

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1060690

Luminaire Tested: S124RDR-H1020D940-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060690
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D940-X4F0-XX-UDD-SVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

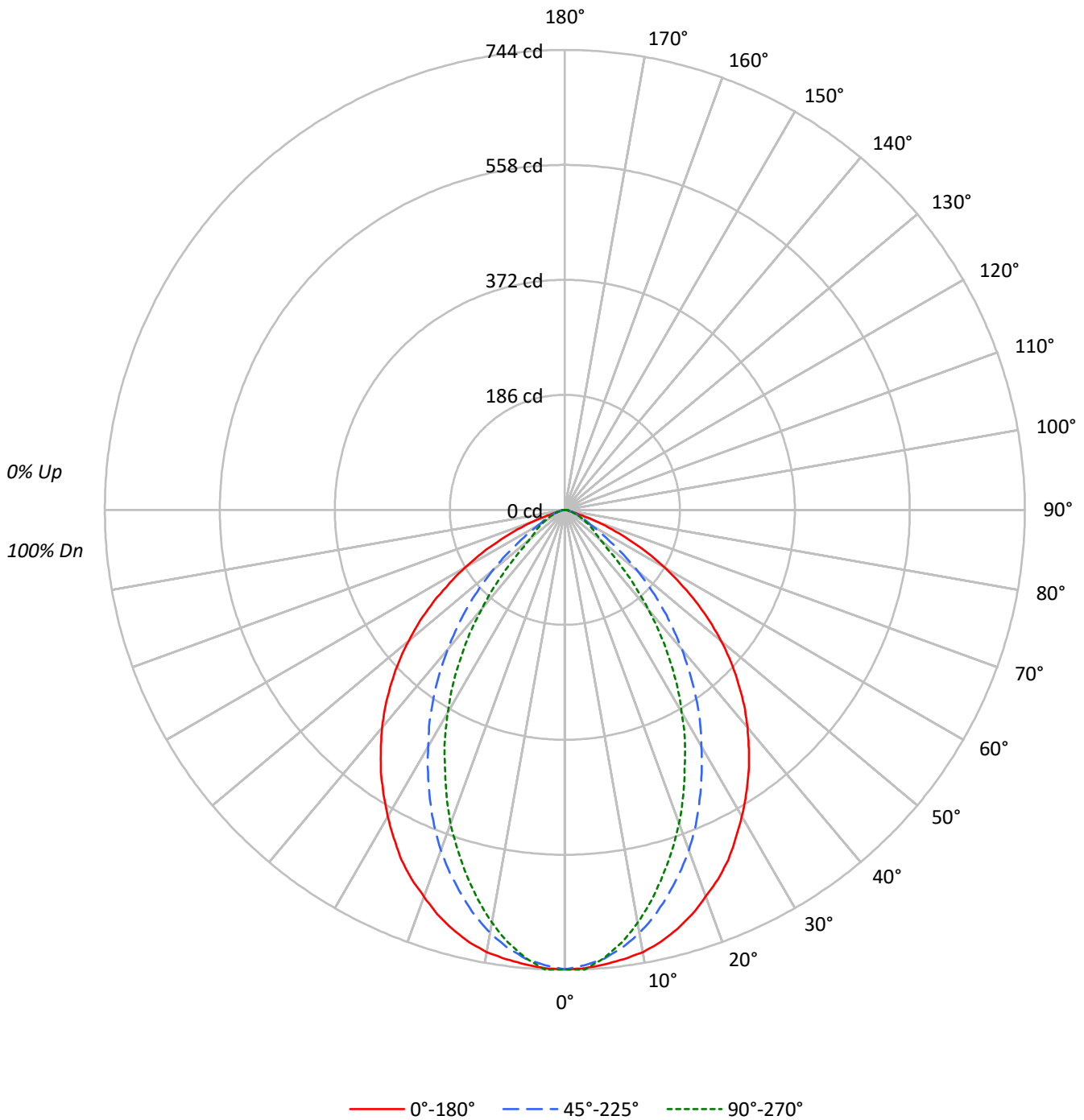
Lumens per Lamp: N/A
Luminaire Lumens: 1096.0 lumens
Efficiency: N/A
Efficacy: 35.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
Input Voltage (V): 120
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	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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90				
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80				
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63				
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57				
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51				
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47				
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43				
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39				
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6401	6401	6401
5°	6380	6299	6289
10°	6353	6079	5932
15°	6263	5749	5460
20°	6102	5373	4950
25°	5938	4904	4357
30°	5695	4393	3759
35°	5447	3885	3103
40°	5166	3307	2354
45°	4832	2704	1581
50°	4418	2048	982
55°	3882	1351	833
60°	3210	830	685
65°	2325	640	554
70°	1266	473	423
75°	279	349	383
80°	208	258	312
85°	207	207	306

