

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: P313391

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-HRP-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: P313391
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 5354.0 lumens
Efficiency: N/A
Efficacy: 85.3 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

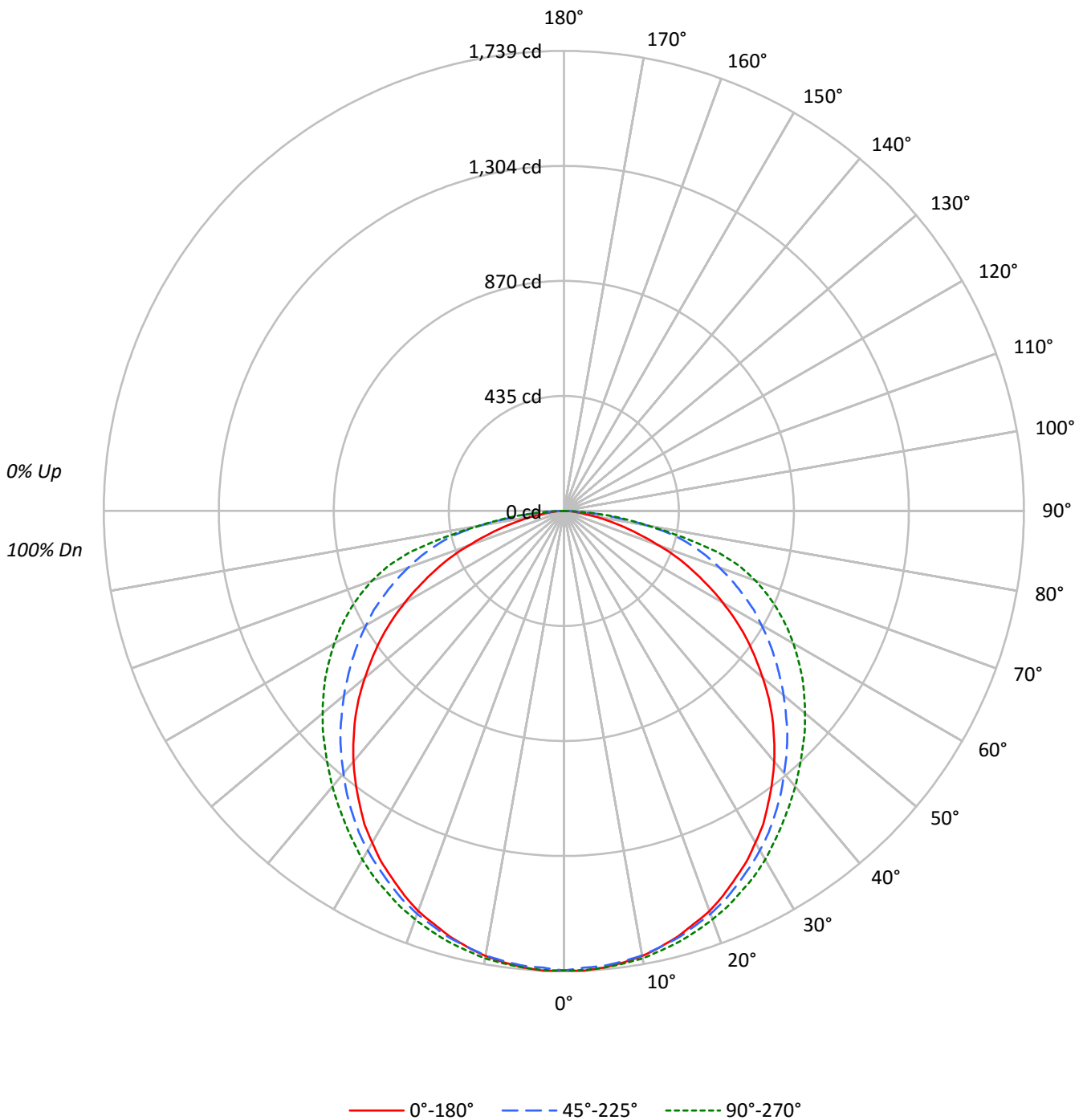
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313391

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-HRP-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313391

