

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: P309727

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA08-W2A-U-3500K**

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: P309727
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 4777.0 lumens
Efficiency: N/A
Efficacy: 82.4 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

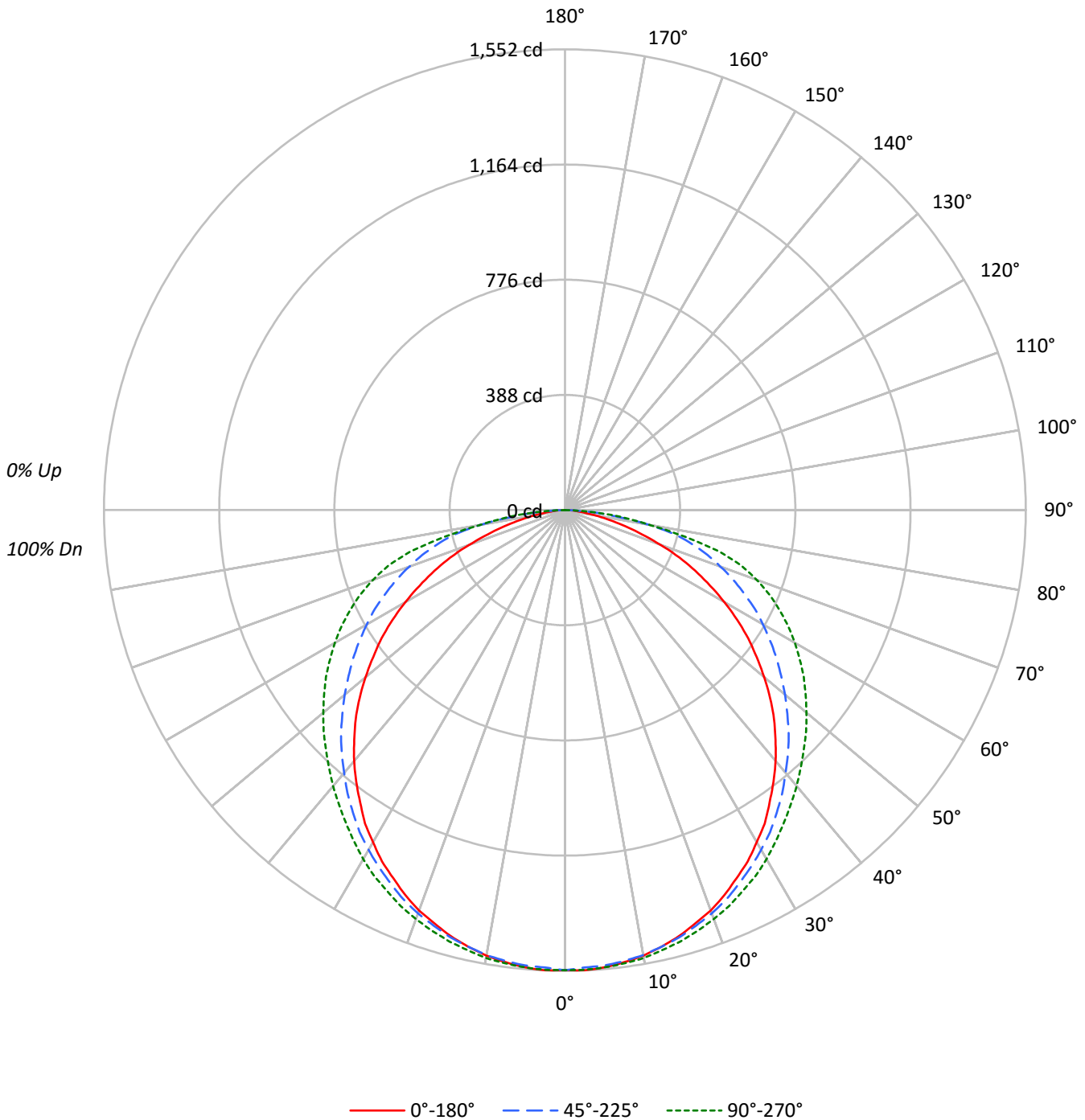
Input Watts (W): 58
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	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°	2085	2085	2085
5°	2088	2080	2088
10°	2082	2079	2093
15°	2070	2075	2095
20°	2056	2070	2099
25°	2031	2060	2102
30°	2007	2054	2110
35°	1974	2043	2112
40°	1939	2030	2132
45°	1895	2028	2165
50°	1833	2026	2223
55°	1769	2041	2303
60°	1668	2072	2405
65°	1541	2120	2540
70°	1345	2195	2707
75°	1092	2308	2797
80°	806	2263	2263
85°	618	1667	1883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.8	3.1
10°-20°	421.6	8.8
20°-30°	641.9	13.4
30°-40°	779.4	16.3
40°-50°	823.4	17.2
50°-60°	777.0	16.3
60°-70°	646.1	13.5
70°-80°	425.0	8.9
80°-90°	115.9	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°	1210.3	25.3
0°-40°	1989.7	41.7
0°-60°	3590.0	75.2
0°-90°	4777.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4777.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1550	1550	1550	1550	1550	
5°	1546	1546	1540	1546	1546	147
15°	1486	1488	1490	1504	1504	419
25°	1368	1376	1388	1412	1416	631
35°	1202	1216	1244	1276	1286	752
45°	996	1016	1066	1118	1138	767
55°	754	786	870	952	982	672
