

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: P309806

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-2700K**

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: P309806
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-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 2700K 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: 4452.0 lumens
Efficiency: N/A
Efficacy: 70.9 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

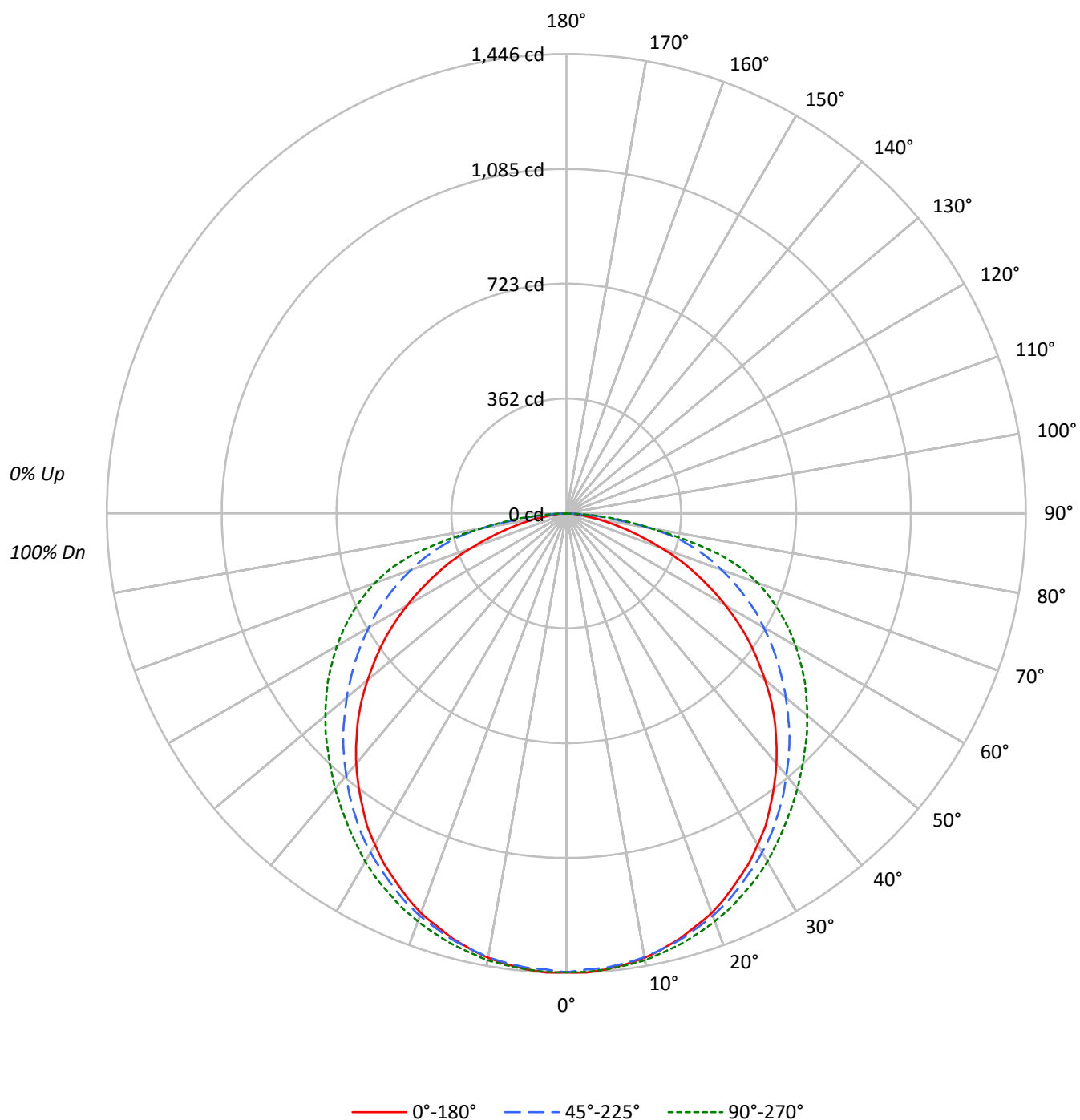
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309806

