

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: P309536

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP250-W2A-U-2700K**

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: P309536
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: 24FCZ2-50HE-UNV-L82765-HRP-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 2700K 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: 2969.0 lumens
Efficiency: N/A
Efficacy: 77.3 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

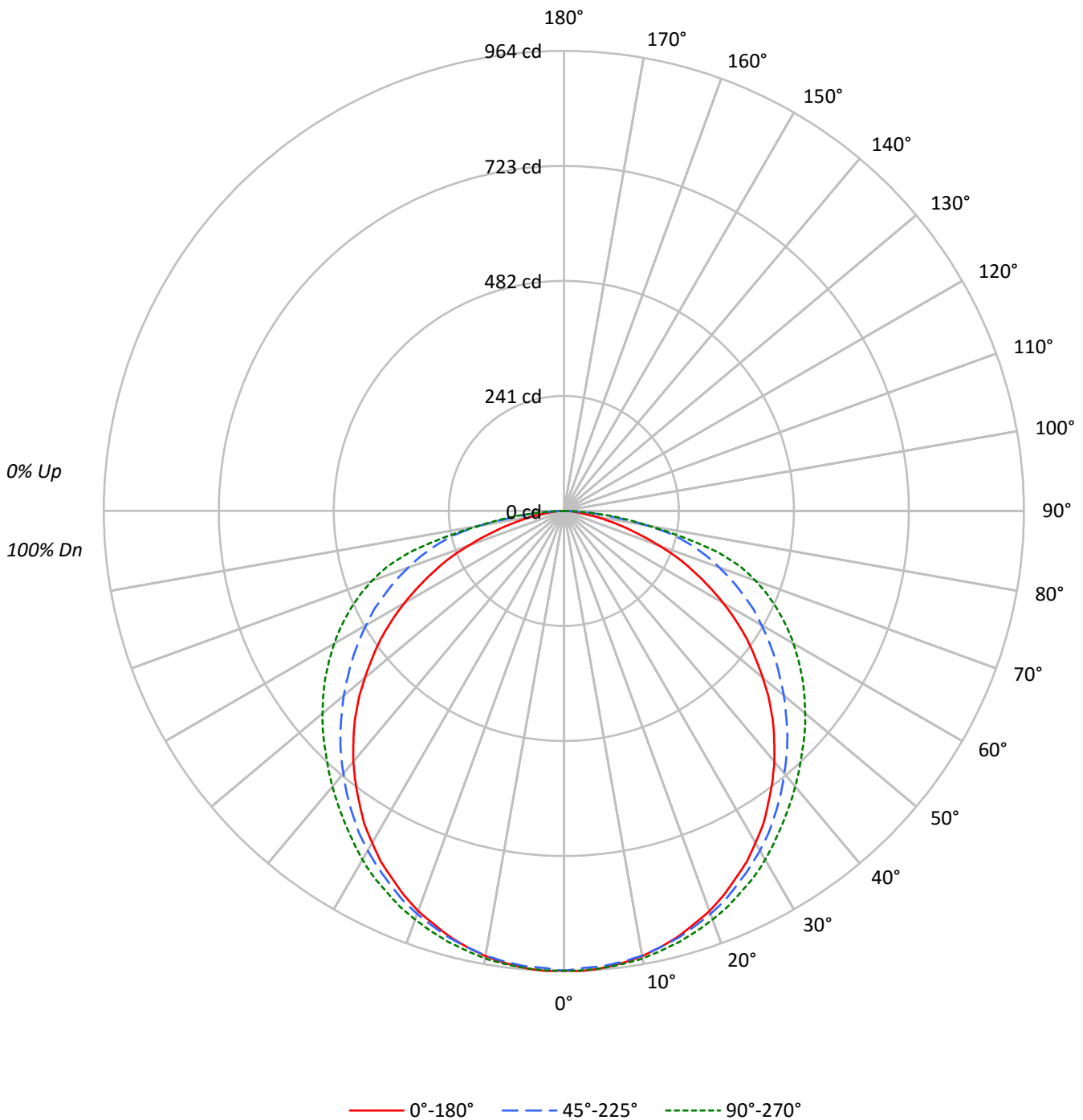
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1296	1296	1296
5°	1298	1293	1298
10°	1294	1292	1301
15°	1286	1290	1302
20°	1278	1287	1305
25°	1262	1281	1306
30°	1248	1276	1311
35°	1227	1270	1313
40°	1205	1262	1325
45°	1178	1261	1346
50°	1140	1259	1382
55°	1099	1268	1432
60°	1037	1288	1495
65°	958	1318	1579
70°	836	1364	1682
75°	678	1434	1738
80°	501	1406	1406
85°	384	1036	1170



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.3	3.1
10°-20°	262.0	8.8
20°-30°	398.9	13.4
30°-40°	484.4	16.3
40°-50°	511.8	17.2
50°-60°	482.9	16.3
60°-70°	401.5	13.5
70°-80°	264.2	8.9
80°-90°	72.0	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°	752.2	25.3
0°-40°	1236.6	41.7
0°-60°	2231.3	75.2
0°-90°	2969.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2969.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	963	963	963	963	963	
5°	961	961	957	961	961	91
15°	924	925	926	935	935	260
25°	850	855	863	878	880	392
35°	747	756	773	793	799	468
45°	619	631	662	695	707	477
55°	469	488	541	592	610	417
65°	301	336	414	475	496	297
75°	130	190	276	327	334	141
85°	25	55	67	75	76	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	963.3	963.3	963.3	963.3	963.3
2.5°	964.5	963.3	958.3	963.3	963.3
5°	960.8	960.8	957.1	960.8	960.8
7.5°	954.6	954.6	952.1	957.1	957.1
10°	947.1	947.1	945.9	952.1	952.1
12.5°	935.9	937.2	935.9	943.4	943.4
15°	923.5	924.8	926.0	934.7	934.7
17.5°	907.4	909.8	912.3	922.3	923.5
20°	892.4	893.7	898.7	909.8	911.1
22.5°	872.6	876.3	882.5	893.7	897.4
25°	850.2	855.2	862.6	877.5	880.0
27.5°	829.1	832.8	842.7	858.9	863.9
30°	803.0	809.2	821.6	837.8	844.0
32.5°	778.1	784.3	799.2	816.6	821.6
35°	747.0	755.7	773.1	793.0	799.2
37.5°	717.2	725.9	747.0	769.4	776.9
40°	686.1	696.1	718.4	744.5	754.5
42.5°	652.6	666.2	691.1	719.7	730.9
45°	619.0	631.4	662.5	694.8	707.2
47.5°	582.9	597.9	631.4	670.0	684.9
50°	544.4	563.1	601.6	643.9	660.0
52.5°	505.9	527.0	570.5	617.8	635.2
55°	468.6	488.5	540.7	591.6	610.3
57.5°	427.6	452.4	509.6	564.3	582.9
60°	385.3	412.7	478.5	535.7	555.6
62.5°	343.1	374.1	448.7	505.9	527.0
65°	300.8	335.6	413.9	474.8	495.9
67.5°	259.8	298.3	381.6	442.5	463.6
70°	212.5	261.0	346.8	406.4	427.6
72.5°	169.0	225.0	313.2	369.2	387.8
75°	130.5	190.2	275.9	326.9	334.4
77.5°	95.7	155.4	237.4	254.8	256.0
80°	64.6	124.3	181.5	179.0	181.5
82.5°	42.3	93.2	114.4	128.0	129.3
85°	24.9	54.7	67.1	74.6	75.8
87.5°	12.4	18.6	23.6	24.9	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)