

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: P309778

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-6500K**

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: P309778
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 5465.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

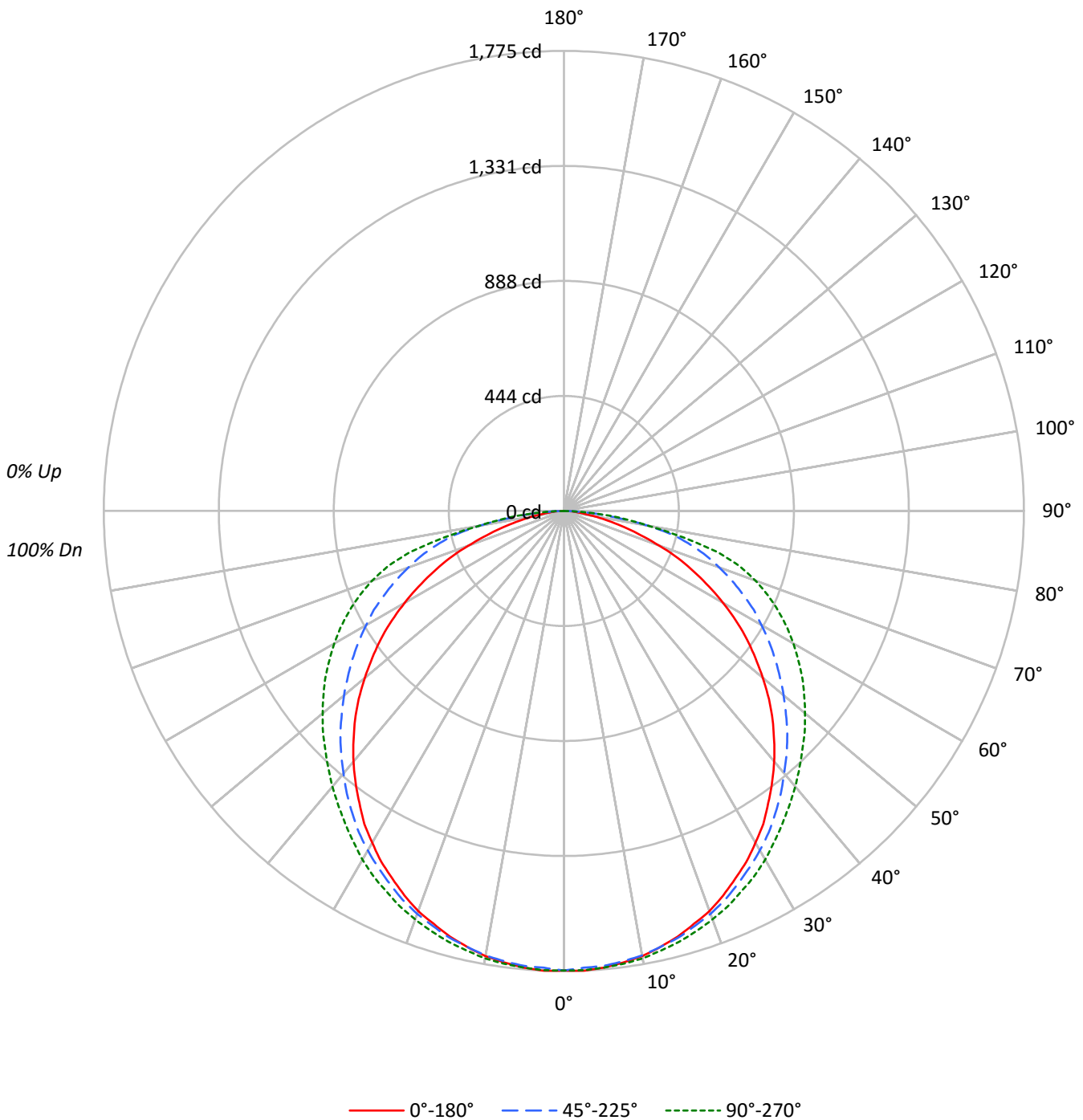
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2386	2386	2386
5°	2389	2379	2389
10°	2382	2379	2394
15°	2368	2374	2397
20°	2352	2369	2401
25°	2323	2357	2405
30°	2296	2350	2414
35°	2258	2337	2416
40°	2218	2323	2439
45°	2168	2320	2477
50°	2098	2318	2543
55°	2023	2335	2635
60°	1908	2370	2752
65°	1763	2426	2906
70°	1539	2511	3096
75°	1249	2640	3199
80°	922	2588	2588
85°	707	1907	2155



