

Scaled data based on original data using
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: SHAPER

Report Number: 253P355

Luminaire Tested: **1220-XX-44-MH/4/150-T5C/1/40**

Issue Date: 3/3/2020

Test Information

Test Method: LM-46-04
Report Number: 253P355
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 1220-XX-44-MH/4/150-T5C/1/40
Description: SHAPER 44 INCH 1220 SERIES DIRECT/INDIRECT INDOOR PENDANT FIXTURE
WITH DEEP DIFFUSING BOWL AND 6" APERTURE
Light Source: FOUR 150 WATT T6 CLEAR CERAMIC METAL HALIDE LAMPS AND ONE 40 WATT CIRCLINE
(4)CDM150MH -14000 LUMENS AND (1)TL5C40W/830 - 3300 LUMENS
Ballast/Driver: -

Summary

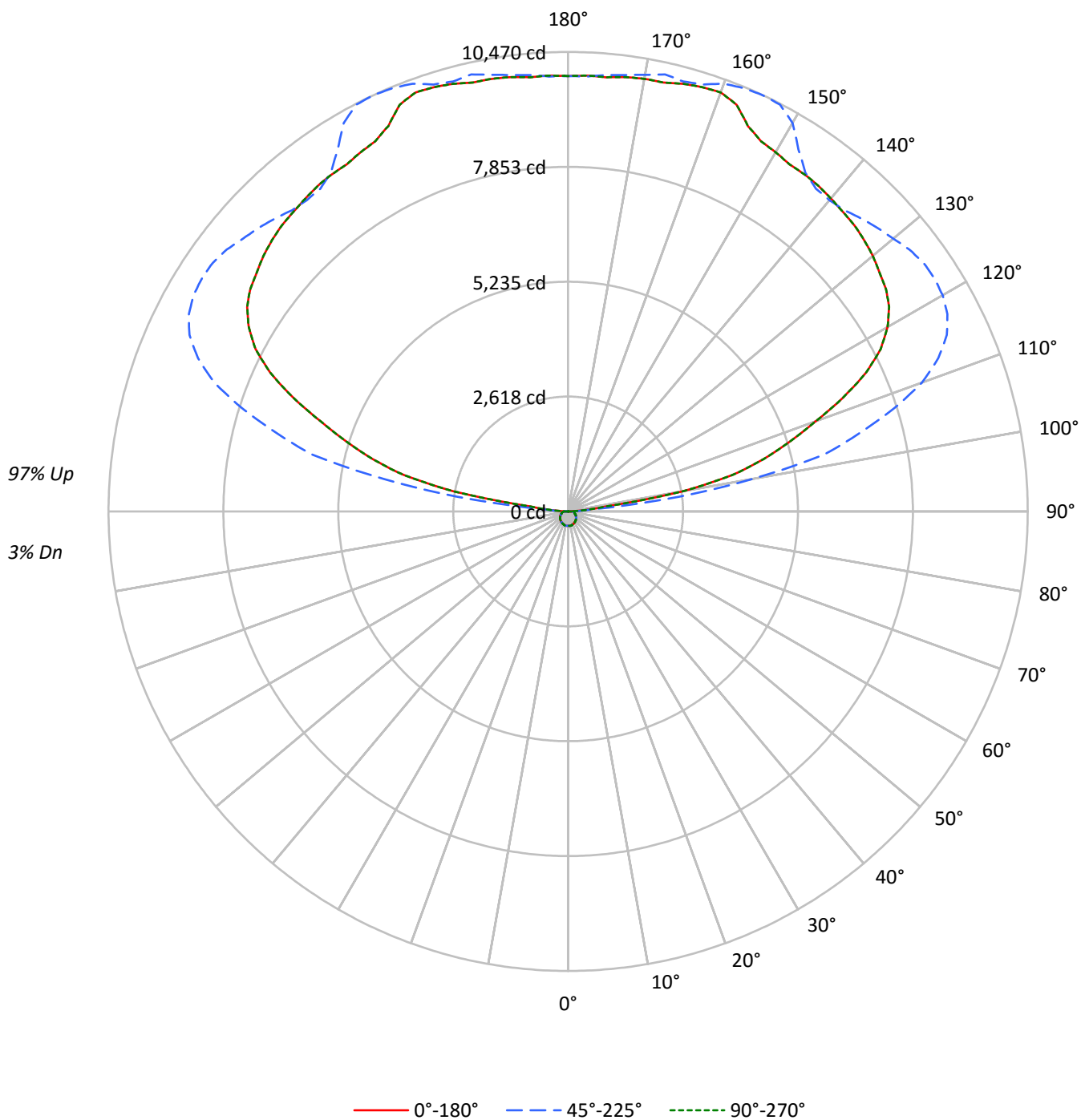
Lumens per Lamp: 59300 (1 lamp)
Luminaire Lumens: 46710.4 lumens
Efficiency: 78.8%
Efficacy: 1086.3 lumens/watt
Spacing Criteria (0/90/45): 1.33 / 1.33 / 1.46
Luminous Opening: Vertical Cylinder (Dia: 3.67' x H: 1.33')
CIE Type: Indirect

