

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: P309738

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA125-W2A-U-4500K**

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: P309738
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-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 4950.0 lumens
Efficiency: N/A
Efficacy: 84.2 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

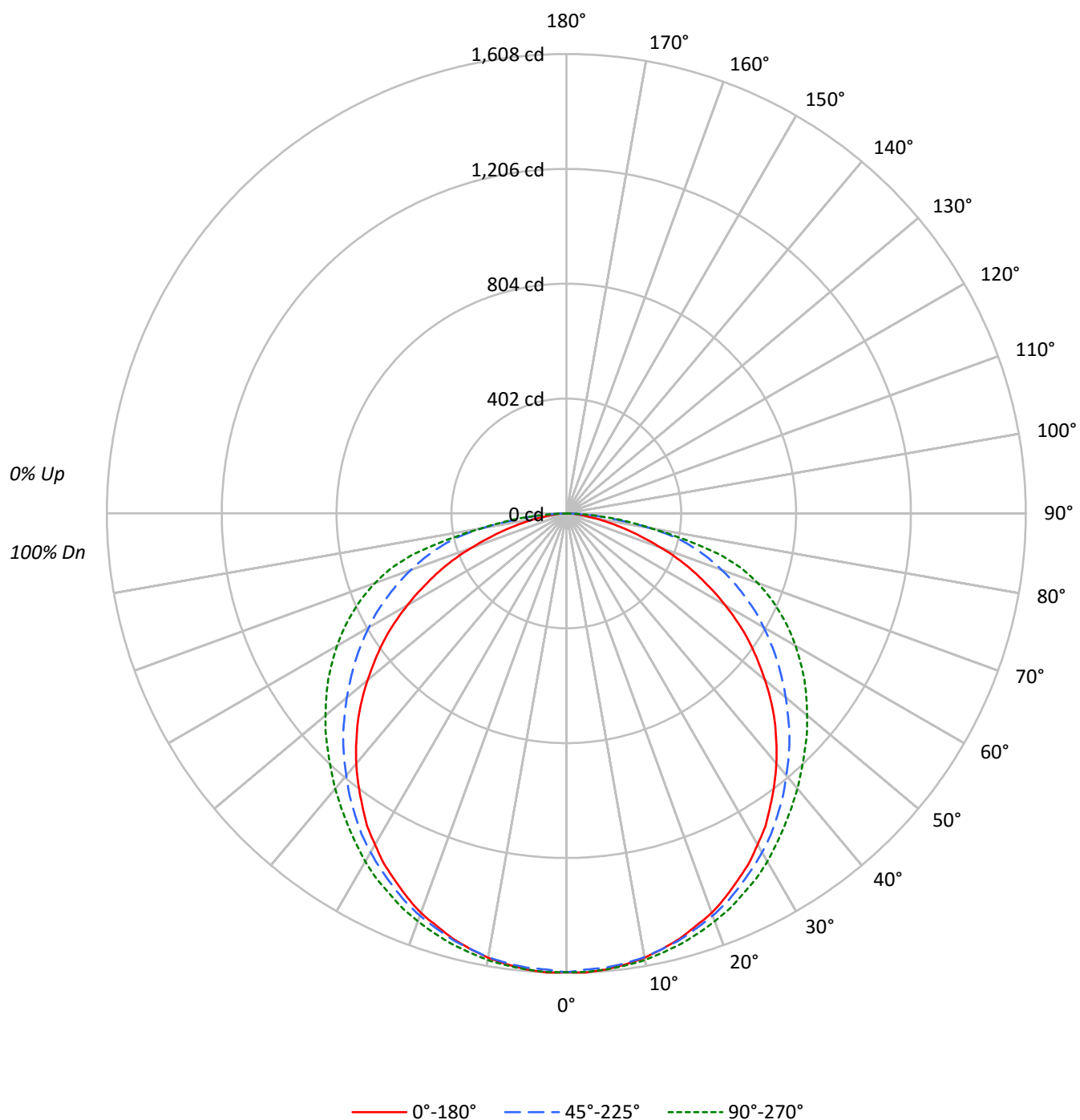
Input Watts (W): 58.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2161	2161	2161
5°	2164	2155	2164
10°	2157	2155	2169
15°	2145	2151	2171
20°	2130	2145	2175
25°	2104	2135	2178
30°	2080	2128	2186
35°	2046	2117	2189
40°	2009	2104	2209
45°	1964	2102	2244
50°	1900	2099	2303
55°	1833	2114	2387
60°	1729	2147	2493
65°	1597	2197	2632
70°	1394	2275	2805
75°	1131	2392	2898
80°	835	2345	2345
85°	639	1727	1951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.1	3.1
10°-20°	436.9	8.8
20°-30°	665.1	13.4
30°-40°	807.6	16.3
40°-50°	853.2	17.2
50°-60°	805.1	16.3
60°-70°	669.4	13.5
70°-80°	440.4	8.9
80°-90°	120.0	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°	1254.2	25.3
0°-40°	2061.8	41.7
0°-60°	3720.1	75.2
0°-90°	4950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1606	1606	1606	1606	1606	
5°	1602	1602	1596	1602	1602	152
15°	1540	1542	1544	1558	1558	434
25°	1418	1426	1438	1463	1467	654
35°	1246	1260	1289	1322	1332	780
45°	1032	1053	1104	1158	1179	795
55°	781	814	901	986	1018	696
65°	502	560	690	792	827	496
