

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: P309802

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP187-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: P309802
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-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 5037.0 lumens
Efficiency: N/A
Efficacy: 78.3 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

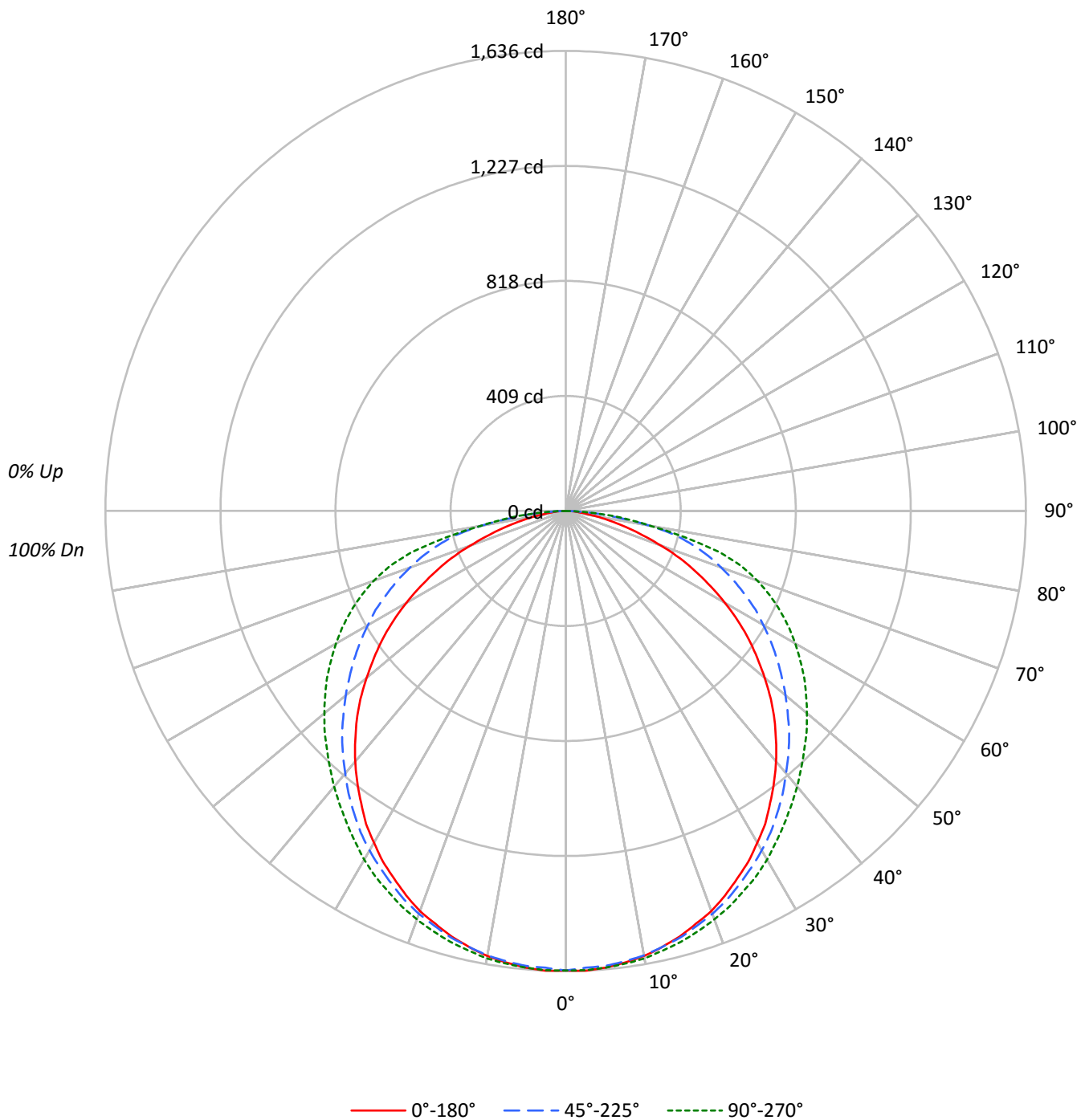
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2199	2199	2199
5°	2202	2193	2202
10°	2195	2192	2207
15°	2182	2188	2209
20°	2168	2183	2213
25°	2141	2173	2216
30°	2116	2166	2224
35°	2082	2154	2227
40°	2044	2141	2248
45°	1998	2139	2283
50°	1933	2136	2344
55°	1865	2152	2429
60°	1759	2185	2537
65°	1625	2236	2679
70°	1419	2314	2854
75°	1151	2433	2949
80°	850	2386	2386
85°	651	1758	1985