Input Watts (W): 43
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				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	76	76	76	76	65	65	65	65	45	45	45	27	27	27	10	10	10
1	69	65	63	60	59	56	54	52	39	38	36	23	23	22	9	8	8
2	62	57	53	49	53	49	45	42	34	32	30	20	19	18	8	7	7
3	57	50	45	40	49	43	39	35	30	27	25	18	16	15	7	6	6
4	52	44	38	34	44	38	33	30	26	23	21	16	14	13	6	5	5
5	47	39	33	29	40	34	29	25	23	20	18	14	12	11	5	5	4
6	43	35	29	25	37	30	25	21	21	18	15	13	11	9	5	4	4
7	40	31	25	21	34	27	22	19	19	16	13	11	10	8	4	4	3
8	37	28	22	18	31	24	19	16	17	14	12	10	8	7	4	3	3
9	34	25	20	16	29	22	17	14	15	12	10	9	8	6	3	3	2
10	32	23	18	14	27	20	15	12	14	11	9	8	7	6	3	3	2

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	336	336	336
5°	325	325	325
10°	316	316	316
15°	300	300	300
20°	288	288	288
25°	278	278	278
30°	269	269	269
35°	263	263	263
40°	259	259	259
45°	246	246	246
50°	245	245	245
55°	235	235	235
60°	226	226	226
65°	230	230	230
70°	223	223	223
75°	217	217	217
80°	227	227	227
85°	223	223	223

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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	31.5	0.1	0.1
10°-20°	91.1	0.2	0.2
20°-30°	139.7	0.3	0.2
30°-40°	175.6	0.4	0.3
40°-50°	194.2	0.4	0.3
50°-60°	197.0	0.4	0.3
60°-70°	187.1	0.4	0.3
70°-80°	162.6	0.3	0.3
80°-90°	117.2	0.3	0.2
90°-100°	1082.9	2.3	1.8
100°-110°	5979.7	12.8	10.1
110°-120°	8255.6	17.7	13.9
120°-130°	8275.8	17.7	14.0
130°-140°	7310.8	15.7	12.3
140°-150°	6016.2	12.9	10.1
150°-160°	4653.6	10.0	7.8
160°-170°	2884.4	6.2	4.9
170°-180°	955.2	2.0	1.6
0°-30°	262.4	0.6	0.4
0°-40°	437.9	0.9	0.7
0°-60°	829.2	1.8	1.4
0°-90°	1296.0	2.8	2.2
90°-120°	15318.3	32.8	25.8
90°-150°	36921.1	79.0	62.3
90°-180°	45414.0	97.2	76.6
0°-180°	46710.4	100.0	78.8

