

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: P313414

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-HRP-CP250-W2A-U-5000K**

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: P313414
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: 24FCZ2-75HE-UNV-L83050-HRP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 5000K 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: 5267.0 lumens
Efficiency: N/A
Efficacy: 79.9 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

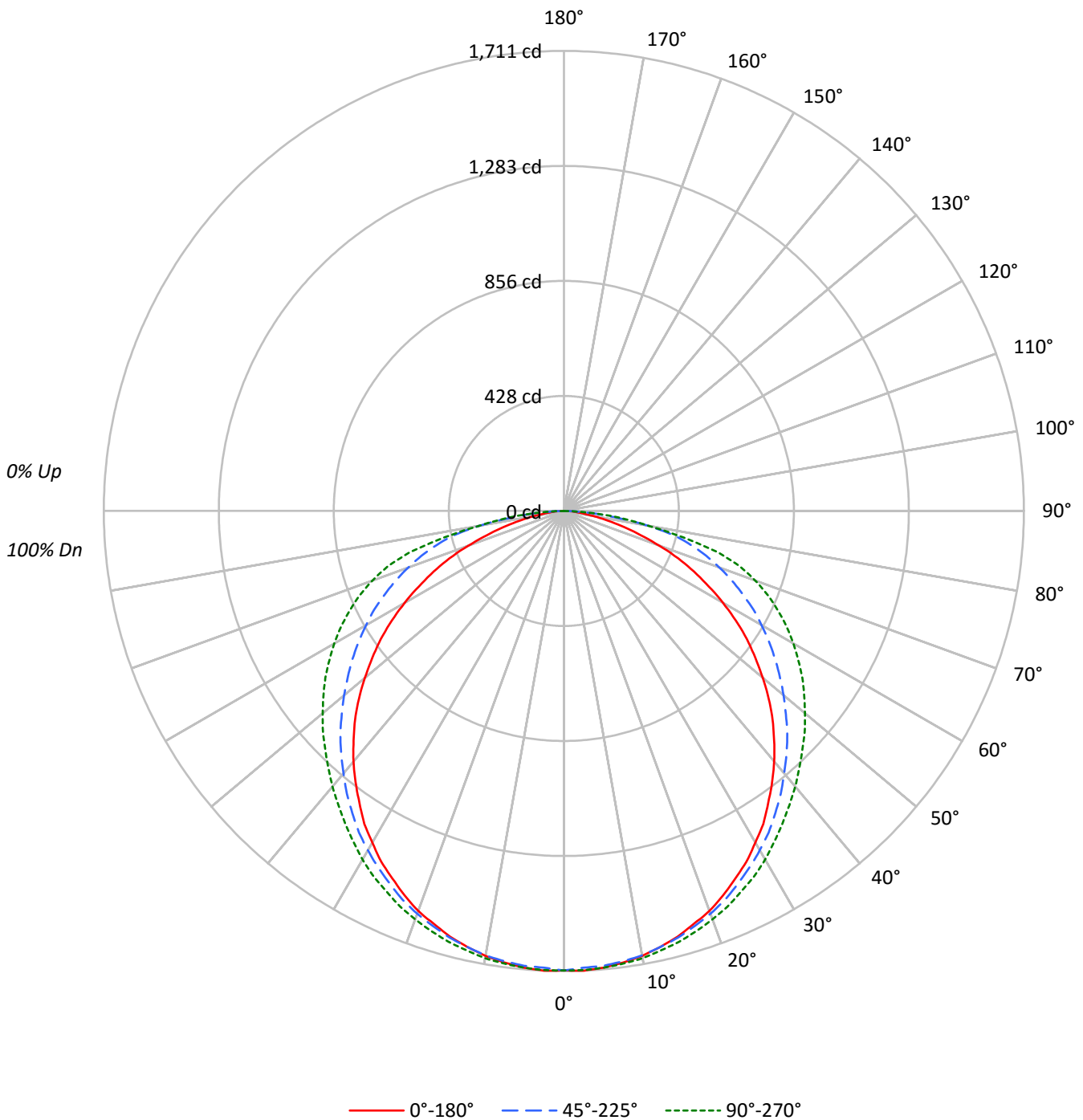
Input Watts (W): 65.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	2299	2299	2299
5°	2302	2293	2302
10°	2296	2293	2308
15°	2282	2288	2310
20°	2267	2283	2314
25°	2239	2272	2318
30°	2213	2264	2326
35°	2177	2253	2329
40°	2138	2239	2351
45°	2089	2236	2387
50°	2022	2234	2451
55°	1950	2250	2540
60°	1840	2284	2652
65°	1699	2338	2801
70°	1483	2420	2984
75°	1203	2545	3083
80°	889	2494	2494
85°	681	1839	2076



