

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: P309751

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CP125-W2A-U-6500K**

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: P309751
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (336) 6500K 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: 4994.0 lumens
Efficiency: N/A
Efficacy: 82.8 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

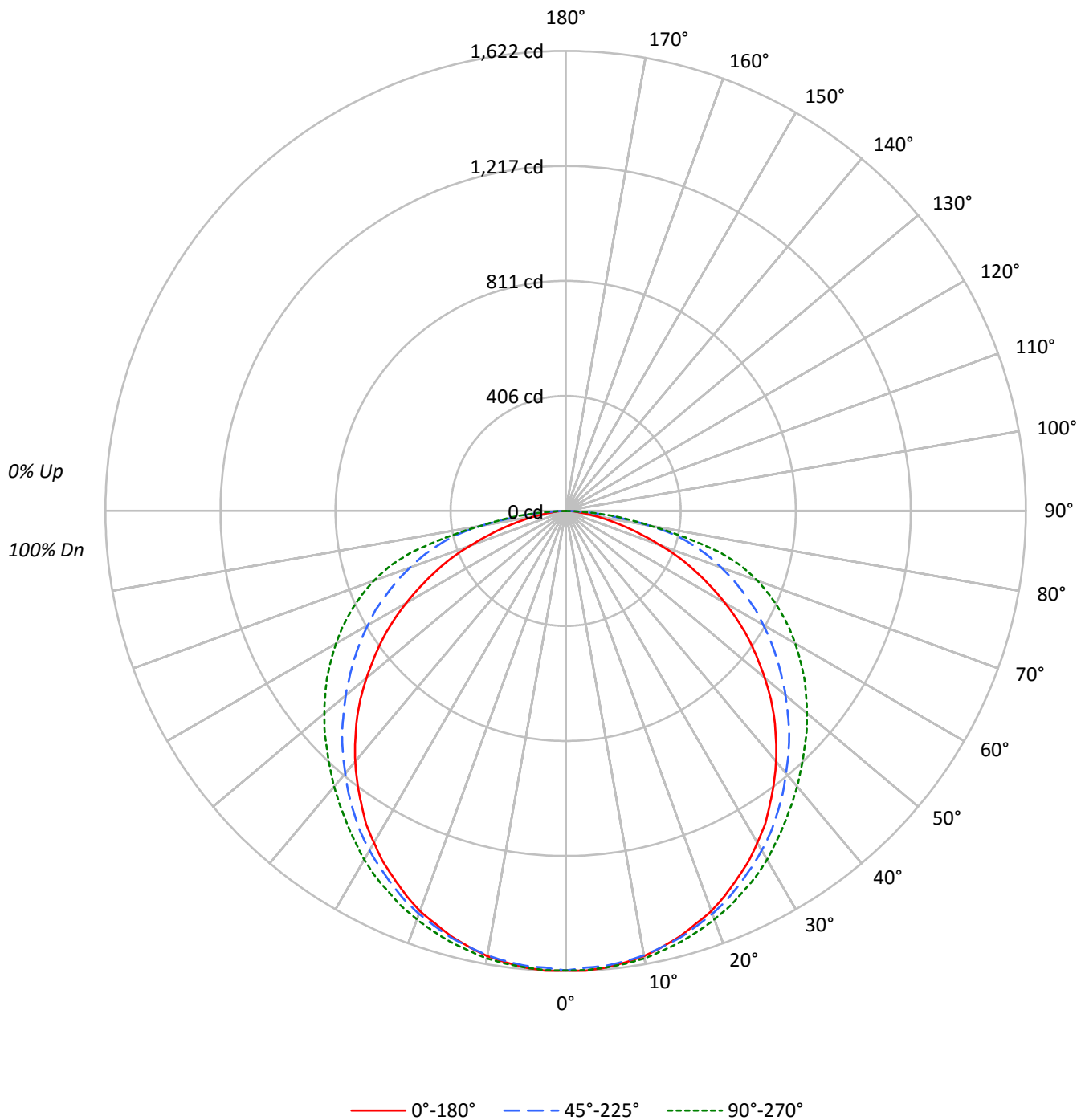
Input Watts (W): 60.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2180	2180	2180
5°	2183	2174	2183
10°	2177	2174	2188
15°	2164	2170	2190
20°	2149	2164	2194
25°	2123	2154	2197
30°	2098	2147	2206
35°	2064	2136	2208
40°	2027	2122	2229
45°	1981	2120	2264
50°	1917	2118	2324
55°	1849	2133	2408
60°	1744	2166	2515
65°	1611	2216	2656
70°	1406	2295	2829
75°	1141	2413	2924
80°	842	2365	2365
85°	645	1743	1968