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	330	330	330	330	330	
5°	330	330	330	330	330	32
15°	320	320	320	320	320	91
25°	300	300	300	300	300	140
35°	280	280	280	280	280	176
45°	250	250	250	250	250	194
55°	220	220	220	220	220	197
65°	190	190	190	190	190	187
75°	150	150	150	150	150	163
85°	120	120	120	120	120	102
90°	0	0	0	0	0	33
95°	440	498	520	498	440	729
105°	4610	5837	6860	5837	4610	4763
115°	7490	8376	9520	8376	7490	7304
125°	8840	9164	9880	9164	8840	7885
135°	9220	9561	9440	9561	9220	7125
145°	9380	9658	9420	9658	9380	5888
155°	9690	10080	10470	10080	9690	4506
165°	10090	10173	10140	10173	10090	2860
175°	9930	9977	9980	9977	9930	951
180°	9920	9920	9920	9920	9920	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	330	330	330	330	330	330	330	330	330	330	330
2.5°	330	330	330	330	330	330	330	330	330	330	330
5°	330	330	330	330	330	330	330	330	330	330	330
7.5°	330	330	330	330	330	330	330	330	330	330	330
10°	330	330	330	330	330	330	330	330	330	330	330
12.5°	330	330	330	330	330	330	330	330	330	330	330
15°	320	320	320	320	320	320	320	320	320	320	320
17.5°	320	320	320	320	320	320	320	320	320	320	320
20°	310	310	310	310	310	310	310	310	310	310	310
22.5°	310	310	310	310	310	310	310	310	310	310	310
25°	300	300	300	300	300	300	300	300	300	300	300
27.5°	300	300	300	300	300	300	300	300	300	300	300
30°	290	290	290	290	290	290	290	290	290	290	290
32.5°	290	290	290	290	290	290	290	290	290	290	290
35°	280	280	280	280	280	280	280	280	280	280	280
37.5°	270	270	270	270	270	270	270	270	270	270	270
40°	270	270	270	270	270	270	270	270	270	270	270
42.5°	260	260	260	260	260	260	260	260	260	260	260
45°	250	250	250	250	250	250	250	250	250	250	250
47.5°	240	240	240	240	240	240	240	240	240	240	240
50°	240	240	240	240	240	240	240	240	240	240	240
52.5°	230	230	230	230	230	230	230	230	230	230	230
55°	220	220	220	220	220	220	220	220	220	220	220
57.5°	210	210	210	210	210	210	210	210	210	210	210
60°	200	200	200	200	200	200	200	200	200	200	200
62.5°	200	200	200	200	200	200	200	200	200	200	200
65°	190	190	190	190	190	190	190	190	190	190	190
67.5°	180	180	180	180	180	180	180	180	180	180	180
70°	170	170	170	170	170	170	170	170	170	170	170
72.5°	160	160	160	160	160	160	160	160	160	160	160
75°	150	150	150	150	150	150	150	150	150	150	150
77.5°	150	150	150	150	150	150	150	150	150	150	150
80°	140	140	140	140	140	140	140	140	140	140	140
82.5°	130	130	130	130	130	130	130	130	130	130	130
85°	120	120	120	120	120	120	120	120	120	120	120
87.5°	110	110	110	110	110	110	110	110	110	110	110
90°	0	0	0	0	0	0	0	0	0	0	0
92.5°	130	130	130	130	130	134	143	152	161	170	161
95°	440	453	467	480	493	502	507	511	516	520	516
97.5°	850	1010	1170	1330	1490	1678	1893	2109	2324	2540	2324
100°	2660	2831	3002	3173	3344	3523	3710	3897	4083	4270	4083
102.5°	3830	4083	4337	4590	4843	5080	5300	5520	5740	5960	5740
105°	4610	4886	5161	5437	5712	5962	6187	6411	6636	6860	6636
107.5°	5290	5583	5877	6170	6463	6739	6997	7254	7512	7770	7512
110°	5990	6281	6572	6863	7154	7441	7723	8006	8288	8570	8288

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	6780	7029	7278	7527	7776	8037	8310	8583	8857	9130	8857
115°	7490	7683	7877	8070	8263	8489	8747	9004	9262	9520	9262
117.5°	8030	8179	8328	8477	8626	8816	9047	9278	9509	9740	9509
120°	8400	8516	8631	8747	8862	9023	9230	9437	9643	9850	9643
122.5°	8670	8754	8839	8923	9008	9143	9330	9517	9703	9890	9703
125°	8840	8907	8973	9040	9107	9222	9387	9551	9716	9880	9716
127.5°	8940	9007	9073	9140	9207	9302	9427	9551	9676	9800	9676
130°	9060	9120	9180	9240	9300	9368	9443	9519	9594	9670	9594
132.5°	9150	9217	9283	9350	9417	9462	9487	9511	9536	9560	9536
135°	9220	9302	9384	9467	9549	9573	9540	9507	9473	9440	9473
137.5°	9260	9356	9451	9547	9642	9648	9563	9479	9394	9310	9394
140°	9310	9401	9492	9583	9674	9669	9567	9464	9362	9260	9362
142.5°	9360	9436	9511	9587	9662	9652	9557	9461	9366	9270	9366
145°	9380	9449	9518	9587	9656	9660	9600	9540	9480	9420	9480
147.5°	9380	9453	9527	9600	9673	9717	9730	9743	9757	9770	9757
150°	9450	9510	9570	9630	9690	9776	9887	9998	10109	10220	10109
152.5°	9510	9579	9648	9717	9786	9890	10030	10170	10310	10450	10310
155°	9690	9777	9863	9950	10037	10123	10210	10297	10383	10470	10383
157.5°	10030	10090	10150	10210	10270	10316	10347	10378	10409	10440	10409
160°	10160	10198	10236	10273	10311	10334	10343	10352	10361	10370	10361
162.5°	10140	10171	10202	10233	10264	10271	10253	10236	10218	10200	10218
165°	10090	10110	10130	10150	10170	10176	10167	10158	10149	10140	10149
167.5°	10010	10028	10046	10063	10081	10102	10127	10151	10176	10200	10176
170°	10010	10028	10046	10063	10081	10091	10093	10096	10098	10100	10098
172.5°	9980	9996	10011	10027	10042	10048	10043	10039	10034	10030	10034
175°	9930	9941	9952	9963	9974	9980	9980	9980	9980	9980	9980
177.5°	9940	9940	9940	9940	9940	9938	9933	9929	9924	9920	9924
180°	9920	9920	9920	9920	9920	9920	9920	9920	9920	9920	9920

