

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: P313321

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-HRP-CA125-W2A-U-3500K**

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: P313321
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: 24FCZ2-60HE-UNV-L83050-HRP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3500K 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: 4269.0 lumens
Efficiency: N/A
Efficacy: 89.7 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

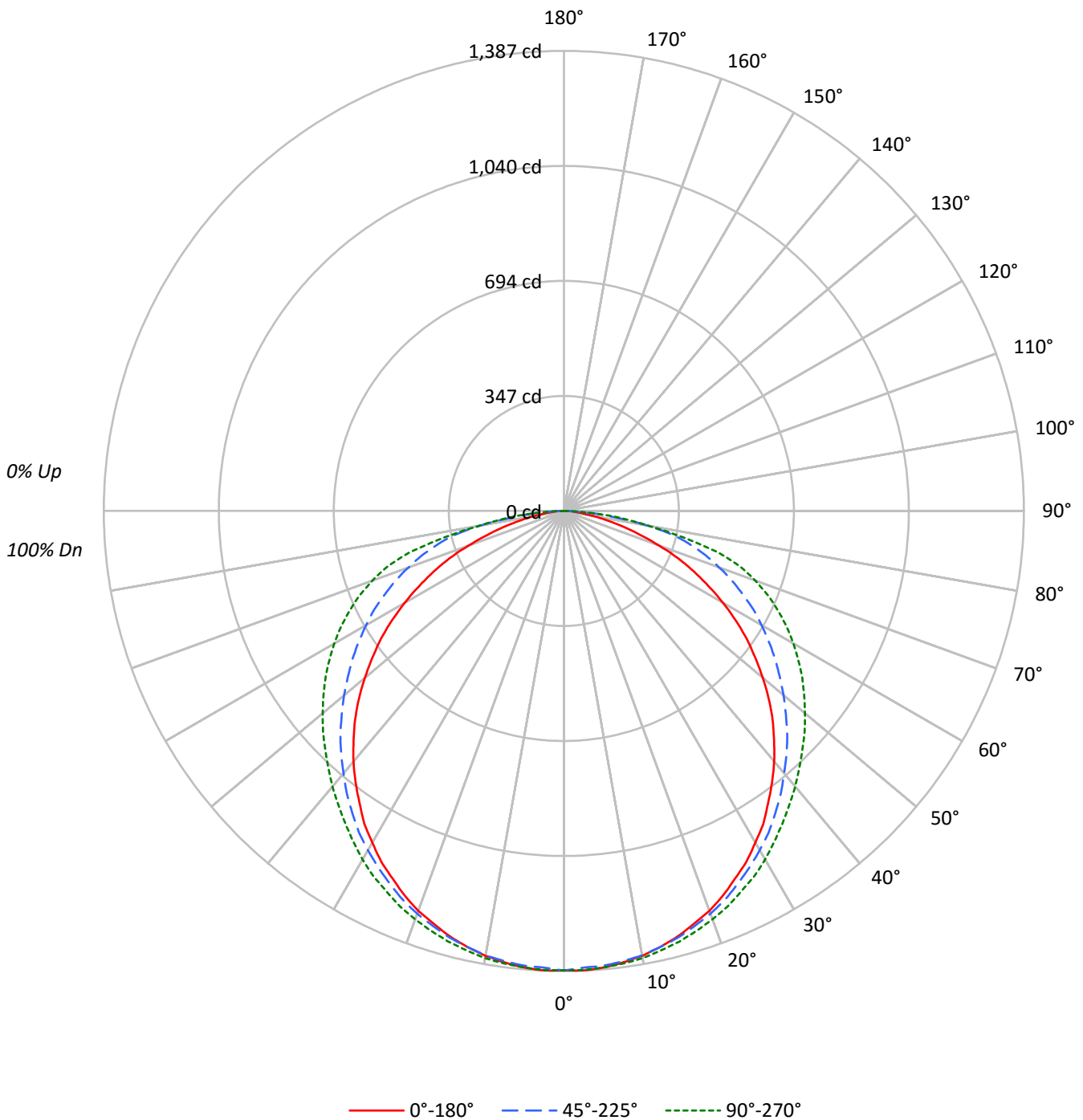
Input Watts (W): 47.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313321

