

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P998420

Luminaire Tested: S124DR-B1020DB27-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P998420
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-B1020DB27-4F0-XX-W2A-D
Description: Define 4 Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

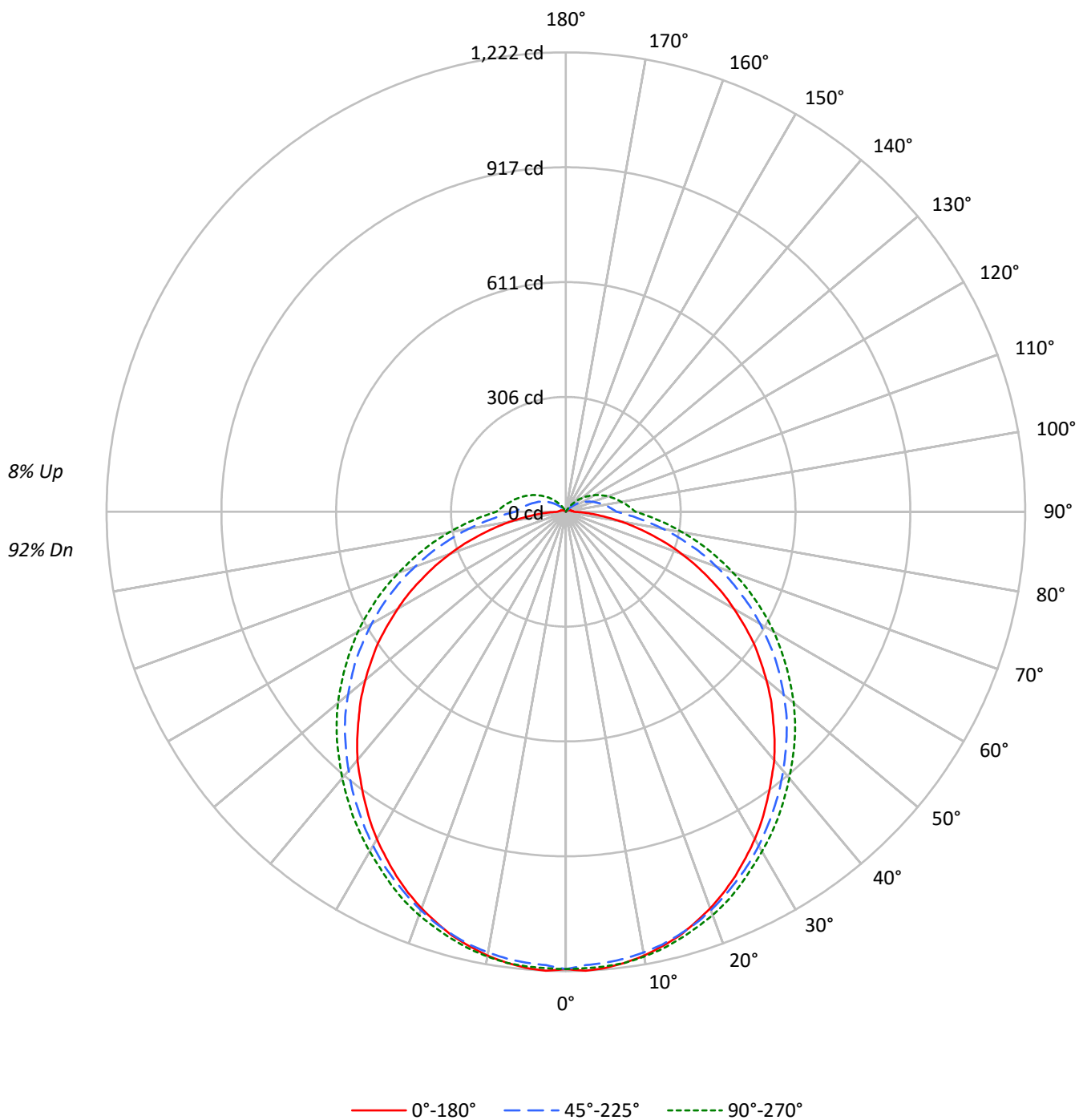
Lumens per Lamp: N/A
Luminaire Lumens: 4148.0 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V):
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: 24 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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63
3	87	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53
4	79	66	57	50	76	65	56	49	61	54	48	58	52	47	55	49	45
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	39	34
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27
9	54	40	32	26	52	39	31	26	38	30	25	36	29	25	34	29	24
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9921	9921	9921
5°	9970	9859	9937
10°	9927	9859	9950
15°	9857	9834	9926
20°	9742	9789	9907
25°	9610	9721	9868
30°	9468	9660	9827
35°	9304	9602	9832
40°	9180	9572	9848
45°	8987	9584	9929
50°	8832	9592	10042
55°	8678	9665	10169
60°	8422	9732	10421
65°	8148	9885	10751
70°	7827	10166	11273
75°	7382	10775	12363
80°	6974	12346	14778
85°	6755	17842	22941

