

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: P309789

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP125-W2A-U-3000K**

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: P309789
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-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 4823.0 lumens
Efficiency: N/A
Efficacy: 77.3 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

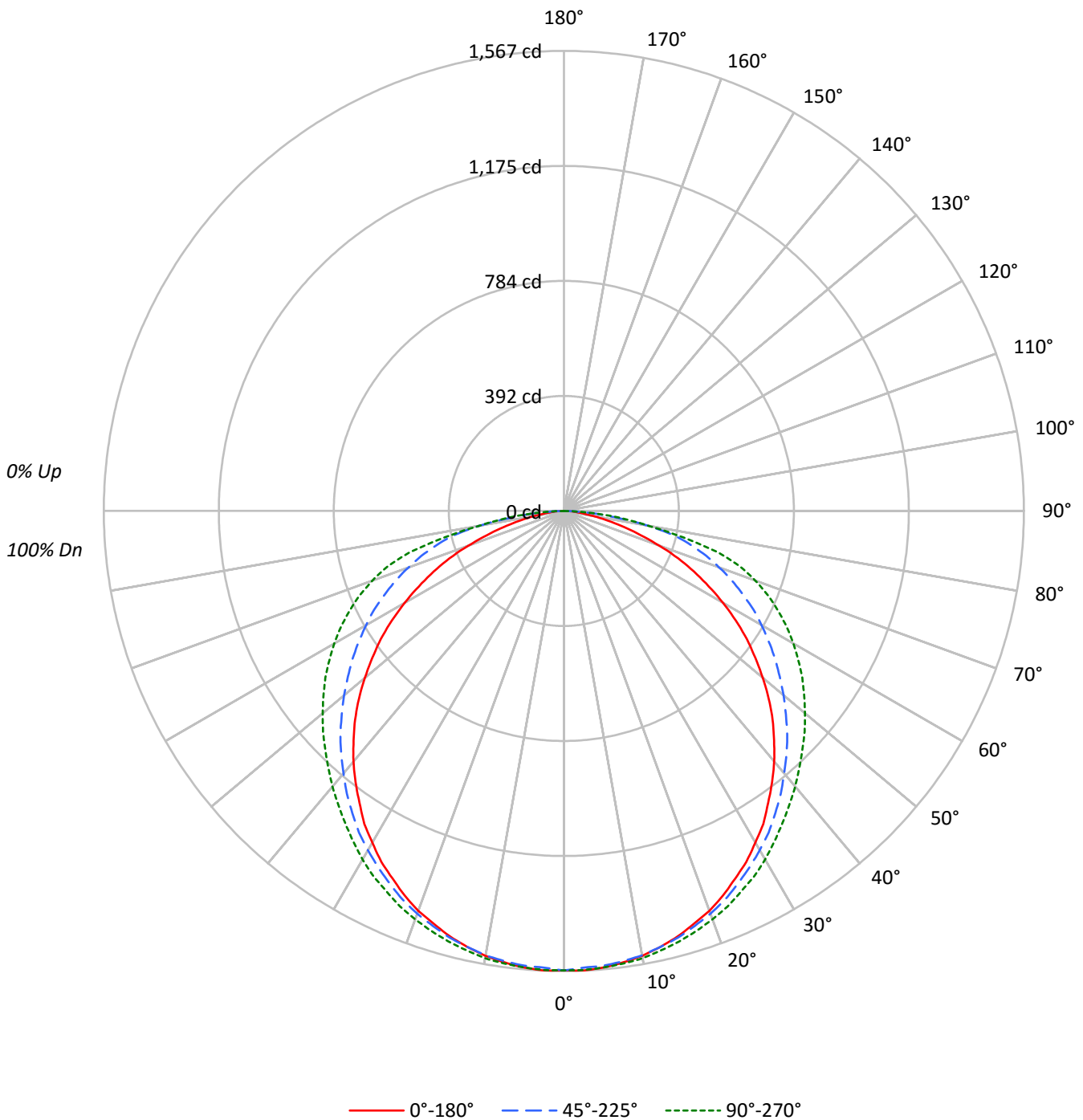
Input Watts (W): 62.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2105	2105	2105
5°	2108	2100	2108
10°	2102	2099	2113
15°	2090	2095	2115
20°	2076	2090	2119
25°	2050	2080	2122
30°	2027	2073	2130
35°	1993	2063	2133
40°	1958	2050	2153
45°	1913	2048	2186
50°	1851	2046	2244
55°	1786	2060	2326
60°	1684	2092	2429
65°	1556	2141	2565
70°	1358	2216	2733
75°	1102	2330	2823
80°	814	2284	2284
85°	624	1683	1902



