

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: P309737

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA125-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: P309737
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 4864.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

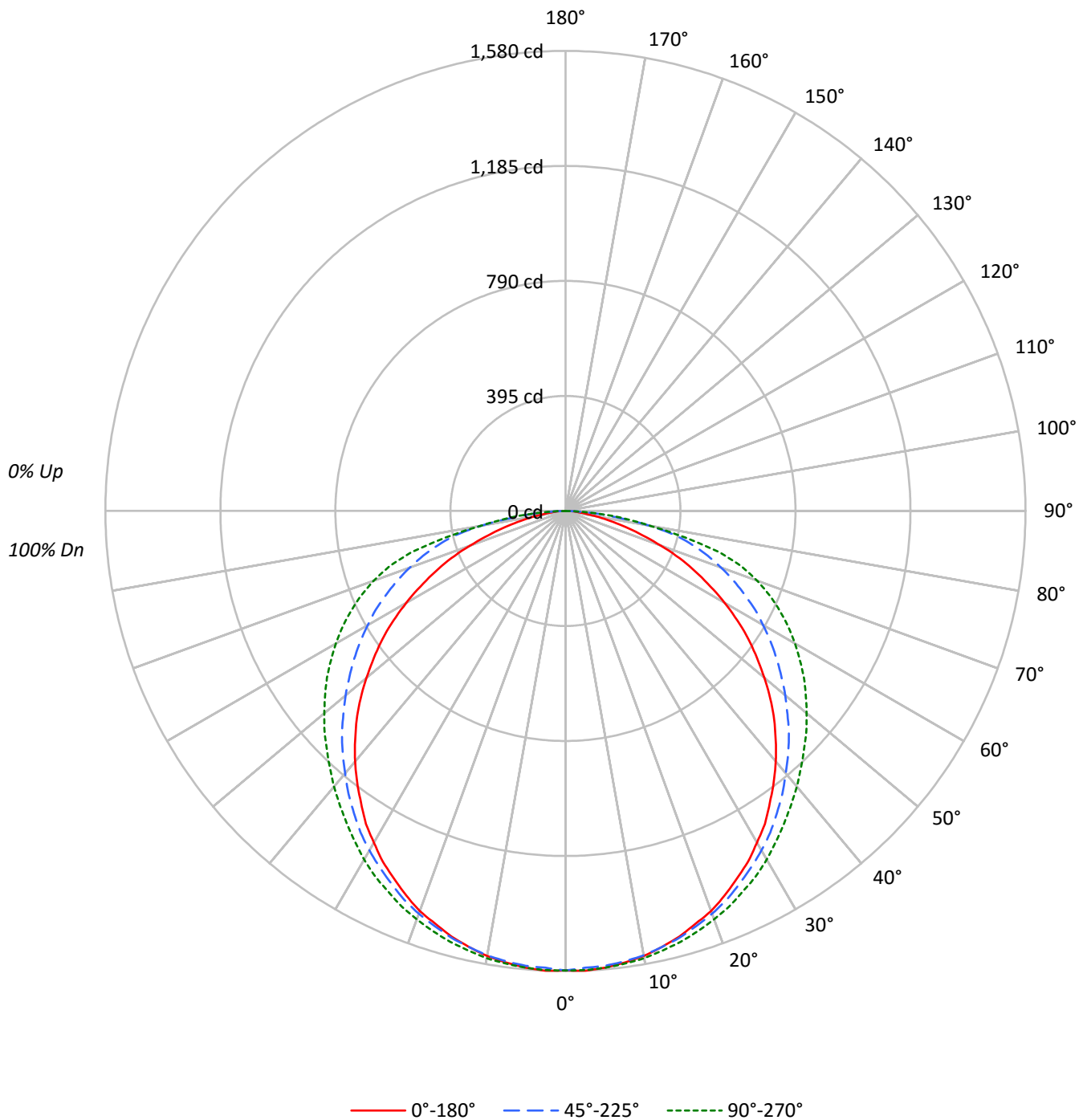
Input Watts (W): 58.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2123	2123	2123
5°	2126	2118	2126
10°	2120	2117	2131
15°	2108	2113	2133
20°	2093	2108	2137
25°	2068	2098	2140
30°	2044	2091	2148
35°	2010	2080	2151
40°	1974	2067	2171
45°	1930	2065	2205
50°	1867	2063	2263
55°	1801	2078	2345
60°	1699	2110	2449
65°	1569	2159	2587
70°	1370	2235	2756
75°	1111	2350	2848
80°	821	2304	2304
85°	628	1698	1917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.5	3.1
10°-20°	429.3	8.8
20°-30°	653.6	13.4
30°-40°	793.6	16.3
40°-50°	838.4	17.2
50°-60°	791.1	16.3
60°-70°	657.8	13.5
70°-80°	432.8	8.9
80°-90°	118.0	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°	1232.4	25.3
0°-40°	2025.9	41.7
0°-60°	3655.5	75.2
0°-90°	4864.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4864.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1578	1578	1578	1578	1578	
5°	1574	1574	1568	1574	1574	150
15°	1513	1515	1517	1531	1531	427
25°	1393	1401	1413	1438	1442	642
35°	1224	1238	1267	1299	1309	766
45°	1014	1034	1085	1138	1159	781
55°	768	800	886	969	1000	684
65°	493	550	678	778	812	487
75°	214	312	452	536	548	230