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 39726 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.3	2.8
10°-20°	330.3	8.0
20°-30°	499.4	12.0
30°-40°	604.2	14.6
40°-50°	638.7	15.4
50°-60°	601.1	14.5
60°-70°	498.8	12.0
70°-80°	350.0	8.4
80°-90°	197.3	4.8
90°-100°	117.5	2.8
100°-110°	87.0	2.1
110°-120°	58.4	1.4
120°-130°	32.9	0.8
130°-140°	14.2	0.3
140°-150°	2.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	945.0	22.8
0°-40°	1549.1	37.3
0°-60°	2789.0	67.2
0°-90°	3835.2	92.5
90°-120°	262.9	6.3
90°-150°	312.8	7.5
90°-180°	313.0	7.5
0°-180°	4148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1217	1217	1217	1217	1217	
5°	1218	1214	1204	1215	1214	116
15°	1168	1169	1165	1177	1176	329
25°	1068	1076	1080	1095	1097	492
35°	935	951	965	984	988	585
45°	779	805	831	854	861	602
55°	610	639	680	707	715	544
65°	422	466	512	546	557	419
75°	234	285	342	380	392	249
85°	72	129	191	232	245	75
90°	22	76	135	174	185	15
95°	18	63	118	155	168	14
105°	12	40	90	124	135	14
115°	8	20	64	94	104	9
125°	5	4	38	64	72	5
135°	3	3	12	34	42	3
145°	1	0	0	8	14	1
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1216.6	1216.6	1216.6	1216.6	1216.6
2.5°	1222.1	1218.0	1207.1	1216.6	1215.3
5°	1218.0	1213.9	1204.4	1215.3	1213.9
7.5°	1209.8	1207.1	1198.9	1211.2	1209.8
10°	1198.9	1197.6	1190.7	1203.0	1201.6
12.5°	1183.9	1183.9	1179.8	1190.7	1190.7
15°	1167.6	1168.9	1164.9	1177.1	1175.8
17.5°	1145.8	1149.9	1148.5	1160.8	1159.4
20°	1122.6	1126.7	1128.1	1141.7	1141.7
22.5°	1096.7	1102.2	1104.9	1118.5	1121.3
25°	1068.1	1076.3	1080.4	1095.4	1096.7
27.5°	1036.8	1049.1	1054.5	1068.1	1069.5
30°	1005.5	1016.4	1025.9	1040.9	1043.6
32.5°	971.4	985.0	995.9	1013.6	1016.4
35°	934.6	951.0	964.6	983.7	987.7
37.5°	897.8	916.9	933.3	952.3	956.4
40°	862.4	880.1	899.2	919.6	925.1
42.5°	821.5	842.0	865.1	888.3	892.4
45°	779.3	805.2	831.1	854.2	861.0
47.5°	739.8	765.7	795.6	818.8	827.0
50°	696.2	726.2	756.1	783.4	791.6
52.5°	652.6	682.6	718.0	745.2	753.4
55°	610.4	639.0	679.8	707.1	715.3
57.5°	562.7	598.1	637.6	670.3	677.1
60°	516.4	551.8	596.7	628.1	639.0
62.5°	471.4	510.9	555.9	587.2	598.1
65°	422.3	465.9	512.3	546.3	557.2
67.5°	376.0	422.3	471.4	505.5	516.4
70°	328.3	374.7	426.4	463.2	472.8
72.5°	282.0	329.7	385.6	421.0	431.9
75°	234.3	284.7	342.0	380.1	392.4
77.5°	189.4	242.5	302.5	340.6	354.2
80°	148.5	203.0	262.9	303.8	314.7
82.5°	107.6	164.9	224.8	267.0	279.3
85°	72.2	129.4	190.7	231.6	245.2
87.5°	45.0	100.8	160.8	200.3	212.5
90°	21.8	76.3	134.9	174.4	185.3
92.5°	20.4	68.1	126.7	164.9	175.8
95°	17.7	62.7	118.5	155.3	167.6
97.5°	16.3	55.9	111.7	147.1	159.4
100°	15.0	50.4	103.5	140.3	149.9
102.5°	15.0	45.0	96.7	132.2	143.1
105°	12.3	39.5	89.9	124.0	134.9
107.5°	12.3	35.4	83.1	117.2	126.7
110°	10.9	30.0	77.7	109.0	119.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9.5	25.9	70.8	100.8	111.7
115°	8.2	20.4	64.0	94.0	103.5
117.5°	8.2	16.3	57.2	85.8	96.7
120°	6.8	10.9	50.4	77.7	88.6
122.5°	6.8	6.8	43.6	70.8	80.4
125°	5.4	4.1	38.1	64.0	72.2
127.5°	5.4	4.1	31.3	55.9	65.4
130°	4.1	2.7	24.5	49.0	57.2
132.5°	4.1	2.7	19.1	42.2	50.4
135°	2.7	2.7	12.3	34.1	42.2
137.5°	2.7	1.4	6.8	27.2	34.1
140°	2.7	1.4	2.7	20.4	27.2
142.5°	1.4	1.4	0.0	15.0	20.4
145°	1.4	0.0	0.0	8.2	13.6
147.5°	1.4	0.0	0.0	1.4	6.8
150°	1.4	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)