

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: P309782

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA125-W2A-U-4000K**

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: P309782
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 5200.0 lumens
Efficiency: N/A
Efficacy: 81.9 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

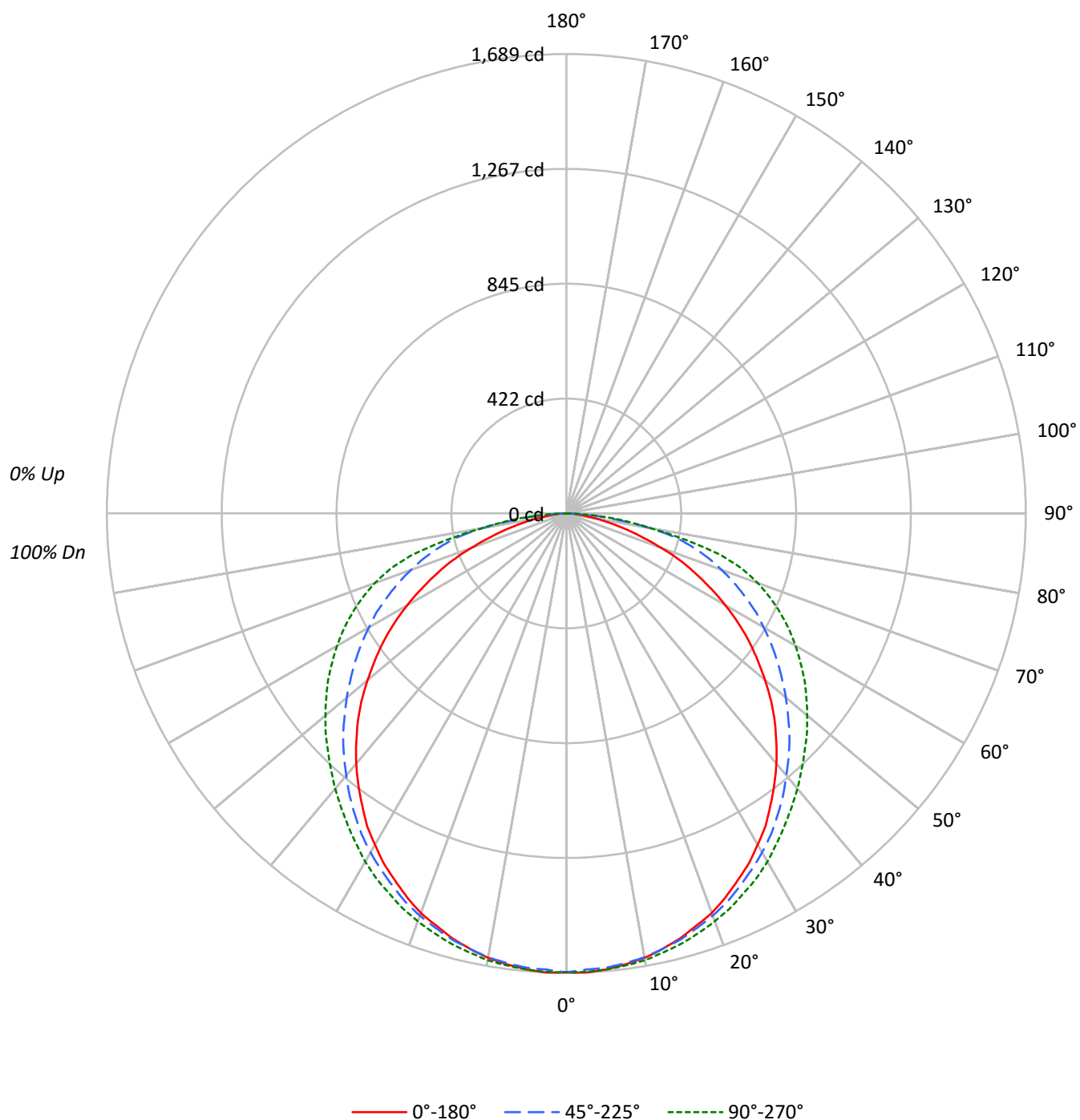
Input Watts (W): 63.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2270	2270	2270
5°	2273	2264	2273
10°	2266	2263	2278
15°	2253	2259	2280
20°	2238	2254	2285
25°	2211	2243	2288
30°	2185	2236	2297
35°	2149	2224	2299
40°	2111	2210	2321
45°	2063	2208	2357
50°	1996	2205	2420
55°	1925	2221	2507
60°	1816	2255	2619
65°	1677	2308	2765
70°	1465	2389	2946
75°	1188	2512	3044
80°	877	2462	2462
85°	672	1815	2050