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P309806

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-2700K

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°	1944	1944	1944
5°	1946	1938	1946
10°	1940	1938	1951
15°	1929	1934	1952
20°	1916	1929	1956
25°	1893	1920	1959
30°	1871	1914	1966
35°	1840	1904	1968
40°	1807	1892	1987
45°	1766	1890	2018
50°	1709	1888	2072
55°	1648	1902	2147
60°	1555	1931	2242
65°	1436	1976	2368
70°	1254	2046	2522
75°	1017	2151	2607
80°	751	2108	2108
85°	576	1553	1755



TEST NUMBER: P309806

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.8	3.1
10°-20°	392.9	8.8
20°-30°	598.2	13.4
30°-40°	726.4	16.3
40°-50°	767.4	17.2
50°-60°	724.1	16.3
60°-70°	602.1	13.5
70°-80°	396.1	8.9
80°-90°	108.0	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°	1128.0	25.3
0°-40°	1854.3	41.7
0°-60°	3345.9	75.2
0°-90°	4452.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4452.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1444	1444	1444	1444	1444	
5°	1441	1441	1435	1441	1441	137
15°	1385	1387	1388	1402	1402	391
25°	1275	1282	1294	1316	1320	588
35°	1120	1133	1159	1189	1198	701
45°	928	947	993	1042	1060	715
55°	703	732	811	887	915	626
65°	451	503	621	712	744	446
75°	196	285	414	490	501	211
85°	37	82	101	112	114	46
90°	0	0	0	0	0	



TEST NUMBER: P309806

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CP250-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1444.5	1444.5	1444.5	1444.5	1444.5
2.5°	1446.3	1444.5	1437.0	1444.5	1444.5
5°	1440.7	1440.7	1435.1	1440.7	1440.7
7.5°	1431.4	1431.4	1427.7	1435.1	1435.1
10°	1420.2	1420.2	1418.4	1427.7	1427.7
12.5°	1403.5	1405.3	1403.5	1414.6	1414.6
15°	1384.8	1386.7	1388.5	1401.6	1401.6
17.5°	1360.6	1364.3	1368.0	1382.9	1384.8
20°	1338.2	1340.1	1347.5	1364.3	1366.2
22.5°	1308.4	1314.0	1323.3	1340.1	1345.7
25°	1274.8	1282.3	1293.5	1315.9	1319.6
27.5°	1243.2	1248.8	1263.7	1287.9	1295.3
30°	1204.0	1213.3	1232.0	1256.2	1265.5
32.5°	1166.7	1176.1	1198.4	1224.5	1232.0
35°	1120.2	1133.2	1159.3	1189.1	1198.4
37.5°	1075.4	1088.5	1120.2	1153.7	1164.9
40°	1028.8	1043.7	1077.3	1116.4	1131.3
42.5°	978.5	999.0	1036.3	1079.1	1095.9
45°	928.2	946.8	993.4	1041.9	1060.5
47.5°	874.1	896.5	946.8	1004.6	1027.0
50°	816.3	844.3	902.1	965.5	989.7
52.5°	758.6	790.3	855.5	926.3	952.4
55°	702.7	732.5	810.8	887.2	915.1
57.5°	641.2	678.4	764.2	846.2	874.1
60°	577.8	618.8	717.6	803.3	833.1
62.5°	514.4	561.0	672.8	758.6	790.3
65°	451.0	503.2	620.6	712.0	743.7
67.5°	389.5	447.3	572.2	663.5	695.2
70°	318.7	391.4	520.0	609.5	641.2
72.5°	253.5	337.4	469.7	553.6	581.5
75°	195.7	285.2	413.8	490.2	501.4
77.5°	143.5	233.0	356.0	382.1	383.9
80°	96.9	186.4	272.1	268.4	272.1
82.5°	63.4	139.8	171.5	192.0	193.8
85°	37.3	82.0	100.6	111.8	113.7
87.5°	18.6	28.0	35.4	37.3	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)