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.9	3.1
10°-20°	464.9	8.8
20°-30°	707.7	13.4
30°-40°	859.3	16.3
40°-50°	907.9	17.2
50°-60°	856.7	16.3
60°-70°	712.3	13.5
70°-80°	468.6	8.9
80°-90°	127.7	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°	1334.5	25.3
0°-40°	2193.8	41.7
0°-60°	3958.4	75.2
0°-90°	5267.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5267.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1709	1709	1709	1709	1709	
5°	1704	1704	1698	1704	1704	162
15°	1638	1640	1643	1658	1658	462
25°	1508	1517	1530	1557	1561	696
35°	1325	1341	1372	1407	1418	830
45°	1098	1120	1175	1233	1255	846
55°	831	867	959	1050	1083	740
65°	534	595	734	842	880	527
75°	232	337	490	580	593	249
85°	44	97	119	132	134	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1708.9	1708.9	1708.9	1708.9	1708.9
2.5°	1711.1	1708.9	1700.1	1708.9	1708.9
5°	1704.5	1704.5	1697.9	1704.5	1704.5
7.5°	1693.4	1693.4	1689.0	1697.9	1697.9
10°	1680.2	1680.2	1678.0	1689.0	1689.0
12.5°	1660.4	1662.6	1660.4	1673.6	1673.6
15°	1638.3	1640.5	1642.7	1658.2	1658.2
17.5°	1609.7	1614.1	1618.5	1636.1	1638.3
20°	1583.2	1585.4	1594.2	1614.1	1616.3
22.5°	1547.9	1554.5	1565.6	1585.4	1592.0
25°	1508.2	1517.0	1530.3	1556.7	1561.1
27.5°	1470.7	1477.4	1495.0	1523.7	1532.5
30°	1424.4	1435.5	1457.5	1486.2	1497.2
32.5°	1380.3	1391.4	1417.8	1448.7	1457.5
35°	1325.2	1340.6	1371.5	1406.8	1417.8
37.5°	1272.3	1287.7	1325.2	1364.9	1378.1
40°	1217.2	1234.8	1274.5	1320.8	1338.4
42.5°	1157.6	1181.9	1226.0	1276.7	1296.5
45°	1098.1	1120.1	1175.3	1232.6	1254.7
47.5°	1034.1	1060.6	1120.1	1188.5	1215.0
50°	965.8	998.9	1067.2	1142.2	1170.9
52.5°	897.4	934.9	1012.1	1095.9	1126.8
55°	831.3	866.6	959.2	1049.6	1082.7
57.5°	758.5	802.6	904.1	1001.1	1034.1
60°	683.6	732.1	848.9	950.4	985.6
62.5°	608.6	663.7	796.0	897.4	934.9
65°	533.6	595.4	734.3	842.3	879.8
67.5°	460.8	529.2	676.9	785.0	822.5
70°	377.1	463.1	615.2	721.0	758.5
72.5°	299.9	399.1	555.7	654.9	688.0
75°	231.5	337.4	489.5	579.9	593.1
77.5°	169.8	275.6	421.2	452.0	454.2
80°	114.7	220.5	321.9	317.5	321.9
82.5°	75.0	165.4	202.9	227.1	229.3
85°	44.1	97.0	119.1	132.3	134.5
87.5°	22.1	33.1	41.9	44.1	48.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)