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.0	3.1
10°-20°	482.3	8.8
20°-30°	734.3	13.4
30°-40°	891.6	16.3
40°-50°	942.0	17.2
50°-60°	888.9	16.3
60°-70°	739.1	13.5
70°-80°	486.2	8.9
80°-90°	132.6	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°	1384.6	25.3
0°-40°	2276.3	41.7
0°-60°	4107.1	75.2
0°-90°	5465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5465.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1773	1773	1773	1773	1773	
5°	1768	1768	1762	1768	1768	168
15°	1700	1702	1704	1720	1720	479
25°	1565	1574	1588	1615	1620	722
35°	1375	1391	1423	1460	1471	861
45°	1139	1162	1220	1279	1302	877
55°	862	899	995	1089	1123	768
65°	554	618	762	874	913	547
75°	240	350	508	602	615	259
85°	46	101	124	137	140	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1773.1	1773.1	1773.1	1773.1	1773.1
2.5°	1775.4	1773.1	1764.0	1773.1	1773.1
5°	1768.5	1768.5	1761.7	1768.5	1768.5
7.5°	1757.1	1757.1	1752.5	1761.7	1761.7
10°	1743.4	1743.4	1741.1	1752.5	1752.5
12.5°	1722.8	1725.1	1722.8	1736.5	1736.5
15°	1699.9	1702.2	1704.5	1720.5	1720.5
17.5°	1670.2	1674.7	1679.3	1697.6	1699.9
20°	1642.7	1645.0	1654.2	1674.7	1677.0
22.5°	1606.1	1613.0	1624.4	1645.0	1651.9
25°	1564.9	1574.1	1587.8	1615.3	1619.8
27.5°	1526.0	1532.9	1551.2	1580.9	1590.1
30°	1478.0	1489.4	1512.3	1542.0	1553.5
32.5°	1432.2	1443.7	1471.1	1503.2	1512.3
35°	1375.0	1391.0	1423.1	1459.7	1471.1
37.5°	1320.1	1336.1	1375.0	1416.2	1429.9
40°	1262.9	1281.2	1322.4	1370.5	1388.8
42.5°	1201.1	1226.3	1272.1	1324.7	1345.3
45°	1139.4	1162.3	1219.5	1278.9	1301.8
47.5°	1073.0	1100.5	1162.3	1233.2	1260.6
50°	1002.1	1036.4	1107.3	1185.1	1214.9
52.5°	931.2	970.1	1050.1	1137.1	1169.1
55°	862.5	899.1	995.2	1089.0	1123.4
57.5°	787.0	832.8	938.0	1038.7	1073.0
60°	709.2	759.6	880.8	986.1	1022.7
62.5°	631.5	688.7	825.9	931.2	970.1
65°	553.7	617.7	761.9	874.0	912.9
67.5°	478.2	549.1	702.4	814.5	853.4
70°	391.2	480.5	638.3	748.1	787.0
72.5°	311.2	414.1	576.6	679.5	713.8
75°	240.2	350.0	507.9	601.7	615.4
77.5°	176.2	286.0	437.0	469.0	471.3
80°	119.0	228.8	334.0	329.5	334.0
82.5°	77.8	171.6	210.5	235.7	237.9
85°	45.8	100.7	123.5	137.3	139.6
87.5°	22.9	34.3	43.5	45.8	50.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)