85°	41	90	110	122	124	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1578.1	1578.1	1578.1	1578.1	1578.1
2.5°	1580.2	1578.1	1570.0	1578.1	1578.1
5°	1574.1	1574.1	1567.9	1574.1	1574.1
7.5°	1563.9	1563.9	1559.8	1567.9	1567.9
10°	1551.7	1551.7	1549.6	1559.8	1559.8
12.5°	1533.3	1535.4	1533.3	1545.5	1545.5
15°	1513.0	1515.0	1517.0	1531.3	1531.3
17.5°	1486.5	1490.6	1494.6	1510.9	1513.0
20°	1462.1	1464.1	1472.2	1490.6	1492.6
22.5°	1429.5	1435.6	1445.8	1464.1	1470.2
25°	1392.8	1401.0	1413.2	1437.6	1441.7
27.5°	1358.2	1364.3	1380.6	1407.1	1415.2
30°	1315.4	1325.6	1346.0	1372.5	1382.6
32.5°	1274.7	1284.9	1309.3	1337.8	1346.0
35°	1223.8	1238.1	1266.6	1299.2	1309.3
37.5°	1174.9	1189.2	1223.8	1260.5	1272.7
40°	1124.0	1140.3	1177.0	1219.7	1236.0
42.5°	1069.1	1091.5	1132.2	1179.0	1197.3
45°	1014.1	1034.4	1085.3	1138.3	1158.7
47.5°	955.0	979.5	1034.4	1097.6	1122.0
50°	891.9	922.4	985.6	1054.8	1081.3
52.5°	828.8	863.4	934.7	1012.0	1040.5
55°	767.7	800.3	885.8	969.3	999.8
57.5°	700.5	741.2	834.9	924.5	955.0
60°	631.3	676.0	784.0	877.6	910.2
62.5°	562.0	612.9	735.1	828.8	863.4
65°	492.8	549.8	678.1	777.9	812.5
67.5°	425.6	488.7	625.1	724.9	759.5
70°	348.2	427.6	568.1	665.9	700.5
72.5°	276.9	368.6	513.1	604.8	635.3
75°	213.8	311.6	452.1	535.5	547.8
77.5°	156.8	254.5	388.9	417.4	419.5
80°	105.9	203.6	297.3	293.2	297.3
82.5°	69.2	152.7	187.3	209.7	211.8
85°	40.7	89.6	110.0	122.2	124.2
87.5°	20.4	30.5	38.7	40.7	44.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)