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-HRP-CA08-W2A-U-3500K

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°	2337	2337	2337
5°	2340	2331	2340
10°	2334	2330	2346
15°	2320	2326	2348
20°	2304	2320	2353
25°	2276	2309	2356
30°	2250	2302	2364
35°	2213	2290	2367
40°	2173	2275	2390
45°	2124	2273	2427
50°	2055	2271	2491
55°	1982	2287	2582
60°	1870	2322	2696
65°	1727	2376	2847
70°	1508	2460	3033
75°	1224	2587	3134
80°	903	2535	2535
85°	692	1868	2110



TEST NUMBER: P313391

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-HRP-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.6	3.1
10°-20°	472.6	8.8
20°-30°	719.4	13.4
30°-40°	873.5	16.3
40°-50°	922.9	17.2
50°-60°	870.8	16.3
60°-70°	724.1	13.5
70°-80°	476.4	8.9
80°-90°	129.8	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°	1356.5	25.3
0°-40°	2230.0	41.7
0°-60°	4023.7	75.2
0°-90°	5354.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5354.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1737	1737	1737	1737	1737	
5°	1733	1733	1726	1733	1733	165
15°	1665	1668	1670	1686	1686	470
25°	1533	1542	1556	1582	1587	707
35°	1347	1363	1394	1430	1441	843
45°	1116	1139	1195	1253	1275	860
55°	845	881	975	1067	1100	753
65°	542	605	746	856	894	536
75°	235	343	498	590	603	254
85°	45	99	121	134	137	55
90°	0	0	0	0	0	



TEST NUMBER: P313391

CATALOG NUMBER: 24FCZ2-75HE-UNV-L83050-HRP-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1737.1	1737.1	1737.1	1737.1	1737.1
2.5°	1739.4	1737.1	1728.1	1737.1	1737.1
5°	1732.6	1732.6	1725.9	1732.6	1732.6
7.5°	1721.4	1721.4	1716.9	1725.9	1725.9
10°	1708.0	1708.0	1705.7	1716.9	1716.9
12.5°	1687.8	1690.0	1687.8	1701.2	1701.2
15°	1665.4	1667.6	1669.9	1685.6	1685.6
17.5°	1636.2	1640.7	1645.2	1663.1	1665.4
20°	1609.3	1611.6	1620.6	1640.7	1643.0
22.5°	1573.5	1580.2	1591.4	1611.6	1618.3
25°	1533.1	1542.1	1555.6	1582.5	1586.9
27.5°	1495.0	1501.8	1519.7	1548.8	1557.8
30°	1448.0	1459.2	1481.6	1510.7	1521.9
32.5°	1403.1	1414.3	1441.2	1472.6	1481.6
35°	1347.1	1362.8	1394.2	1430.0	1441.2
37.5°	1293.3	1309.0	1347.1	1387.4	1400.9
40°	1237.3	1255.2	1295.5	1342.6	1360.5
42.5°	1176.8	1201.4	1246.2	1297.8	1318.0
45°	1116.2	1138.6	1194.7	1253.0	1275.4
47.5°	1051.2	1078.1	1138.6	1208.1	1235.0
50°	981.7	1015.4	1084.9	1161.1	1190.2
52.5°	912.3	950.4	1028.8	1114.0	1145.4
55°	845.0	880.9	975.0	1066.9	1100.5
57.5°	771.1	815.9	919.0	1017.6	1051.2
60°	694.8	744.2	863.0	966.1	1001.9
62.5°	618.6	674.7	809.2	912.3	950.4
65°	542.4	605.2	746.4	856.2	894.3
67.5°	468.5	537.9	688.1	797.9	836.1
70°	383.3	470.7	625.4	732.9	771.1
72.5°	304.8	405.7	564.8	665.7	699.3
75°	235.4	342.9	497.6	589.5	602.9
77.5°	172.6	280.2	428.1	459.5	461.7
80°	116.6	224.1	327.2	322.8	327.2
82.5°	76.2	168.1	206.2	230.9	233.1
85°	44.8	98.6	121.0	134.5	136.7
87.5°	22.4	33.6	42.6	44.8	49.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)