65°	484	540	666	764	798	478
75°	210	306	444	526	538	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°	1549.9	1549.9	1549.9	1549.9	1549.9
2.5°	1551.9	1549.9	1541.9	1549.9	1549.9
5°	1545.9	1545.9	1539.9	1545.9	1545.9
7.5°	1535.9	1535.9	1531.9	1539.9	1539.9
10°	1523.9	1523.9	1521.9	1531.9	1531.9
12.5°	1505.9	1507.9	1505.9	1517.9	1517.9
15°	1485.9	1487.9	1489.9	1503.9	1503.9
17.5°	1459.9	1463.9	1467.9	1483.9	1485.9
20°	1435.9	1437.9	1445.9	1463.9	1465.9
22.5°	1403.9	1409.9	1419.9	1437.9	1443.9
25°	1367.9	1375.9	1387.9	1411.9	1415.9
27.5°	1333.9	1339.9	1355.9	1381.9	1389.9
30°	1291.9	1301.9	1321.9	1347.9	1357.9
32.5°	1251.9	1261.9	1285.9	1313.9	1321.9
35°	1201.9	1215.9	1243.9	1275.9	1285.9
37.5°	1153.9	1167.9	1201.9	1237.9	1249.9
40°	1103.9	1119.9	1155.9	1197.9	1213.9
42.5°	1049.9	1071.9	1111.9	1157.9	1175.9
45°	995.9	1015.9	1065.9	1117.9	1137.9
47.5°	937.9	961.9	1015.9	1077.9	1101.9
50°	875.9	905.9	967.9	1035.9	1061.9
52.5°	813.9	847.9	917.9	993.9	1021.9
55°	754.0	785.9	869.9	951.9	981.9
57.5°	688.0	728.0	819.9	907.9	937.9
60°	620.0	664.0	770.0	861.9	893.9
62.5°	552.0	602.0	722.0	813.9	847.9
65°	484.0	540.0	666.0	764.0	797.9
67.5°	418.0	480.0	614.0	712.0	746.0
70°	342.0	420.0	558.0	654.0	688.0
72.5°	272.0	362.0	504.0	594.0	624.0
75°	210.0	306.0	444.0	526.0	538.0
77.5°	154.0	250.0	382.0	410.0	412.0
80°	104.0	200.0	292.0	288.0	292.0
82.5°	68.0	150.0	184.0	206.0	208.0
85°	40.0	88.0	108.0	120.0	122.0
87.5°	20.0	30.0	38.0	40.0	44.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)