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.2	3.1
10°-20°	425.7	8.8
20°-30°	648.1	13.4
30°-40°	786.9	16.3
40°-50°	831.3	17.2
50°-60°	784.5	16.3
60°-70°	652.3	13.5
70°-80°	429.1	8.9
80°-90°	117.0	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°	1222.0	25.3
0°-40°	2008.9	41.7
0°-60°	3624.7	75.2
0°-90°	4823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4823.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1561	1561	1555	1561	1561	148
15°	1500	1502	1504	1518	1518	423
25°	1381	1389	1401	1426	1430	637
35°	1214	1228	1256	1288	1298	760
45°	1006	1026	1076	1129	1149	774
55°	761	794	878	961	991	678
65°	489	545	672	771	806	483
75°	212	309	448	531	543	228
85°	40	89	109	121	123	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1564.8	1564.8	1564.8	1564.8	1564.8
2.5°	1566.8	1564.8	1556.7	1564.8	1564.8
5°	1560.8	1560.8	1554.7	1560.8	1560.8
7.5°	1550.7	1550.7	1546.7	1554.7	1554.7
10°	1538.6	1538.6	1536.6	1546.7	1546.7
12.5°	1520.4	1522.4	1520.4	1532.5	1532.5
15°	1500.2	1502.2	1504.3	1518.4	1518.4
17.5°	1474.0	1478.0	1482.0	1498.2	1500.2
20°	1449.7	1451.8	1459.8	1478.0	1480.0
22.5°	1417.4	1423.5	1433.6	1451.8	1457.8
25°	1381.1	1389.2	1401.3	1425.5	1429.5
27.5°	1346.8	1352.8	1369.0	1395.2	1403.3
30°	1304.4	1314.5	1334.6	1360.9	1371.0
32.5°	1264.0	1274.1	1298.3	1326.6	1334.6
35°	1213.5	1227.6	1255.9	1288.2	1298.3
37.5°	1165.0	1179.2	1213.5	1249.8	1262.0
40°	1114.6	1130.7	1167.1	1209.5	1225.6
42.5°	1060.0	1082.3	1122.6	1169.1	1187.2
45°	1005.5	1025.7	1076.2	1128.7	1148.9
47.5°	947.0	971.2	1025.7	1088.3	1112.5
50°	884.4	914.7	977.3	1045.9	1072.2
52.5°	821.8	856.1	926.8	1003.5	1031.8
55°	761.2	793.5	878.3	961.1	991.4
57.5°	694.6	735.0	827.8	916.7	947.0
60°	625.9	670.4	777.4	870.2	902.6
62.5°	557.3	607.8	728.9	821.8	856.1
65°	488.6	545.2	672.4	771.3	805.6
67.5°	422.0	484.6	619.9	718.8	753.1
70°	345.3	424.0	563.3	660.3	694.6
72.5°	274.6	365.5	508.8	599.7	630.0
75°	212.0	308.9	448.2	531.0	543.1
77.5°	155.5	252.4	385.7	413.9	415.9
80°	105.0	201.9	294.8	290.8	294.8
82.5°	68.7	151.4	185.8	208.0	210.0
85°	40.4	88.8	109.0	121.1	123.2
87.5°	20.2	30.3	38.4	40.4	44.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)