

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: 236P318

Luminaire Tested: **HBE-632-N-A-UNV-EB82-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236P318
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBE-632-N-A-UNV-EB82-U
Description: OPEN HIGH BAY LUMINAIRE WITH DOORFRAME AND PRISMATIC ACYRLIC LENS, SPECULAR REFLECTOR, NARROW DISTRIBUTION, NO UPLIGHT
Light Source: SIX 32 WATT T8 - 3100 LUMENS EA
Ballast/Driver: -

Summary

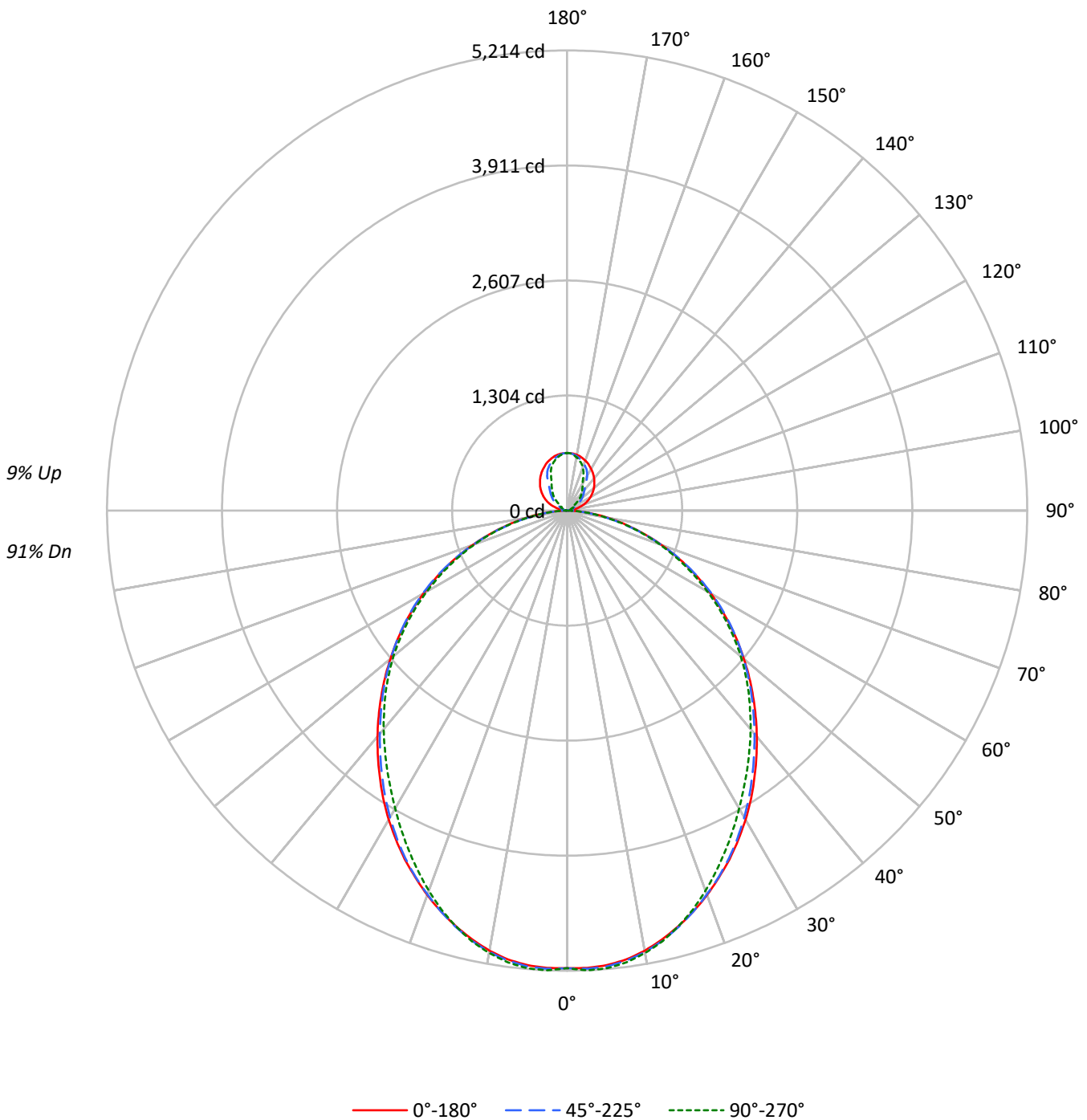
Lumens per Lamp: 3100 (6 lamps)
Luminaire Lumens: 14261.8 lumens
Efficiency: 76.7%
Efficacy: 69.6 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.27
Luminous Opening: Rectangular (W 1.65' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 205
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: 236P318

