

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: P309784

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA125-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: P309784
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-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 5364.0 lumens
Efficiency: N/A
Efficacy: 83.4 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

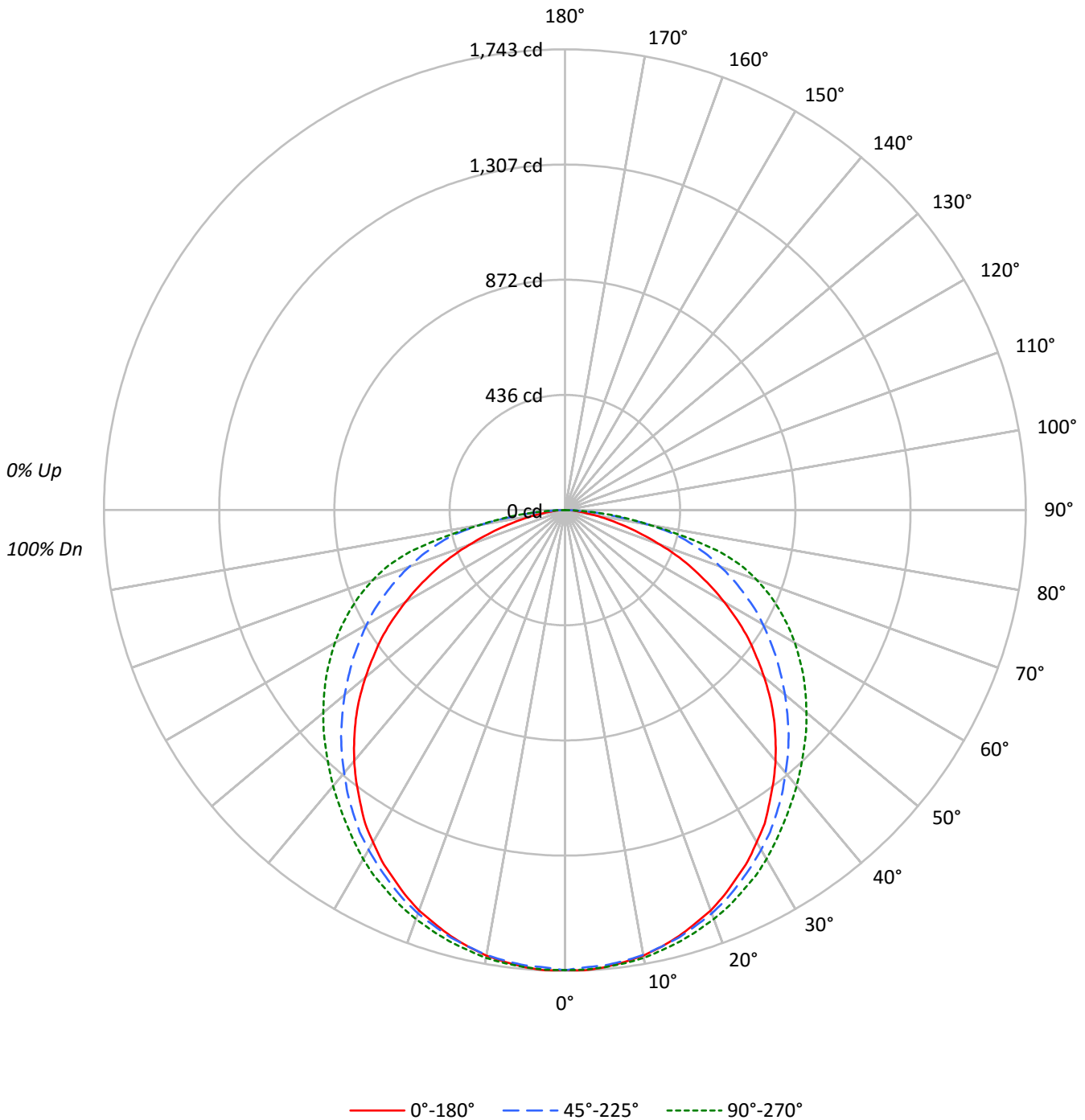
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82				82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56				56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48				48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2342	2342	2342
5°	2345	2335	2345
10°	2338	2335	2350
15°	2324	2330	2352
20°	2309	2325	2357
25°	2280	2314	2360
30°	2254	2306	2369
35°	2217	2294	2372
40°	2177	2280	2394
45°	2128	2277	2431
50°	2059	2275	2496
55°	1986	2291	2586
60°	1873	2327	2701
65°	1730	2381	2853
70°	1511	2465	3039
75°	1226	2591	3140
80°	905	2541	2541
85°	693	1873	2115



