

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: P309739

Luminaire Tested: **24FCZ2-70HE-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: P309739
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: 24FCZ2-70HE-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: 5017.0 lumens
Efficiency: N/A
Efficacy: 84.9 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

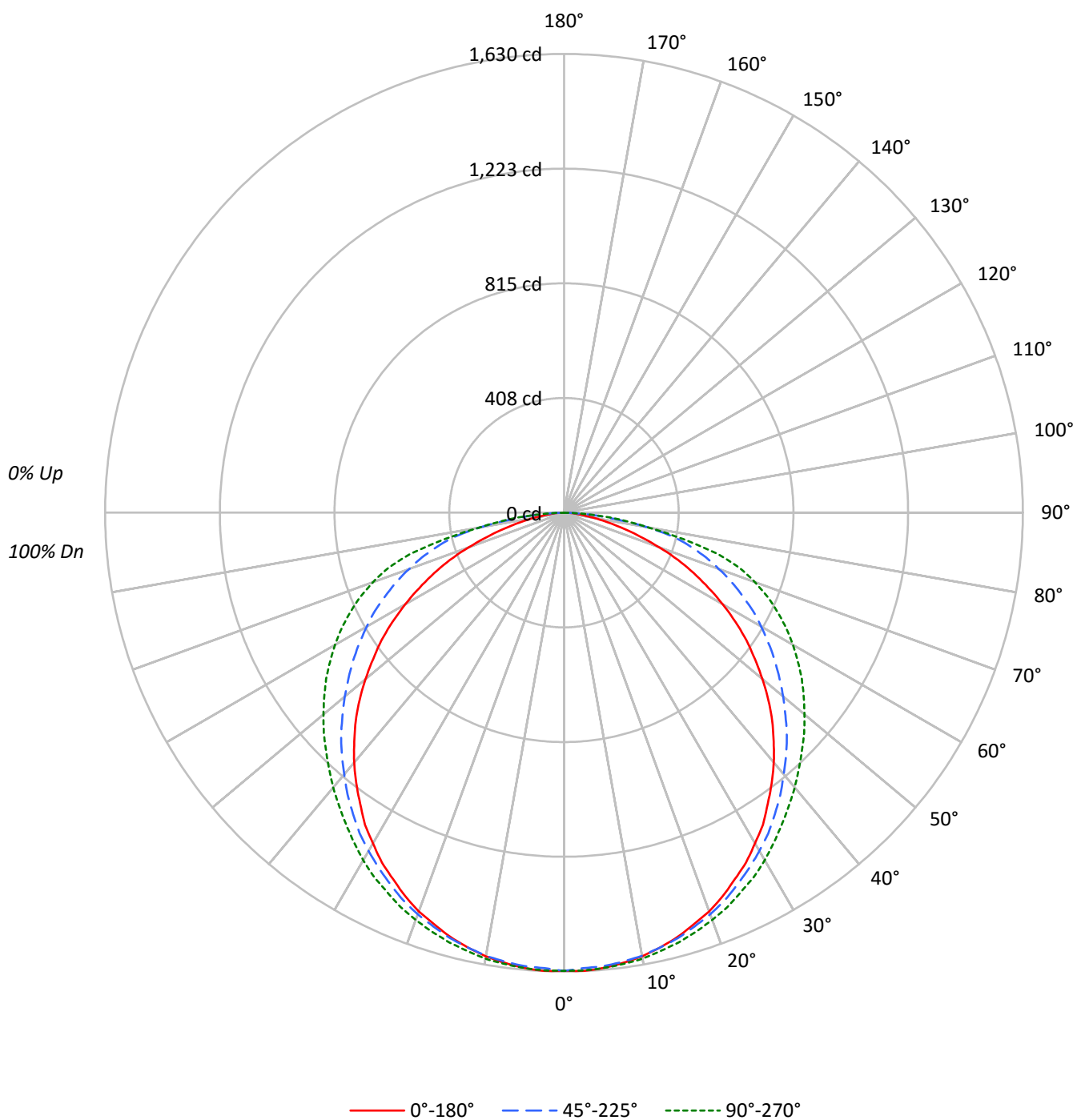
Input Watts (W): 59.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2190	2190	2190
5°	2193	2184	2193
10°	2187	2184	2198
15°	2174	2180	2200
20°	2159	2174	2204
25°	2133	2164	2208
30°	2108	2157	2216
35°	2073	2146	2218
40°	2036	2132	2239
45°	1990	2130	2274
50°	1926	2128	2335
55°	1857	2143	2419
60°	1752	2176	2527
65°	1618	2227	2668
70°	1413	2305	2842
75°	1146	2424	2937
80°	846	2376	2376
85°	648	1751	1978