CATALOG NUMBER: HBE-632-N-A-UNV-EB82-U

Luminous Intensity Polar Plot





TEST NUMBER: 236P318

CATALOG NUMBER: HBE-632-N-A-UNV-EB82-U

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	50	30	10	0	
RCR																						
0	90	90	90	90	87	87	87	87	81	81	81	76	76	76	72	72	72	70				70
1	82	79	75	73	79	76	73	71	72	69	67	67	66	64	64	62	61	59				59
2	75	69	64	59	72	67	62	58	63	59	56	59	56	53	56	54	51	49				49
3	68	61	54	50	66	59	53	49	56	51	47	53	49	45	50	46	44	42				42
4	63	54	47	42	60	52	46	42	49	44	40	47	43	39	44	41	38	36				36
5	58	48	41	37	56	47	41	36	44	39	35	42	38	34	40	36	33	31				31
6	53	43	37	32	51	42	36	32	40	35	31	38	34	30	36	32	29	27				27
7	49	39	33	28	48	38	32	28	37	31	27	35	30	27	33	29	26	24				24
8	46	36	30	25	45	35	29	25	34	28	24	32	27	24	31	26	23	22				22
9	43	33	27	23	42	32	27	23	31	26	22	30	25	22	28	24	21	20				20
10	40	31	25	21	39	30	24	20	29	24	20	27	23	20	26	22	19	18				18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8478	8478	8478
5°	8485	8508	8541
10°	8407	8432	8451
15°	8252	8267	8252
20°	8066	8054	7974
25°	7862	7835	7662
30°	7633	7578	7357
35°	7383	7303	7108
40°	7135	7048	6905
45°	6888	6835	6722
50°	6649	6636	6535
55°	6417	6439	6294
60°	6148	6197	6001
65°	5838	5873	5683
70°	5440	5421	5311
75°	4953	4826	4852
80°	4388	4096	4115
85°	3658	3208	3208



TEST NUMBER: 236P318

CATALOG NUMBER: HBE-632-N-A-UNV-EB82-U

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	491.3	3.4	2.6	0°	5185	5185	5185	5185	5185	
10°-20°	1373.1	9.6	7.4	5°	5170	5173	5184	5191	5204	490
20°-30°	1989.1	13.9	10.7	15°	4875	4881	4884	4875	4875	1373
30°-40°	2283.1	16.0	12.3	25°	4358	4367	4343	4276	4247	2005
40°-50°	2283.3	16.0	12.3	35°	3699	3714	3659	3586	3561	2314
50°-60°	2013.4	14.1	10.8	45°	2979	3003	2956	2934	2907	2300
60°-70°	1491.9	10.5	8.0	55°	2251	2274	2259	2253	2208	2012
70°-80°	822.0	5.8	4.4	65°	1509	1524	1518	1503	1469	1493
80°-90°	210.0	1.5	1.1	75°	784	783	764	772	768	834
90°-100°	23.1	0.2	0.1	85°	195	186	171	171	171	214
100°-110°	63.3	0.4	0.3	90°	3	4	5	5	5	12
110°-120°	116.2	0.8	0.6	95°	34	21	19	16	12	38
120°-130°	168.6	1.2	0.9	105°	141	62	45	38	36	150
130°-140°	226.2	1.6	1.2	115°	255	154	88	77	66	251
140°-150°	245.0	1.7	1.3	125°	351	239	176	108	90	314
150°-160°	233.1	1.6	1.3	135°	435	374	260	225	209	337
160°-170°	168.1	1.2	0.9	145°	512	475	367	314	300	320
170°-180°	61.0	0.4	0.3	155°	577	556	517	460	430	265
0°-30°	3853.5	27.0	20.7	165°	625	616	597	579	574	176
0°-40°	6136.6	43.0	33.0	175°	650	650	646	641	642	62
0°-60°	10433.3	73.2	56.1	180°	654	654	654	654	654	
0°-90°	12957.2	90.9	69.7							
90°-120°	202.6	1.4	1.1							
90°-150°	842.4	5.9	4.5							
90°-180°	1305.0	9.2	7.0							
0°-180°	14261.8	100.0	76.7							



