

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: P309746

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CP125-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: P309746
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB 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: 4769.0 lumens
Efficiency: N/A
Efficacy: 81.7 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

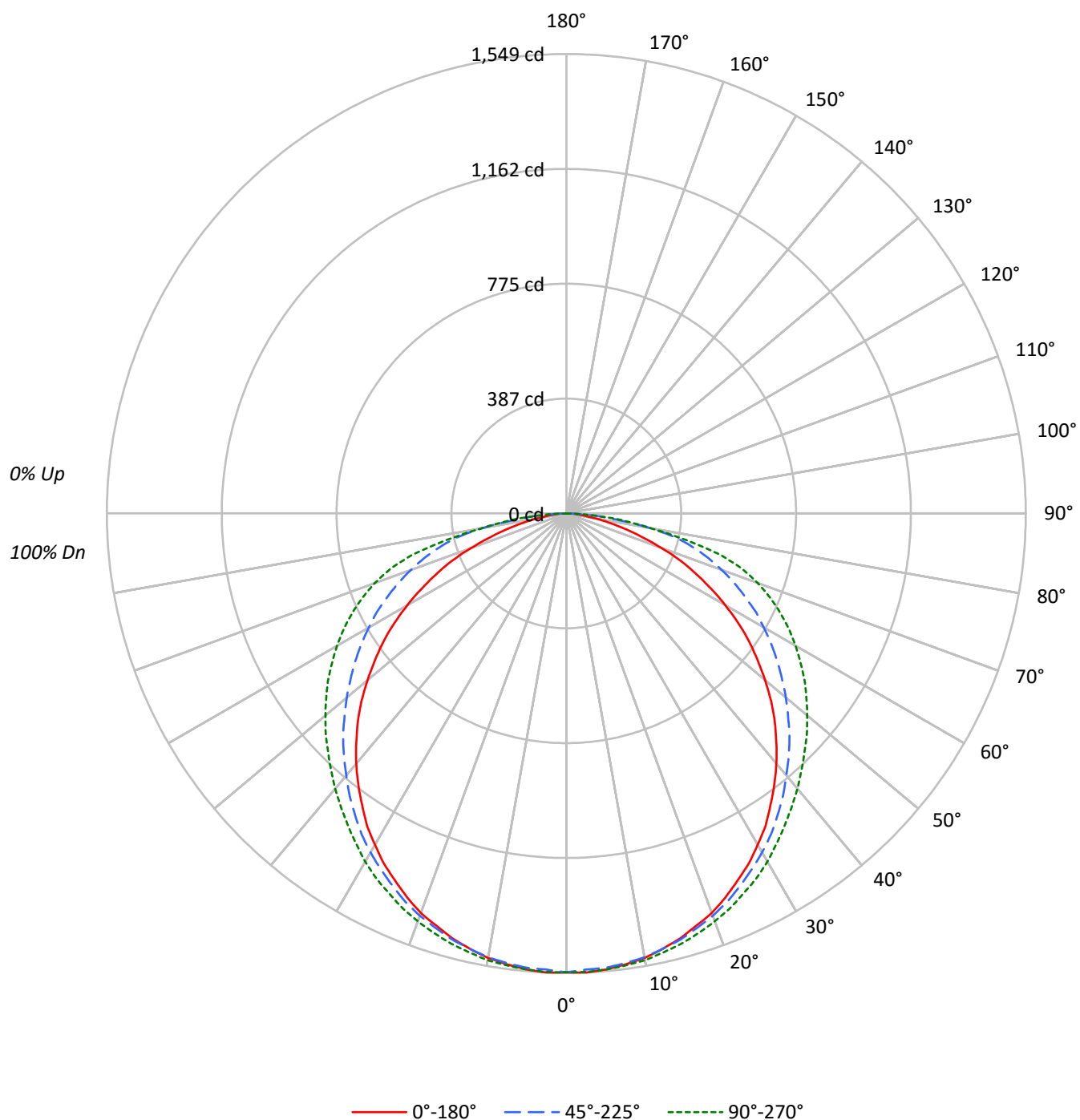
Input Watts (W): 58.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	2082	2082	2082
5°	2084	2076	2084
10°	2079	2076	2089
15°	2066	2072	2091
20°	2053	2067	2095
25°	2027	2057	2098
30°	2004	2050	2106
35°	1971	2040	2109
40°	1936	2027	2129
45°	1892	2025	2162
50°	1831	2023	2219
55°	1766	2037	2300
60°	1665	2069	2401
65°	1538	2117	2536
70°	1343	2191	2702
75°	1090	2304	2792
80°	804	2259	2259
85°	616	1664	1880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.6	3.1
10°-20°	420.9	8.8
20°-30°	640.8	13.4
30°-40°	778.1	16.3
40°-50°	822.0	17.2
50°-60°	775.7	16.3
60°-70°	645.0	13.5
70°-80°	424.3	8.9
80°-90°	115.6	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°	1208.3	25.3
0°-40°	1986.4	41.7
0°-60°	3584.1	75.2
0°-90°	4769.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4769.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1547	1547	1547	1547	1547	
5°	1543	1543	1537	1543	1543	147
15°	1483	1485	1487	1501	1501	418
25°	1366	1374	1386	1410	1414	630
35°	1200	1214	1242	1274	1284	751
45°	994	1014	1064	1116	1136	766
55°	753	785	868	950	980	670
