

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: P309771

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-3000K**

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: P309771
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-L82765-HRP-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3000K 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: 4936.0 lumens
Efficiency: N/A
Efficacy: 79.1 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

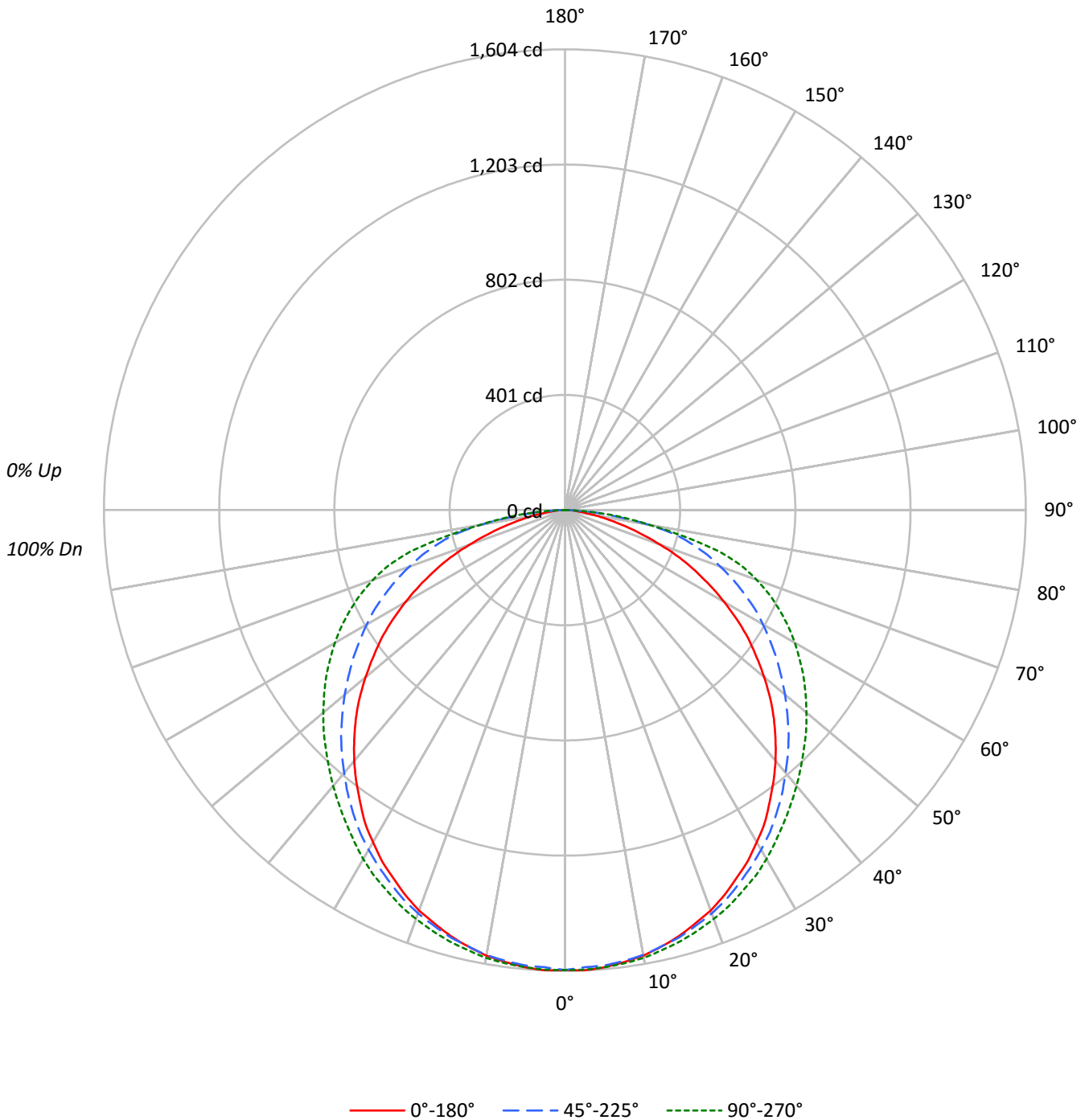
Input Watts (W): 62.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2155	2155	2155
5°	2157	2149	2157
10°	2151	2149	2163
15°	2139	2144	2165
20°	2124	2139	2169
25°	2098	2129	2172
30°	2074	2122	2180
35°	2040	2111	2182
40°	2004	2098	2203
45°	1958	2096	2237
50°	1895	2094	2297
55°	1827	2109	2380
60°	1724	2141	2486
65°	1592	2191	2625
70°	1390	2268	2797
75°	1128	2385	2890
80°	833	2338	2338
85°	638	1723	1947