75°	218	317	460	545	557	234
85°	41	91	112	124	126	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1606.0	1606.0	1606.0	1606.0	1606.0
2.5°	1608.1	1606.0	1597.7	1606.0	1606.0
5°	1601.9	1601.9	1595.7	1601.9	1601.9
7.5°	1591.5	1591.5	1587.4	1595.7	1595.7
10°	1579.1	1579.1	1577.0	1587.4	1587.4
12.5°	1560.4	1562.5	1560.4	1572.9	1572.9
15°	1539.7	1541.8	1543.9	1558.4	1558.4
17.5°	1512.8	1516.9	1521.1	1537.6	1539.7
20°	1487.9	1490.0	1498.3	1516.9	1519.0
22.5°	1454.8	1461.0	1471.3	1490.0	1496.2
25°	1417.5	1425.7	1438.2	1463.0	1467.2
27.5°	1382.2	1388.4	1405.0	1432.0	1440.2
30°	1338.7	1349.1	1369.8	1396.7	1407.1
32.5°	1297.3	1307.6	1332.5	1361.5	1369.8
35°	1245.5	1260.0	1289.0	1322.1	1332.5
37.5°	1195.7	1210.2	1245.5	1282.8	1295.2
40°	1143.9	1160.5	1197.8	1241.3	1257.9
42.5°	1088.0	1110.8	1152.2	1199.9	1218.5
45°	1032.0	1052.7	1104.5	1158.4	1179.1
47.5°	971.9	996.8	1052.7	1117.0	1141.8
50°	907.7	938.8	1003.0	1073.5	1100.4
52.5°	843.4	878.7	951.2	1029.9	1058.9
55°	781.3	814.4	901.4	986.4	1017.5
57.5°	712.9	754.3	849.6	940.8	971.9
60°	642.4	688.0	797.8	893.2	926.3
62.5°	572.0	623.8	748.1	843.4	878.7
65°	501.5	559.5	690.1	791.6	826.8
67.5°	433.1	497.4	636.2	737.7	773.0
70°	354.4	435.2	578.2	677.6	712.9
72.5°	281.8	375.1	522.2	615.5	646.6
75°	217.6	317.1	460.1	545.0	557.4
77.5°	159.6	259.0	395.8	424.8	426.9
80°	107.8	207.2	302.6	298.4	302.6
82.5°	70.5	155.4	190.7	213.4	215.5
85°	41.4	91.2	111.9	124.3	126.4
87.5°	20.7	31.1	39.4	41.4	45.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)