65°	483	539	665	763	797	478
75°	210	306	443	525	537	226
85°	40	88	108	120	122	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1547.3	1547.3	1547.3	1547.3	1547.3
2.5°	1549.3	1547.3	1539.3	1547.3	1547.3
5°	1543.3	1543.3	1537.3	1543.3	1543.3
7.5°	1533.3	1533.3	1529.3	1537.3	1537.3
10°	1521.4	1521.4	1519.4	1529.3	1529.3
12.5°	1503.4	1505.4	1503.4	1515.4	1515.4
15°	1483.4	1485.4	1487.4	1501.4	1501.4
17.5°	1457.5	1461.5	1465.4	1481.4	1483.4
20°	1433.5	1435.5	1443.5	1461.5	1463.5
22.5°	1401.6	1407.5	1417.5	1435.5	1441.5
25°	1365.6	1373.6	1385.6	1409.5	1413.5
27.5°	1331.7	1337.7	1353.6	1379.6	1387.6
30°	1289.8	1299.7	1319.7	1345.7	1355.6
32.5°	1249.8	1259.8	1283.8	1311.7	1319.7
35°	1199.9	1213.9	1241.8	1273.8	1283.8
37.5°	1152.0	1166.0	1199.9	1235.8	1247.8
40°	1102.1	1118.1	1154.0	1195.9	1211.9
42.5°	1048.2	1070.1	1110.1	1156.0	1174.0
45°	994.3	1014.2	1064.1	1116.1	1136.0
47.5°	936.4	960.3	1014.2	1076.1	1100.1
50°	874.5	904.4	966.3	1034.2	1060.2
52.5°	812.6	846.5	916.4	992.3	1020.2
55°	752.7	784.6	868.5	950.3	980.3
57.5°	686.8	726.7	818.6	906.4	936.4
60°	618.9	662.8	768.7	860.5	892.4
62.5°	551.0	601.0	720.7	812.6	846.5
65°	483.2	539.1	664.8	762.7	796.6
67.5°	417.3	479.2	612.9	710.8	744.7
70°	341.4	419.3	557.0	652.9	686.8
72.5°	271.5	361.4	503.1	593.0	622.9
75°	209.6	305.5	443.2	525.1	537.1
77.5°	153.7	249.6	381.3	409.3	411.3
80°	103.8	199.7	291.5	287.5	291.5
82.5°	67.9	149.7	183.7	205.6	207.6
85°	39.9	87.8	107.8	119.8	121.8
87.5°	20.0	29.9	37.9	39.9	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)