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	330	330	330	330	330	330	330	330
2.5°	330	330	330	330	330	330	330	330
5°	330	330	330	330	330	330	330	330
7.5°	330	330	330	330	330	330	330	330
10°	330	330	330	330	330	330	330	330
12.5°	330	330	330	330	330	330	330	330
15°	320	320	320	320	320	320	320	320
17.5°	320	320	320	320	320	320	320	320
20°	310	310	310	310	310	310	310	310
22.5°	310	310	310	310	310	310	310	310
25°	300	300	300	300	300	300	300	300
27.5°	300	300	300	300	300	300	300	300
30°	290	290	290	290	290	290	290	290
32.5°	290	290	290	290	290	290	290	290
35°	280	280	280	280	280	280	280	280
37.5°	270	270	270	270	270	270	270	270
40°	270	270	270	270	270	270	270	270
42.5°	260	260	260	260	260	260	260	260
45°	250	250	250	250	250	250	250	250
47.5°	240	240	240	240	240	240	240	240
50°	240	240	240	240	240	240	240	240
52.5°	230	230	230	230	230	230	230	230
55°	220	220	220	220	220	220	220	220
57.5°	210	210	210	210	210	210	210	210
60°	200	200	200	200	200	200	200	200
62.5°	200	200	200	200	200	200	200	200
65°	190	190	190	190	190	190	190	190
67.5°	180	180	180	180	180	180	180	180
70°	170	170	170	170	170	170	170	170
72.5°	160	160	160	160	160	160	160	160
75°	150	150	150	150	150	150	150	150
77.5°	150	150	150	150	150	150	150	150
80°	140	140	140	140	140	140	140	140
82.5°	130	130	130	130	130	130	130	130
85°	120	120	120	120	120	120	120	120
87.5°	110	110	110	110	110	110	110	110
90°	0	0	0	0	0	0	0	0
92.5°	152	143	134	130	130	130	130	130
95°	511	507	502	493	480	467	453	440
97.5°	2109	1893	1678	1490	1330	1170	1010	850
100°	3897	3710	3523	3344	3173	3002	2831	2660
102.5°	5520	5300	5080	4843	4590	4337	4083	3830
105°	6411	6187	5962	5712	5437	5161	4886	4610
107.5°	7254	6997	6739	6463	6170	5877	5583	5290
110°	8006	7723	7441	7154	6863	6572	6281	5990

TEST NUMBER: 253P355

CATALOG NUMBER: 1220-XX-44-MH/4/150-T5C/1/40

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	8583	8310	8037	7776	7527	7278	7029	6780
115°	9004	8747	8489	8263	8070	7877	7683	7490
117.5°	9278	9047	8816	8626	8477	8328	8179	8030
120°	9437	9230	9023	8862	8747	8631	8516	8400
122.5°	9517	9330	9143	9008	8923	8839	8754	8670
125°	9551	9387	9222	9107	9040	8973	8907	8840
127.5°	9551	9427	9302	9207	9140	9073	9007	8940
130°	9519	9443	9368	9300	9240	9180	9120	9060
132.5°	9511	9487	9462	9417	9350	9283	9217	9150
135°	9507	9540	9573	9549	9467	9384	9302	9220
137.5°	9479	9563	9648	9642	9547	9451	9356	9260
140°	9464	9567	9669	9674	9583	9492	9401	9310
142.5°	9461	9557	9652	9662	9587	9511	9436	9360
145°	9540	9600	9660	9656	9587	9518	9449	9380
147.5°	9743	9730	9717	9673	9600	9527	9453	9380
150°	9998	9887	9776	9690	9630	9570	9510	9450
152.5°	10170	10030	9890	9786	9717	9648	9579	9510
155°	10297	10210	10123	10037	9950	9863	9777	9690
157.5°	10378	10347	10316	10270	10210	10150	10090	10030
160°	10352	10343	10334	10311	10273	10236	10198	10160
162.5°	10236	10253	10271	10264	10233	10202	10171	10140
165°	10158	10167	10176	10170	10150	10130	10110	10090
167.5°	10151	10127	10102	10081	10063	10046	10028	10010
170°	10096	10093	10091	10081	10063	10046	10028	10010
172.5°	10039	10043	10048	10042	10027	10011	9996	9980
175°	9980	9980	9980	9974	9963	9952	9941	9930
177.5°	9929	9933	9938	9940	9940	9940	9940	9940
180°	9920	9920	9920	9920	9920	9920	9920	9920

(END OF REPORT)