

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: P309740

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA125-W2A-U-5500K**

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: P309740
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-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5500K 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: 5067.0 lumens
Efficiency: N/A
Efficacy: 85.4 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

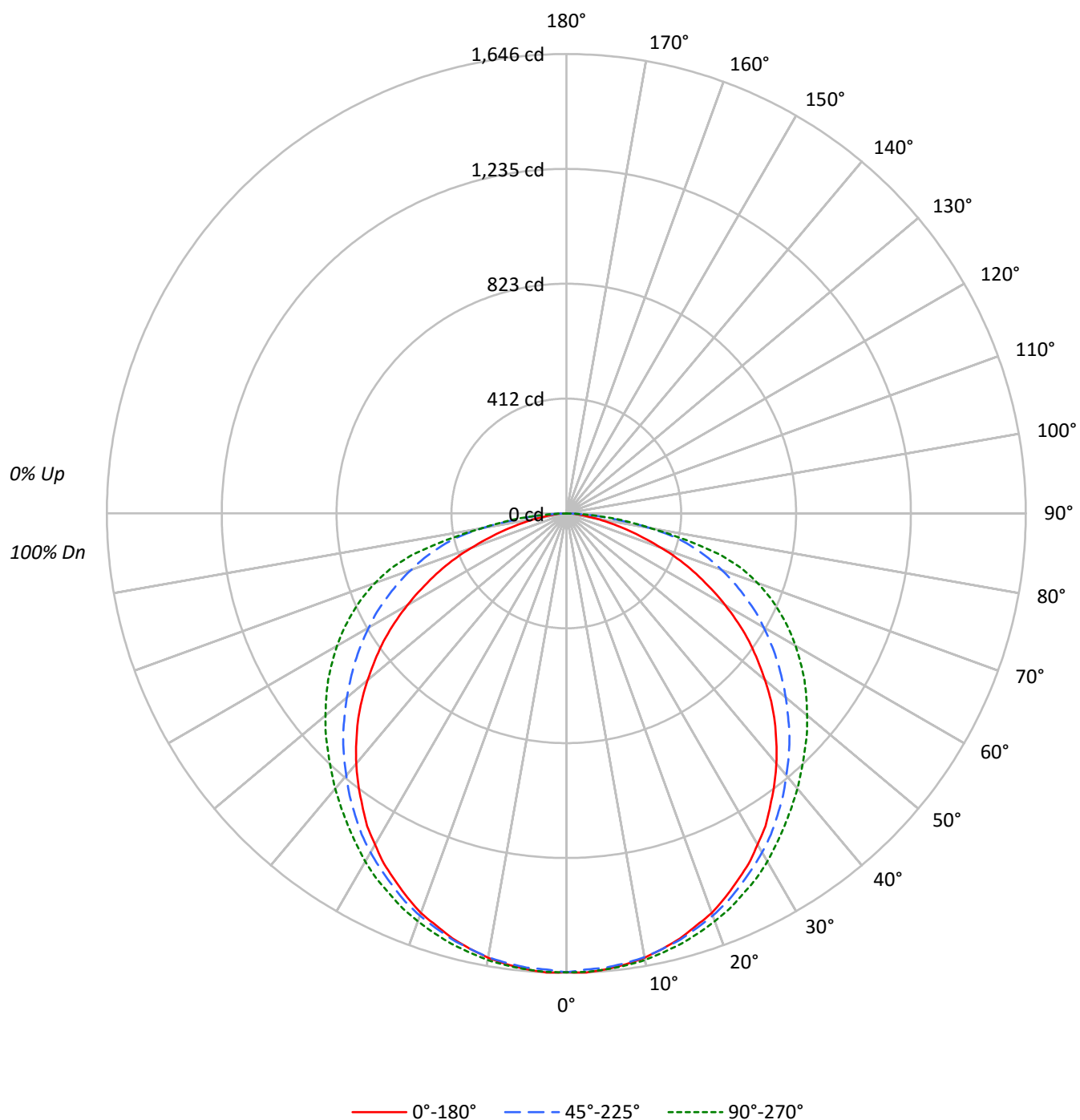
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	2212	2212	2212
5°	2215	2206	2215
10°	2208	2206	2220
15°	2195	2201	2222
20°	2181	2196	2226
25°	2154	2186	2230
30°	2129	2179	2238
35°	2094	2167	2240
40°	2057	2154	2262
45°	2010	2151	2297
50°	1945	2149	2358
55°	1876	2165	2443
60°	1770	2198	2552
65°	1634	2249	2695
70°	1427	2328	2871
75°	1158	2448	2966
80°	855	2400	2400
85°	655	1768	1998