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.2	3.1
10°-20°	442.8	8.8
20°-30°	674.1	13.4
30°-40°	818.5	16.3
40°-50°	864.8	17.2
50°-60°	816.0	16.3
60°-70°	678.5	13.5
70°-80°	446.4	8.9
80°-90°	121.7	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°	1271.1	25.3
0°-40°	2089.7	41.7
0°-60°	3770.5	75.2
0°-90°	5017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5017.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1628	1628	1628	1628	1628	
5°	1624	1624	1617	1624	1624	154
15°	1561	1563	1565	1580	1580	440
25°	1437	1445	1458	1483	1487	663
35°	1262	1277	1306	1340	1350	790
45°	1046	1067	1120	1174	1195	806
55°	792	825	914	1000	1031	705
65°	508	567	699	802	838	502
75°	220	321	466	552	565	238
85°	42	92	113	126	128	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1627.8	1627.8	1627.8	1627.8	1627.8
2.5°	1629.9	1627.8	1619.4	1627.8	1627.8
5°	1623.6	1623.6	1617.3	1623.6	1623.6
7.5°	1613.1	1613.1	1608.9	1617.3	1617.3
10°	1600.5	1600.5	1598.4	1608.9	1608.9
12.5°	1581.6	1583.7	1581.6	1594.2	1594.2
15°	1560.6	1562.7	1564.8	1579.5	1579.5
17.5°	1533.3	1537.5	1541.7	1558.5	1560.6
20°	1508.0	1510.2	1518.6	1537.5	1539.6
22.5°	1474.4	1480.7	1491.2	1510.2	1516.5
25°	1436.6	1445.0	1457.6	1482.8	1487.0
27.5°	1400.9	1407.2	1424.0	1451.3	1459.7
30°	1356.8	1367.3	1388.3	1415.6	1426.1
32.5°	1314.8	1325.3	1350.5	1379.9	1388.3
35°	1262.3	1277.0	1306.4	1340.0	1350.5
37.5°	1211.9	1226.6	1262.3	1300.1	1312.7
40°	1159.4	1176.2	1214.0	1258.1	1274.9
42.5°	1102.7	1125.8	1167.8	1216.1	1235.0
45°	1046.0	1067.0	1119.5	1174.1	1195.1
47.5°	985.1	1010.3	1067.0	1132.1	1157.3
50°	920.0	951.5	1016.6	1088.0	1115.3
52.5°	854.8	890.5	964.1	1043.9	1073.3
55°	791.8	825.4	913.7	999.8	1031.3
57.5°	722.5	764.5	861.1	953.6	985.1
60°	651.1	697.3	808.6	905.2	938.9
62.5°	579.7	632.2	758.2	854.8	890.5
65°	508.3	567.1	699.4	802.3	838.0
67.5°	439.0	504.1	644.8	747.7	783.4
70°	359.2	441.1	586.0	686.8	722.5
72.5°	285.6	380.2	529.3	623.8	655.3
75°	220.5	321.4	466.3	552.4	565.0
77.5°	161.7	262.5	401.2	430.6	432.7
80°	109.2	210.0	306.7	302.5	306.7
82.5°	71.4	157.5	193.2	216.3	218.4
85°	42.0	92.4	113.4	126.0	128.1
87.5°	21.0	31.5	39.9	42.0	46.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)