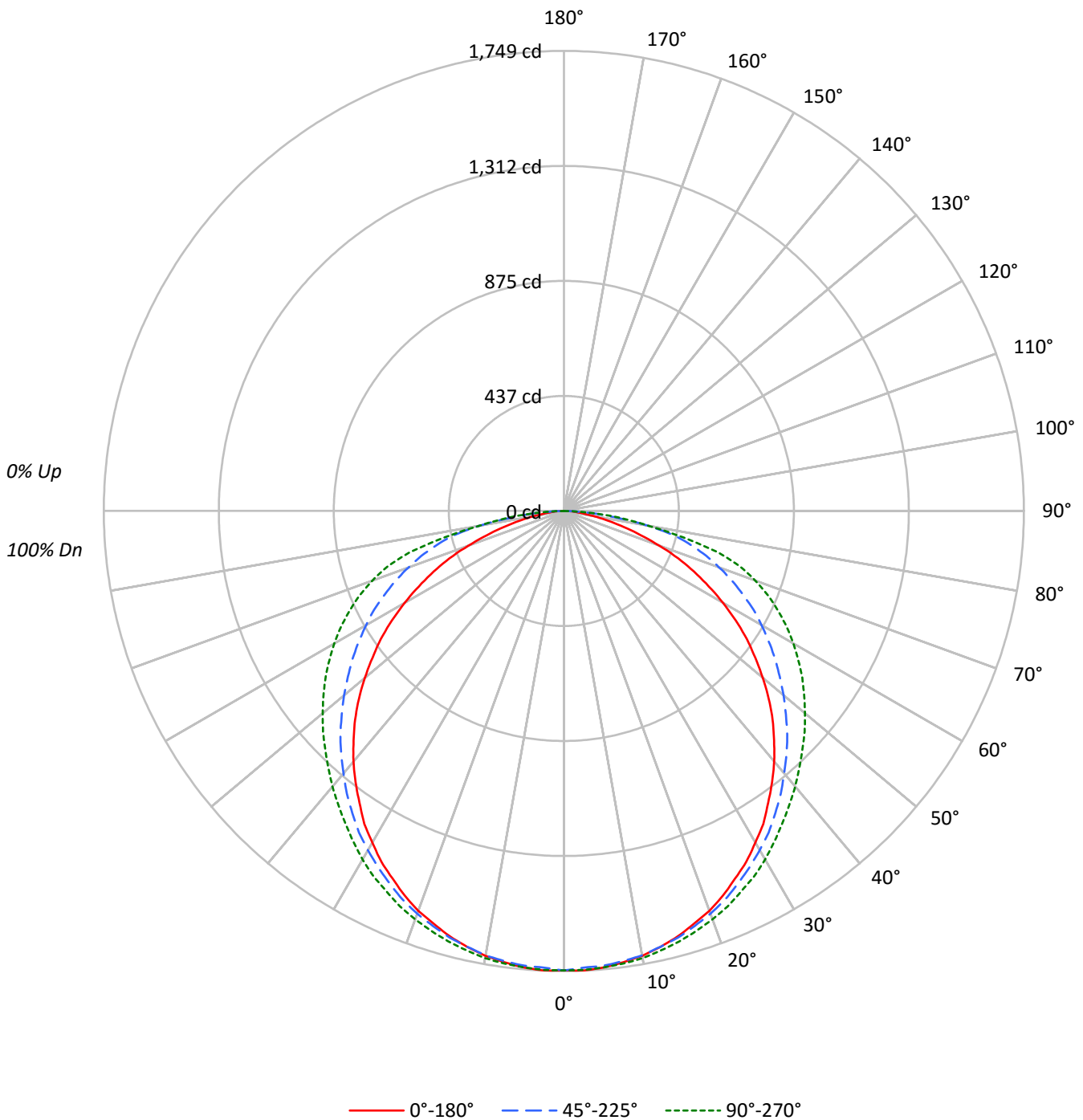
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2350	2350	2350
5°	2353	2344	2353
10°	2346	2343	2358
15°	2332	2339	2361
20°	2317	2333	2365
25°	2288	2322	2369
30°	2262	2314	2377
35°	2225	2302	2380
40°	2185	2288	2403
45°	2136	2286	2440
50°	2066	2283	2505
55°	1993	2300	2596
60°	1880	2335	2711
65°	1736	2389	2863
70°	1516	2473	3050
75°	1230	2601	3151
80°	908	2549	2549
85°	696	1879	2123



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.4	3.1
10°-20°	475.1	8.8
20°-30°	723.3	13.4
30°-40°	878.3	16.3
40°-50°	927.9	17.2
50°-60°	875.5	16.3
60°-70°	728.0	13.5
70°-80°	478.9	8.9
80°-90°	130.6	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°	1363.9	25.3
0°-40°	2242.1	41.7
0°-60°	4045.5	75.2
0°-90°	5383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5383.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1746	1746	1746	1746	1746	
5°	1742	1742	1735	1742	1742	165
15°	1674	1677	1679	1695	1695	472
25°	1541	1550	1564	1591	1596	711
35°	1354	1370	1402	1438	1449	848
45°	1122	1145	1201	1260	1282	864
55°	850	886	980	1073	1106	757
65°	545	608	750	861	899	539
75°	237	345	500	593	606	255
85°	45	99	122	135	138	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1746.5	1746.5	1746.5	1746.5	1746.5
2.5°	1748.8	1746.5	1737.5	1746.5	1746.5
5°	1742.0	1742.0	1735.3	1742.0	1742.0