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.7	3.1
10°-20°	447.2	8.8
20°-30°	680.8	13.4
30°-40°	826.7	16.3
40°-50°	873.4	17.2
50°-60°	824.2	16.3
60°-70°	685.2	13.5
70°-80°	450.8	8.9
80°-90°	122.9	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°	1283.8	25.3
0°-40°	2110.5	41.7
0°-60°	3808.0	75.2
0°-90°	5067.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5067.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1644	1644	1644	1644	1644	
5°	1640	1640	1633	1640	1640	156
15°	1576	1578	1580	1595	1595	444
25°	1451	1459	1472	1498	1502	669
35°	1275	1290	1319	1353	1364	798
45°	1056	1078	1131	1186	1207	814
55°	800	834	923	1010	1042	712
65°	513	573	706	810	846	507
75°	223	325	471	558	571	240
85°	42	93	114	127	129	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1644.0	1644.0	1644.0	1644.0	1644.0
2.5°	1646.1	1644.0	1635.5	1644.0	1644.0
5°	1639.7	1639.7	1633.4	1639.7	1639.7
7.5°	1629.1	1629.1	1624.9	1633.4	1633.4
10°	1616.4	1616.4	1614.3	1624.9	1624.9
12.5°	1597.3	1599.4	1597.3	1610.1	1610.1
15°	1576.1	1578.2	1580.4	1595.2	1595.2
17.5°	1548.5	1552.8	1557.0	1574.0	1576.1
20°	1523.1	1525.2	1533.7	1552.8	1554.9
22.5°	1489.1	1495.5	1506.1	1525.2	1531.6
25°	1451.0	1459.4	1472.2	1497.6	1501.9
27.5°	1414.9	1421.3	1438.2	1465.8	1474.3
30°	1370.3	1381.0	1402.2	1429.7	1440.3
32.5°	1327.9	1338.5	1364.0	1393.7	1402.2
35°	1274.9	1289.7	1319.4	1353.4	1364.0
37.5°	1224.0	1238.8	1274.9	1313.1	1325.8
40°	1170.9	1187.9	1226.1	1270.6	1287.6
42.5°	1113.7	1137.0	1179.4	1228.2	1247.3
45°	1056.4	1077.6	1130.6	1185.8	1207.0
47.5°	994.9	1020.3	1077.6	1143.4	1168.8
50°	929.1	960.9	1026.7	1098.8	1126.4
52.5°	863.4	899.4	973.7	1054.3	1084.0
55°	799.7	833.7	922.8	1009.7	1041.5
57.5°	729.7	772.1	869.7	963.1	994.9
60°	657.6	704.3	816.7	914.3	948.2
62.5°	585.5	638.5	765.8	863.4	899.4
65°	513.3	572.7	706.4	810.3	846.4
67.5°	443.3	509.1	651.2	755.2	791.2
70°	362.7	445.5	591.8	693.7	729.7
72.5°	288.5	384.0	534.6	630.0	661.8
75°	222.7	324.6	470.9	557.9	570.6
77.5°	163.3	265.2	405.2	434.9	437.0
80°	110.3	212.1	309.7	305.5	309.7
82.5°	72.1	159.1	195.2	218.5	220.6
85°	42.4	93.3	114.5	127.3	129.4
87.5°	21.2	31.8	40.3	42.4	46.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)