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.5	3.1
10°-20°	440.8	8.8
20°-30°	671.0	13.4
30°-40°	814.8	16.3
40°-50°	860.8	17.2
50°-60°	812.3	16.3
60°-70°	675.4	13.5
70°-80°	444.3	8.9
80°-90°	121.1	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°	1265.3	25.3
0°-40°	2080.1	41.7
0°-60°	3753.2	75.2
0°-90°	4994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4994.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1616	1616	1610	1616	1616	154
15°	1553	1556	1558	1572	1572	438
25°	1430	1438	1451	1476	1480	660
35°	1256	1271	1300	1334	1344	787
45°	1041	1062	1114	1169	1190	802
55°	788	822	910	995	1026	702
65°	506	564	696	799	834	500
75°	220	320	464	550	562	237
85°	42	92	113	125	128	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1620.3	1620.3	1620.3	1620.3	1620.3
2.5°	1622.4	1620.3	1611.9	1620.3	1620.3
5°	1616.1	1616.1	1609.9	1616.1	1616.1
7.5°	1605.7	1605.7	1601.5	1609.9	1609.9
10°	1593.1	1593.1	1591.0	1601.5	1601.5
12.5°	1574.3	1576.4	1574.3	1586.9	1586.9
15°	1553.4	1555.5	1557.6	1572.2	1572.2
17.5°	1526.2	1530.4	1534.6	1551.3	1553.4
20°	1501.1	1503.2	1511.6	1530.4	1532.5
22.5°	1467.7	1474.0	1484.4	1503.2	1509.5
25°	1430.1	1438.4	1451.0	1476.0	1480.2
27.5°	1394.5	1400.8	1417.5	1444.7	1453.0
30°	1350.6	1361.1	1382.0	1409.1	1419.6
32.5°	1308.8	1319.2	1344.3	1373.6	1382.0
35°	1256.5	1271.2	1300.4	1333.9	1344.3
37.5°	1206.3	1221.0	1256.5	1294.2	1306.7
40°	1154.1	1170.8	1208.4	1252.3	1269.1
42.5°	1097.6	1120.6	1162.4	1210.5	1229.3
45°	1041.2	1062.1	1114.4	1168.7	1189.6
47.5°	980.5	1005.6	1062.1	1126.9	1152.0
50°	915.7	947.1	1011.9	1083.0	1110.2
52.5°	850.9	886.5	959.6	1039.1	1068.4
55°	788.2	821.7	909.5	995.2	1026.5
57.5°	719.2	761.0	857.2	949.2	980.5
60°	648.1	694.1	804.9	901.1	934.6
62.5°	577.0	629.3	754.7	850.9	886.5
65°	506.0	564.5	696.2	798.7	834.2
67.5°	437.0	501.8	641.9	744.3	779.8
70°	357.5	439.1	583.3	683.7	719.2
72.5°	284.3	378.4	526.9	620.9	652.3
75°	219.5	319.9	464.1	549.9	562.4
77.5°	161.0	261.3	399.3	428.6	430.7
80°	108.7	209.1	305.2	301.1	305.2
82.5°	71.1	156.8	192.3	215.3	217.4
85°	41.8	92.0	112.9	125.4	127.5
87.5°	20.9	31.4	39.7	41.8	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)