



PICASSO LIGHTING INDUSTRIES, LLC
320 West Commerical Ave., Moonachie, NJ 07074
201.246.8188

Indoor Distribution Test Report

Picasso Lighting Industries, LLC

320 West Commerical Ave.
Moonachie, NJ 07074

Photopia Photometric Analysis & Optical Design

Catalog Number

MON-PR-4-D5-30-80-FW-W

MONARCH - 4' Downlight - White Housing, Frosted White Lens

Test Number

IES-P00351

Test Date

Thu Sep 23 13:05:26 2021

The results contained in this report pertain only to the tested sample.
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MON-PR-4-D5-30-80-FW-W
MONARCH - 4' Downlight - White Housing, Frosted White Lens
LED (3000K 80+ CRI)

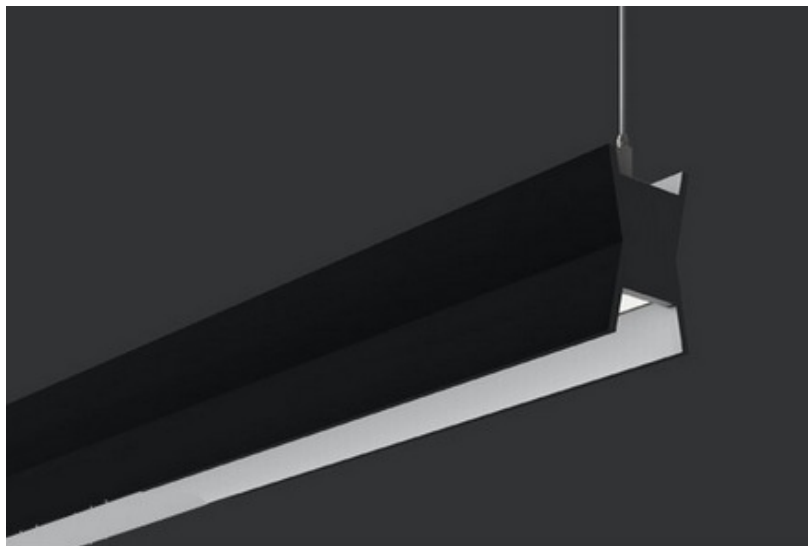


Image may differ slightly from actual unit.

Summary of Results

Output:

Watts:	20.82 W
Lumens:	2,048.89 lm
Efficiency:	N/A
Efficacy:	96.14 lm/W

Spacing Criterion

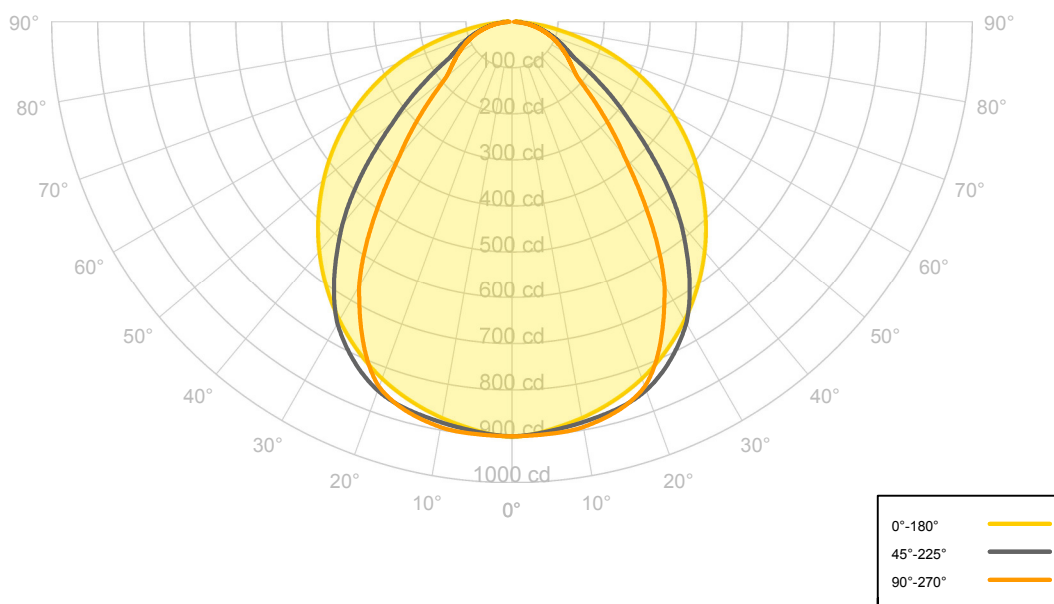
Two luminaires, plane 0°	1.23
Two luminaires, plane 90°	1.11
Four luminaires	1.25

Full Beam Angle

0° - 180°	112.84°
90° - 270°	74.97°

Calculated results may not be representative of field performance.
Ballast factors have not been applied.