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.9	3.1
10°-20°	473.4	8.8
20°-30°	720.7	13.4
30°-40°	875.1	16.3
40°-50°	924.6	17.2
50°-60°	872.4	16.3
60°-70°	725.4	13.5
70°-80°	477.3	8.9
80°-90°	130.1	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°	1359.0	25.3
0°-40°	2234.2	41.7
0°-60°	4031.2	75.2
0°-90°	5364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1740	1740	1740	1740	1740	
5°	1736	1736	1729	1736	1736	165
15°	1668	1671	1673	1689	1689	471
25°	1536	1545	1558	1585	1590	709
35°	1350	1365	1397	1433	1444	845
45°	1118	1141	1197	1255	1278	861
55°	847	882	977	1069	1103	754
65°	543	606	748	858	896	537
75°	236	344	498	591	604	254
85°	45	99	121	135	137	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1740.4	1740.4	1740.4	1740.4	1740.4
2.5°	1742.6	1740.4	1731.4	1740.4	1740.4
5°	1735.9	1735.9	1729.1	1735.9	1735.9
7.5°	1724.6	1724.6	1720.1	1729.1	1729.1
10°	1711.2	1711.2	1708.9	1720.1	1720.1
12.5°	1691.0	1693.2	1691.0	1704.4	1704.4
15°	1668.5	1670.7	1673.0	1688.7	1688.7
17.5°	1639.3	1643.8	1648.3	1666.2	1668.5
20°	1612.4	1614.6	1623.6	1643.8	1646.0
22.5°	1576.4	1583.2	1594.4	1614.6	1621.3
25°	1536.0	1545.0	1558.5	1585.4	1589.9
27.5°	1497.8	1504.6	1522.5	1551.7	1560.7
30°	1450.7	1461.9	1484.4	1513.5	1524.8
32.5°	1405.8	1417.0	1443.9	1475.4	1484.4
35°	1349.6	1365.3	1396.8	1432.7	1443.9
37.5°	1295.7	1311.4	1349.6	1390.0	1403.5
40°	1239.6	1257.5	1298.0	1345.1	1363.1
42.5°	1178.9	1203.7	1248.6	1300.2	1320.4
45°	1118.3	1140.8	1196.9	1255.3	1277.8
47.5°	1053.2	1080.1	1140.8	1210.4	1237.3
50°	983.6	1017.3	1086.9	1163.2	1192.4
52.5°	914.0	952.1	1030.7	1116.1	1147.5
55°	846.6	882.5	976.8	1068.9	1102.6
57.5°	772.5	817.4	920.7	1019.5	1053.2
60°	696.1	745.5	864.6	967.9	1003.8
62.5°	619.8	675.9	810.7	914.0	952.1
65°	543.4	606.3	747.8	857.8	896.0
67.5°	469.3	538.9	689.4	799.4	837.6
70°	384.0	471.6	626.5	734.3	772.5
72.5°	305.4	406.5	565.9	666.9	700.6
75°	235.8	343.6	498.5	590.6	604.1
77.5°	172.9	280.7	428.9	460.4	462.6
80°	116.8	224.6	327.9	323.4	327.9
82.5°	76.4	168.4	206.6	231.3	233.5
85°	44.9	98.8	121.3	134.7	137.0
87.5°	22.5	33.7	42.7	44.9	49.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)