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.8	3.1
10°-20°	459.0	8.8
20°-30°	698.7	13.4
30°-40°	848.4	16.3
40°-50°	896.3	17.2
50°-60°	845.8	16.3
60°-70°	703.2	13.5
70°-80°	462.7	8.9
80°-90°	126.1	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°	1317.5	25.3
0°-40°	2165.9	41.7
0°-60°	3908.0	75.2
0°-90°	5200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1687	1687	1687	1687	1687	
5°	1683	1683	1676	1683	1683	160
15°	1618	1620	1622	1637	1637	456
25°	1489	1498	1511	1537	1541	687
35°	1308	1324	1354	1389	1400	819
45°	1084	1106	1160	1217	1239	835
55°	821	856	947	1036	1069	731
65°	527	588	725	832	869	521
75°	229	333	483	572	586	246
85°	44	96	118	131	133	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1687.1	1687.1	1687.1	1687.1	1687.1
2.5°	1689.3	1687.1	1678.4	1687.1	1687.1
5°	1682.8	1682.8	1676.3	1682.8	1682.8
7.5°	1671.9	1671.9	1667.6	1676.3	1676.3
10°	1658.8	1658.8	1656.7	1667.6	1667.6
12.5°	1639.3	1641.4	1639.3	1652.3	1652.3
15°	1617.5	1619.7	1621.8	1637.1	1637.1
17.5°	1589.2	1593.5	1597.9	1615.3	1617.5
20°	1563.1	1565.2	1573.9	1593.5	1595.7
22.5°	1528.2	1534.8	1545.6	1565.2	1571.8
25°	1489.0	1497.7	1510.8	1536.9	1541.3
27.5°	1452.0	1458.6	1476.0	1504.3	1513.0
30°	1406.3	1417.2	1439.0	1467.3	1478.2
32.5°	1362.8	1373.7	1399.8	1430.3	1439.0
35°	1308.4	1323.6	1354.1	1388.9	1399.8
37.5°	1256.1	1271.3	1308.4	1347.5	1360.6
40°	1201.7	1219.1	1258.3	1304.0	1321.4
42.5°	1142.9	1166.9	1210.4	1260.5	1280.1
45°	1084.1	1105.9	1160.3	1216.9	1238.7
47.5°	1021.0	1047.1	1105.9	1173.4	1199.5
50°	953.5	986.2	1053.6	1127.7	1156.0
52.5°	886.0	923.0	999.2	1081.9	1112.4
55°	820.7	855.5	947.0	1036.2	1068.9
57.5°	748.9	792.4	892.6	988.3	1021.0
60°	674.9	722.8	838.1	938.3	973.1
62.5°	600.8	655.3	785.9	886.0	923.0
65°	526.8	587.8	724.9	831.6	868.6
67.5°	455.0	522.5	668.3	775.0	812.0
70°	372.3	457.2	607.4	711.9	748.9
72.5°	296.1	394.0	548.6	646.6	679.2
75°	228.6	333.1	483.3	572.5	585.6
77.5°	167.6	272.1	415.8	446.3	448.5
80°	113.2	217.7	317.8	313.5	317.8
82.5°	74.0	163.3	200.3	224.2	226.4
85°	43.5	95.8	117.6	130.6	132.8
87.5°	21.8	32.7	41.4	43.5	47.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)