TEST NUMBER: 236P318

CATALOG NUMBER: HBE-632-N-A-UNV-EB82-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5185	5185	5185	5185	5185
2.5°	5186	5185	5196	5204	5214
5°	5170	5173	5184	5191	5204
7.5°	5130	5134	5143	5153	5163
10°	5064	5067	5079	5084	5090
12.5°	4976	4983	4991	4990	4997
15°	4875	4881	4884	4875	4875
17.5°	4761	4766	4761	4743	4740
20°	4636	4643	4629	4596	4583
22.5°	4498	4510	4491	4439	4419
25°	4358	4367	4343	4276	4247
27.5°	4202	4216	4181	4105	4073
30°	4043	4054	4014	3933	3897
32.5°	3877	3890	3839	3756	3725
35°	3699	3714	3659	3586	3561
37.5°	3523	3542	3479	3420	3395
40°	3343	3362	3302	3257	3235
42.5°	3162	3183	3125	3093	3068
45°	2979	3003	2956	2934	2907
47.5°	2799	2822	2782	2771	2739
50°	2614	2639	2609	2604	2569
52.5°	2433	2457	2434	2432	2388
55°	2251	2274	2259	2253	2208
57.5°	2066	2088	2080	2069	2023
60°	1880	1899	1895	1881	1835
62.5°	1694	1709	1707	1689	1651
65°	1509	1524	1518	1503	1469
67.5°	1322	1333	1327	1315	1288
70°	1138	1145	1134	1131	1111
72.5°	958	960	947	947	938
75°	784	783	764	772	768
77.5°	619	613	593	602	602
80°	466	454	435	439	437
82.5°	327	312	290	292	293
85°	195	186	171	171	171
87.5°	63	74	74	65	60
90°	3	4	5	5	5
92.5°	19	19	18	13	7
95°	34	21	19	16	12
97.5°	55	30	24	21	19
100°	85	46	29	24	23
102.5°	114	51	37	31	27
105°	141	62	45	38	36
107.5°	171	82	59	41	40
110°	199	107	72	47	43



TEST NUMBER: 236P318

CATALOG NUMBER: HBE-632-N-A-UNV-EB82-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	228	132	75	58	50
115°	255	154	88	77	66
117.5°	281	174	102	74	79
120°	304	194	121	80	73
122.5°	327	215	149	91	80
125°	351	239	176	108	90
127.5°	374	270	199	135	109
130°	396	307	219	170	138
132.5°	416	342	238	202	175
135°	435	374	260	225	209
137.5°	456	402	282	246	232
140°	475	428	305	267	253
142.5°	494	453	333	289	275
145°	512	475	367	314	300
147.5°	529	497	411	340	326
150°	544	517	454	371	352
152.5°	560	537	488	410	385
155°	577	556	517	460	430
157.5°	591	572	540	502	482
160°	602	588	561	533	521
162.5°	614	603	580	559	551
165°	625	616	597	579	574
167.5°	634	628	611	597	594
170°	641	638	625	613	613
172.5°	646	644	636	629	628
175°	650	650	646	641	642
177.5°	651	653	651	649	651
180°	654	654	654	654	654

(END OF REPORT)