

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: P309812

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-5500K**

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: P309812
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 5500K 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: 5045.0 lumens
Efficiency: N/A
Efficacy: 78.1 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

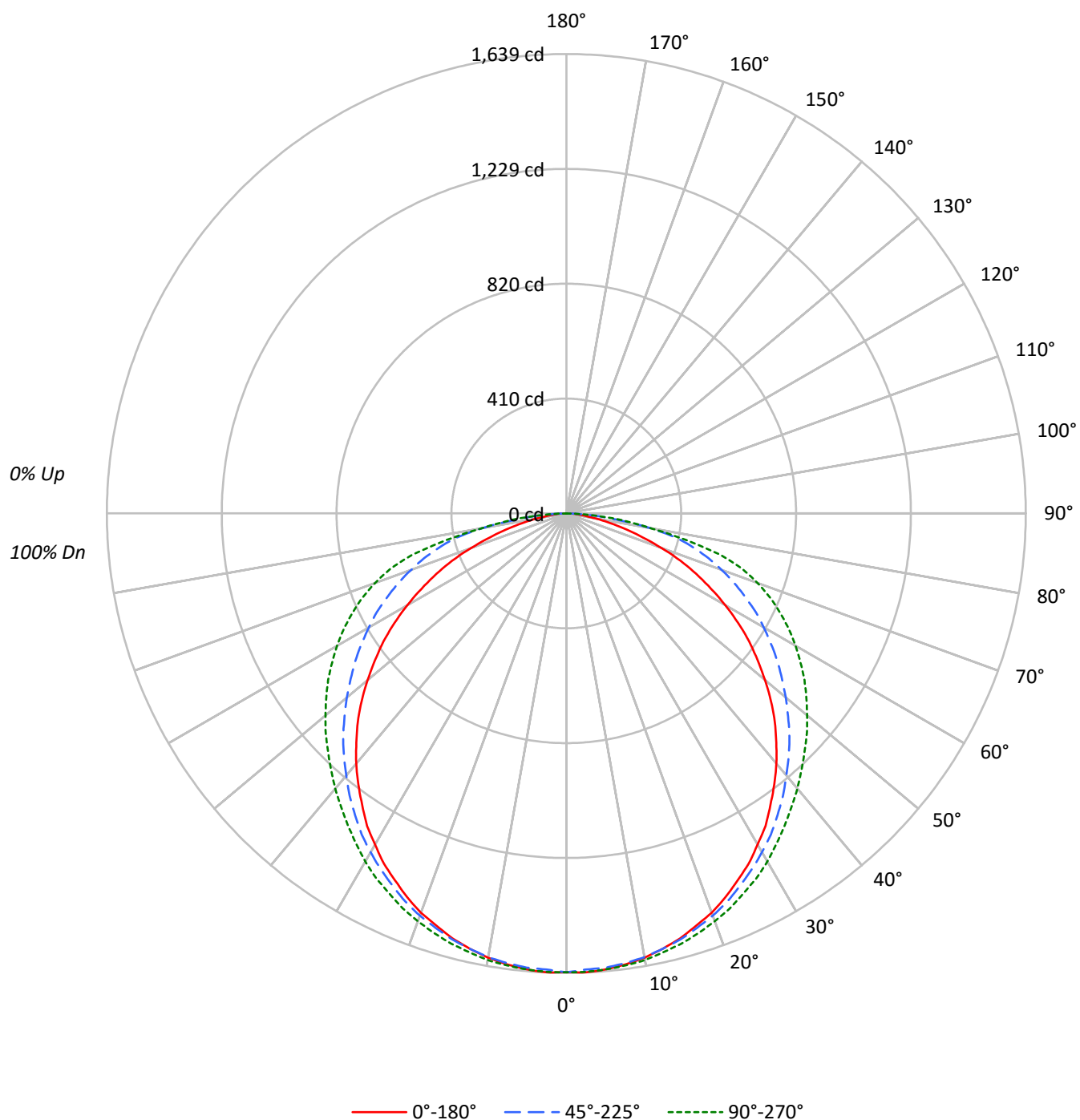
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	2202	2202	2202
5°	2205	2197	2205
10°	2199	2196	2210
15°	2186	2192	2212
20°	2171	2186	2217
25°	2145	2176	2220
30°	2120	2169	2228
35°	2085	2158	2231
40°	2048	2144	2252
45°	2001	2142	2287
50°	1936	2140	2348
55°	1868	2155	2433
60°	1762	2188	2541
65°	1627	2239	2683
70°	1421	2318	2858
75°	1153	2438	2953
80°	851	2390	2390
85°	651	1761	1988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.1	3.1
10°-20°	445.3	8.8
20°-30°	677.9	13.4
30°-40°	823.1	16.3
40°-50°	869.6	17.2
50°-60°	820.6	16.3
60°-70°	682.3	13.5
70°-80°	448.9	8.9
80°-90°	122.3	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°	1278.2	25.3
0°-40°	2101.3	41.7
0°-60°	3791.5	75.2
0°-90°	5045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5045.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1637	1637	1637	1637	1637	
5°	1633	1633	1626	1633	1633	155
15°	1569	1571	1574	1588	1588	443
25°	1445	1453	1466	1491	1495	666
35°	1269	1284	1314	1348	1358	795
45°	1052	1073	1126	1181	1202	810
55°	796	830	919	1005	1037	709
65°	511	570	703	807	843	505