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.8	3.1
10°-20°	444.6	8.8
20°-30°	676.8	13.4
30°-40°	821.8	16.3
40°-50°	868.2	17.2
50°-60°	819.3	16.3
60°-70°	681.2	13.5
70°-80°	448.2	8.9
80°-90°	122.2	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°	1276.2	25.3
0°-40°	2098.0	41.7
0°-60°	3785.5	75.2
0°-90°	5037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1634	1634	1634	1634	1634	
5°	1630	1630	1624	1630	1630	155
15°	1567	1569	1571	1586	1586	442
25°	1442	1451	1464	1489	1493	665
35°	1267	1282	1312	1345	1356	793
45°	1050	1071	1124	1179	1200	809
55°	795	829	917	1004	1035	708
65°	510	569	702	806	841	504
75°	221	323	468	555	567	239
85°	42	93	114	126	129	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1634.3	1634.3	1634.3	1634.3	1634.3
2.5°	1636.4	1634.3	1625.8	1634.3	1634.3
5°	1630.0	1630.0	1623.7	1630.0	1630.0
7.5°	1619.5	1619.5	1615.3	1623.7	1623.7
10°	1606.8	1606.8	1604.7	1615.3	1615.3
12.5°	1587.9	1590.0	1587.9	1600.5	1600.5
15°	1566.8	1568.9	1571.0	1585.8	1585.8
17.5°	1539.4	1543.6	1547.8	1564.7	1566.8
20°	1514.1	1516.2	1524.6	1543.6	1545.7
22.5°	1480.3	1486.6	1497.2	1516.2	1522.5
25°	1442.4	1450.8	1463.5	1488.8	1493.0
27.5°	1406.5	1412.8	1429.7	1457.1	1465.6
30°	1362.2	1372.8	1393.9	1421.3	1431.8
32.5°	1320.1	1330.6	1355.9	1385.4	1393.9
35°	1267.3	1282.1	1311.6	1345.4	1355.9
37.5°	1216.7	1231.5	1267.3	1305.3	1318.0
40°	1164.0	1180.9	1218.8	1263.1	1280.0
42.5°	1107.1	1130.3	1172.4	1220.9	1239.9
45°	1050.1	1071.2	1123.9	1178.8	1199.9
47.5°	989.0	1014.3	1071.2	1136.6	1161.9
50°	923.6	955.3	1020.6	1092.3	1119.7
52.5°	858.2	894.1	967.9	1048.0	1077.6
55°	795.0	828.7	917.3	1003.8	1035.4
57.5°	725.4	767.6	864.6	957.4	989.0
60°	653.7	700.1	811.9	908.9	942.6
62.5°	582.0	634.7	761.2	858.2	894.1
65°	510.3	569.4	702.2	805.5	841.4
67.5°	440.7	506.1	647.4	750.7	786.6
70°	360.6	442.8	588.3	689.6	725.4
72.5°	286.8	381.7	531.4	626.3	657.9
75°	221.4	322.6	468.1	554.6	567.2
77.5°	162.4	263.6	402.8	432.3	434.4
80°	109.7	210.9	307.9	303.7	307.9
82.5°	71.7	158.2	194.0	217.2	219.3
85°	42.2	92.8	113.9	126.5	128.6
87.5°	21.1	31.6	40.1	42.2	46.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)