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4832 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	6.3
10°-20°	182.9	16.7
20°-30°	242.3	22.1
30°-40°	240.5	21.9
40°-50°	185.1	16.9
50°-60°	110.3	10.1
60°-70°	50.1	4.6
70°-80°	13.0	1.2
80°-90°	2.9	0.3
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°	494.1	45.1
0°-40°	734.6	67.0
0°-60°	1030.0	94.0
0°-90°	1096.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1096.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	743	743	743	743	743	
5°	738	739	729	729	728	70
15°	702	685	645	623	612	198
25°	625	580	516	473	459	287
35°	518	453	370	313	295	324
45°	397	319	222	155	130	306
55°	259	184	90	56	56	230
65°	114	68	31	27	27	115
75°	8	10	10	12	12	18
85°	2	2	2	3	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	743.3	743.3	743.3	743.3	743.3
2.5°	742.3	743.3	737.1	742.3	744.4
5°	738.1	739.2	728.7	728.7	727.6
7.5°	732.9	730.8	714.0	707.7	705.6
10°	726.6	719.3	695.2	682.6	678.4
12.5°	716.1	704.6	672.1	654.3	647.0
15°	702.5	684.7	644.9	622.9	612.5
17.5°	685.8	663.8	616.7	588.4	576.9
20°	665.9	636.5	586.3	550.7	540.2
22.5°	647.0	610.4	552.8	512.0	500.4
25°	625.0	580.0	516.1	473.2	458.6
27.5°	598.9	550.7	479.5	435.5	420.9
30°	572.7	519.3	441.8	395.7	378.0
32.5°	545.5	486.8	407.3	354.9	338.2
35°	518.2	453.3	369.6	313.0	295.2
37.5°	488.9	419.8	331.9	273.3	253.4
40°	459.6	387.4	294.2	234.5	209.4
42.5°	429.3	353.9	257.6	194.7	169.6
45°	396.8	319.3	222.0	154.9	129.8
47.5°	364.3	286.9	186.4	116.2	93.2
50°	329.8	252.3	152.9	84.8	73.3
52.5°	295.2	218.8	119.4	66.0	62.8
55°	258.6	184.3	90.0	56.5	55.5
57.5°	220.9	152.9	64.9	49.2	47.1
60°	186.4	123.5	48.2	41.9	39.8
62.5°	150.8	93.2	39.8	34.5	32.5
65°	114.1	68.1	31.4	27.2	27.2
67.5°	82.7	46.1	25.1	22.0	20.9
70°	50.3	28.3	18.8	17.8	16.8
72.5°	25.1	16.8	14.7	13.6	13.6
75°	8.4	10.5	10.5	11.5	11.5
77.5°	6.3	7.3	7.3	8.4	8.4
80°	4.2	5.2	5.2	6.3	6.3
82.5°	3.1	3.1	4.2	4.2	5.2
85°	2.1	2.1	2.1	3.1	3.1
87.5°	1.0	1.0	1.0	2.1	2.1
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.57	16.90	15.93	17.22	17.53	7.12	8.45	7.48	8.76	9.08
	3H	16.08	17.26	16.46	17.59	17.95	7.93	9.12	8.31	9.45	9.81
	4H	16.05	17.14	16.45	17.49	17.88	8.22	9.31	8.62	9.67	10.05
	6H	15.98	16.99	16.40	17.36	17.75	8.39	9.40	8.80	9.77	10.16
	8H	15.94	16.90	16.37	17.29	17.69	8.45	9.41	8.88	9.80	10.20
	12H	15.90	16.82	16.34	17.20	17.63	8.50	9.41	8.93	9.79	10.22
4H	2H	15.41	16.51	15.81	16.86	17.24	7.56	8.66	7.96	9.01	9.39
	3H	15.97	16.86	16.38	17.26	17.67	8.52	9.42	8.94	9.82	10.22
	4H	15.94	16.73	16.37	17.15	17.59	8.89	9.68	9.32	10.10	10.54
	6H	15.88	16.57	16.35	17.01	17.48	9.14	9.82	9.60	10.27	10.74
	8H	15.84	16.48	16.31	16.92	17.39	9.23	9.87	9.70	10.31	10.79
	12H	15.80	16.36	16.28	16.85	17.32	9.30	9.87	9.79	10.35	10.82
8H	4H	15.83	16.46	16.29	16.91	17.38	8.97	9.61	9.44	10.06	10.53
	6H	15.76	16.28	16.27	16.78	17.26	9.29	9.81	9.79	10.31	10.79
	8H	15.72	16.18	16.24	16.70	17.19	9.42	9.89	9.94	10.40	10.89
	12H	15.68	16.10	16.20	16.59	17.16	9.55	9.97	10.07	10.46	11.03
12H	4H	15.78	16.35	16.27	16.83	17.30	8.95	9.51	9.43	10.00	10.47
	6H	15.71	16.18	16.23	16.69	17.18	9.27	9.74	9.79	10.25	10.74
	8H	15.68	16.09	16.20	16.59	17.16	9.44	9.85	9.95	10.35	10.92