75°	222	323	469	556	568	239
85°	42	93	114	127	129	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1636.9	1636.9	1636.9	1636.9	1636.9
2.5°	1639.0	1636.9	1628.4	1636.9	1636.9
5°	1632.6	1632.6	1626.3	1632.6	1632.6
7.5°	1622.1	1622.1	1617.8	1626.3	1626.3
10°	1609.4	1609.4	1607.3	1617.8	1617.8
12.5°	1590.4	1592.5	1590.4	1603.1	1603.1
15°	1569.3	1571.4	1573.5	1588.3	1588.3
17.5°	1541.8	1546.0	1550.3	1567.2	1569.3
20°	1516.5	1518.6	1527.0	1546.0	1548.1
22.5°	1482.7	1489.0	1499.6	1518.6	1524.9
25°	1444.7	1453.1	1465.8	1491.1	1495.3
27.5°	1408.8	1415.1	1432.0	1459.4	1467.9
30°	1364.4	1375.0	1396.1	1423.5	1434.1
32.5°	1322.2	1332.7	1358.1	1387.6	1396.1
35°	1269.4	1284.1	1313.7	1347.5	1358.1
37.5°	1218.7	1233.4	1269.4	1307.4	1320.0
40°	1165.9	1182.8	1220.8	1265.1	1282.0
42.5°	1108.8	1132.1	1174.3	1222.9	1241.9
45°	1051.8	1072.9	1125.7	1180.6	1201.8
47.5°	990.6	1015.9	1072.9	1138.4	1163.8
50°	925.1	956.8	1022.2	1094.1	1121.5
52.5°	859.6	895.5	969.4	1049.7	1079.3
55°	796.3	830.0	918.8	1005.3	1037.0
57.5°	726.6	768.8	865.9	958.9	990.6
60°	654.7	701.2	813.1	910.3	944.1
62.5°	582.9	635.7	762.5	859.6	895.5
65°	511.1	570.3	703.3	806.8	842.7
67.5°	441.4	506.9	648.4	751.9	787.8
70°	361.2	443.5	589.3	690.6	726.6
72.5°	287.2	382.3	532.2	627.3	659.0
75°	221.8	323.1	468.9	555.5	568.1
77.5°	162.6	264.0	403.4	433.0	435.1
80°	109.8	211.2	308.4	304.1	308.4
82.5°	71.8	158.4	194.3	217.5	219.7
85°	42.2	92.9	114.1	126.7	128.8
87.5°	21.1	31.7	40.1	42.2	46.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)