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0° - 10°	152.99	7.47%	90° - 100°	4.58	0.22%
10° - 20°	242.10	11.82%	100° - 110°	0.94	0.05%
20° - 30°	358.70	17.51%	100° - 120°	1.39	0.07%
30° - 40°	392.99	19.18%	120° - 130°	0.20	0.01%
40° - 50°	341.45	16.66%	130° - 140°	0.07	0.00%
50° - 60°	254.59	12.43%	140° - 150°	0.02	0.00%
60° - 70°	171.56	8.37%	150° - 160°	0.01	0.00%
70° - 80°	95.19	4.65%	160° - 170°	0.00	0.00%
80° - 90°	33.03	1.61%	170° - 180°	0.02	0.00%
0° - 90°	2,042.60	99.69%	0° - 180°	2,048.89	100.00%



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Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°
0.00°	900.98	900.98	900.98	900.98	900.98
10.00°	873.82	878.49	884.21	888.97	894.65
20.00°	825.21	837.01	852.86	850.58	844.15
30.00°	749.82	769.02	757.96	697.77	663.69
40.00°	651.06	667.34	572.12	431.05	378.94
50.00°	533.97	520.37	332.63	209.72	184.37
60.00°	403.94	334.32	156.16	131.16	131.88
70.00°	259.20	154.95	95.49	89.90	87.66
80.00°	102.30	53.39	46.60	43.45	42.39
90.00°	8.53	8.87	7.67	5.62	4.71
100.00°	0.49	2.09	1.76	0.65	0.03
110.00°	0.13	0.84	1.00	0.44	0.02
120.00°	0.02	0.40	0.53	0.25	0.01
130.00°	0.00	0.16	0.26	0.11	0.01
140.00°	0.01	0.04	0.11	0.05	0.00
150.00°	0.01	0.01	0.03	0.01	0.00
160.00°	0.01	0.01	0.01	0.00	0.01
170.00°	0.01	0.01	0.02	0.02	0.02
180.00°	0.22	0.22	0.22	0.22	0.22

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	14,692	14,692	14,692
45.00°	13,664	10,432	6,495
55.00°	13,332	6,948	4,495
65.00°	12,794	4,855	4,235
75.00°	11,388	4,476	4,097
85.00°	10,368	5,077	4,406



Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
	0	2,438	2,438	2,438	2,438	2,380	2,380	2,380	2,380	2,273	2,273	2,273	2,175	2,175	2,175	2,085	2,085	2,085	2,043
	1	2,253	2,166	2,088	2,017	2,198	2,119	2,048	1,984	2,032	1,974	1,921	1,952	1,905	1,861	1,878	1,840	1,805	1,763
	2	2,074	1,924	1,799	1,695	2,022	1,885	1,771	1,674	1,813	1,718	1,635	1,747	1,667	1,597	1,685	1,620	1,561	1,520
	3	1,913	1,720	1,570	1,451	1,864	1,688	1,549	1,437	1,628	1,509	1,412	1,572	1,472	1,387	1,520	1,436	1,363	1,322
	4	1,770	1,548	1,386	1,262	1,725	1,522	1,370	1,253	1,471	1,340	1,236	1,425	1,311	1,219	1,381	1,284	1,203	1,162
	5	1,643	1,404	1,237	1,113	1,602	1,381	1,225	1,107	1,339	1,201	1,095	1,299	1,178	1,083	1,262	1,157	1,072	1,032
	6	1,531	1,281	1,114	993	1,493	1,262	1,104	989	1,226	1,085	980	1,192	1,067	972	1,161	1,050	963	924
	7	1,430	1,176	1,011	895	1,396	1,160	1,003	892	1,129	988	885	1,100	974	879	1,073	960	873	835
	8	1,341	1,085	924	813	1,310	1,071	918	811	1,045	906	806	1,020	894	801	997	882	797	760
	9	1,261	1,006	850	745	1,233	994	845	743	971	835	739	950	825	735	930	816	732	697
10	1,189	937	787	686	1,164	927	782	685	907	774	682	888	766	679	871	758	676	642	

Cone of Light

Mtg Height	Light Level	0°-180° Beam Diameter	90°-270° Beam Diameter
6 ft	25 fc	18 ft	9 ft
8 ft	14 fc	24 ft	12 ft
10 ft	9 fc	30 ft	15 ft
12 ft	6 fc	36 ft	18 ft
15 ft	4 fc	45 ft	23 ft