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.7	3.1
10°-20°	435.7	8.8
20°-30°	663.2	13.4
30°-40°	805.3	16.3
40°-50°	850.8	17.2
50°-60°	802.8	16.3
60°-70°	667.5	13.5
70°-80°	439.2	8.9
80°-90°	119.7	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°	1250.6	25.3
0°-40°	2055.9	41.7
0°-60°	3709.6	75.2
0°-90°	4936.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4936.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1602	1602	1602	1602	1602	
5°	1597	1597	1591	1597	1597	152
15°	1535	1537	1540	1554	1554	433
25°	1413	1422	1434	1459	1463	652
35°	1242	1256	1285	1318	1329	777
45°	1029	1050	1101	1155	1176	793
55°	779	812	899	984	1015	694
65°	500	558	688	789	824	494
75°	217	316	459	544	556	234
85°	41	91	112	124	126	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1601.5	1601.5	1601.5	1601.5	1601.5
2.5°	1603.6	1601.5	1593.2	1601.5	1601.5
5°	1597.4	1597.4	1591.2	1597.4	1597.4
7.5°	1587.0	1587.0	1582.9	1591.2	1591.2
10°	1574.6	1574.6	1572.6	1582.9	1582.9
12.5°	1556.0	1558.1	1556.0	1568.4	1568.4
15°	1535.4	1537.4	1539.5	1554.0	1554.0
17.5°	1508.5	1512.6	1516.8	1533.3	1535.4
20°	1483.7	1485.8	1494.0	1512.6	1514.7
22.5°	1450.6	1456.8	1467.2	1485.8	1492.0
25°	1413.4	1421.7	1434.1	1458.9	1463.0
27.5°	1378.3	1384.5	1401.0	1427.9	1436.2
30°	1334.9	1345.3	1365.9	1392.8	1403.1
32.5°	1293.6	1303.9	1328.7	1357.6	1365.9
35°	1241.9	1256.4	1285.3	1318.4	1328.7
37.5°	1192.3	1206.8	1241.9	1279.1	1291.5
40°	1140.7	1157.2	1194.4	1237.8	1254.3
42.5°	1084.9	1107.6	1148.9	1196.5	1215.1
45°	1029.1	1049.8	1101.4	1155.1	1175.8
47.5°	969.2	994.0	1049.8	1113.8	1138.6
50°	905.1	936.1	1000.2	1070.4	1097.3
52.5°	841.0	876.2	948.5	1027.0	1055.9
55°	779.0	812.1	898.9	983.6	1014.6
57.5°	710.9	752.2	847.2	938.2	969.2
60°	640.6	686.1	795.6	890.6	923.7
62.5°	570.3	622.0	746.0	841.0	876.2
65°	500.1	557.9	688.1	789.4	824.5
67.5°	431.9	495.9	634.4	735.7	770.8
70°	353.4	434.0	576.5	675.7	710.9
72.5°	281.0	374.0	520.7	613.7	644.7
75°	217.0	316.2	458.7	543.5	555.9
77.5°	159.1	258.3	394.7	423.6	425.7
80°	107.5	206.6	301.7	297.6	301.7
82.5°	70.3	155.0	190.1	212.8	214.9
85°	41.3	90.9	111.6	124.0	126.1
87.5°	20.7	31.0	39.3	41.3	45.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)