7.5°	1730.7	1730.7	1726.2	1735.3	1735.3
10°	1717.2	1717.2	1715.0	1726.2	1726.2
12.5°	1696.9	1699.2	1696.9	1710.5	1710.5
15°	1674.4	1676.7	1678.9	1694.7	1694.7
17.5°	1645.1	1649.6	1654.1	1672.2	1674.4
20°	1618.1	1620.3	1629.3	1649.6	1651.9
22.5°	1582.0	1588.8	1600.0	1620.3	1627.1
25°	1541.4	1550.5	1564.0	1591.0	1595.5
27.5°	1503.1	1509.9	1527.9	1557.2	1566.2
30°	1455.8	1467.1	1489.6	1518.9	1530.2
32.5°	1410.7	1422.0	1449.0	1480.6	1489.6
35°	1354.4	1370.2	1401.7	1437.8	1449.0
37.5°	1300.3	1316.1	1354.4	1395.0	1408.5
40°	1244.0	1262.0	1302.6	1349.9	1367.9
42.5°	1183.1	1207.9	1253.0	1304.8	1325.1
45°	1122.3	1144.8	1201.2	1259.7	1282.3
47.5°	1056.9	1084.0	1144.8	1214.7	1241.7
50°	987.1	1020.9	1090.7	1167.4	1196.6
52.5°	917.2	955.5	1034.4	1120.0	1151.6
55°	849.6	885.7	980.3	1072.7	1106.5
57.5°	775.2	820.3	924.0	1023.1	1056.9
60°	698.6	748.2	867.6	971.3	1007.3
62.5°	622.0	678.3	813.5	917.2	955.5
65°	545.4	608.5	750.4	860.9	899.2
67.5°	471.0	540.9	691.8	802.3	840.6
70°	385.4	473.3	628.7	736.9	775.2
72.5°	306.5	407.9	567.9	669.3	703.1
75°	236.6	344.8	500.3	592.7	606.2
77.5°	173.5	281.7	430.4	462.0	464.2
80°	117.2	225.4	329.0	324.5	329.0
82.5°	76.6	169.0	207.3	232.1	234.4
85°	45.1	99.2	121.7	135.2	137.5
87.5°	22.5	33.8	42.8	45.1	49.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)