CATALOG NUMBER: 24FCZ2-60HE-UNV-L83050-HRP-CA125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313321

CATALOG NUMBER: 24FCZ2-60HE-UNV-L83050-HRP-CA125-W2A-U-3500K

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°	1864	1864	1864
5°	1866	1859	1866
10°	1861	1858	1870
15°	1850	1855	1872
20°	1837	1850	1876
25°	1815	1841	1878
30°	1794	1835	1885
35°	1764	1826	1888
40°	1733	1814	1905
45°	1694	1813	1935
50°	1639	1811	1986
55°	1581	1824	2058
60°	1491	1852	2150
65°	1377	1895	2270
70°	1202	1961	2419
75°	976	2063	2499
80°	720	2022	2022
85°	551	1490	1683



TEST NUMBER: P313321

CATALOG NUMBER: 24FCZ2-60HE-UNV-L83050-HRP-CA125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.2	3.1
10°-20°	376.8	8.8
20°-30°	573.6	13.4
30°-40°	696.5	16.3
40°-50°	735.8	17.2
50°-60°	694.4	16.3
60°-70°	577.3	13.5
70°-80°	379.8	8.9
80°-90°	103.5	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°	1081.6	25.3
0°-40°	1778.1	41.7
0°-60°	3208.3	75.2
0°-90°	4269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4269.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1385	1385	1385	1385	1385	
5°	1382	1382	1376	1382	1382	131
15°	1328	1330	1332	1344	1344	375
25°	1222	1230	1240	1262	1265	564
35°	1074	1087	1112	1140	1149	672
45°	890	908	953	999	1017	685
55°	674	702	777	851	878	600
65°	432	482	595	683	713	428
75°	188	273	397	470	481	202
85°	36	79	96	107	109	44
90°	0	0	0	0	0	



TEST NUMBER: P313321

CATALOG NUMBER: 24FCZ2-60HE-UNV-L83050-HRP-CA125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1385.1	1385.1	1385.1	1385.1	1385.1
2.5°	1386.9	1385.1	1377.9	1385.1	1385.1
5°	1381.5	1381.5	1376.1	1381.5	1381.5
7.5°	1372.6	1372.6	1369.0	1376.1	1376.1
10°	1361.8	1361.8	1360.1	1369.0	1369.0
12.5°	1345.8	1347.5	1345.8	1356.5	1356.5
15°	1327.9	1329.7	1331.5	1344.0	1344.0
17.5°	1304.7	1308.2	1311.8	1326.1	1327.9
20°	1283.2	1285.0	1292.1	1308.2	1310.0
22.5°	1254.6	1260.0	1268.9	1285.0	1290.4
25°	1222.4	1229.6	1240.3	1261.8	1265.3
27.5°	1192.1	1197.4	1211.7	1235.0	1242.1
30°	1154.5	1163.5	1181.3	1204.6	1213.5
32.5°	1118.8	1127.7	1149.2	1174.2	1181.3
35°	1074.1	1086.6	1111.6	1140.2	1149.2
37.5°	1031.2	1043.7	1074.1	1106.3	1117.0
40°	986.5	1000.8	1033.0	1070.5	1084.8
42.5°	938.3	957.9	993.7	1034.8	1050.9
45°	890.0	907.9	952.6	999.0	1016.9
47.5°	838.2	859.6	907.9	963.3	984.7
50°	782.8	809.6	865.0	925.8	949.0
52.5°	727.4	757.8	820.3	888.2	913.3
55°	673.8	702.4	777.4	850.7	877.5
57.5°	614.8	650.5	732.8	811.4	838.2
60°	554.0	593.4	688.1	770.3	798.9
62.5°	493.3	537.9	645.2	727.4	757.8
65°	432.5	482.5	595.1	682.7	713.1
67.5°	373.5	428.9	548.7	636.2	666.6
70°	305.6	375.3	498.6	584.4	614.8
72.5°	243.1	323.5	450.4	530.8	557.6
75°	187.7	273.4	396.8	470.0	480.8
77.5°	137.6	223.4	341.4	366.4	368.2
80°	92.9	178.7	260.9	257.4	260.9
82.5°	60.8	134.0	164.4	184.1	185.9
85°	35.7	78.6	96.5	107.2	109.0
87.5°	17.9	26.8	34.0	35.7	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)