

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: P1060692

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060692
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)
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-W
Description: DEFINE 4 WHITE 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

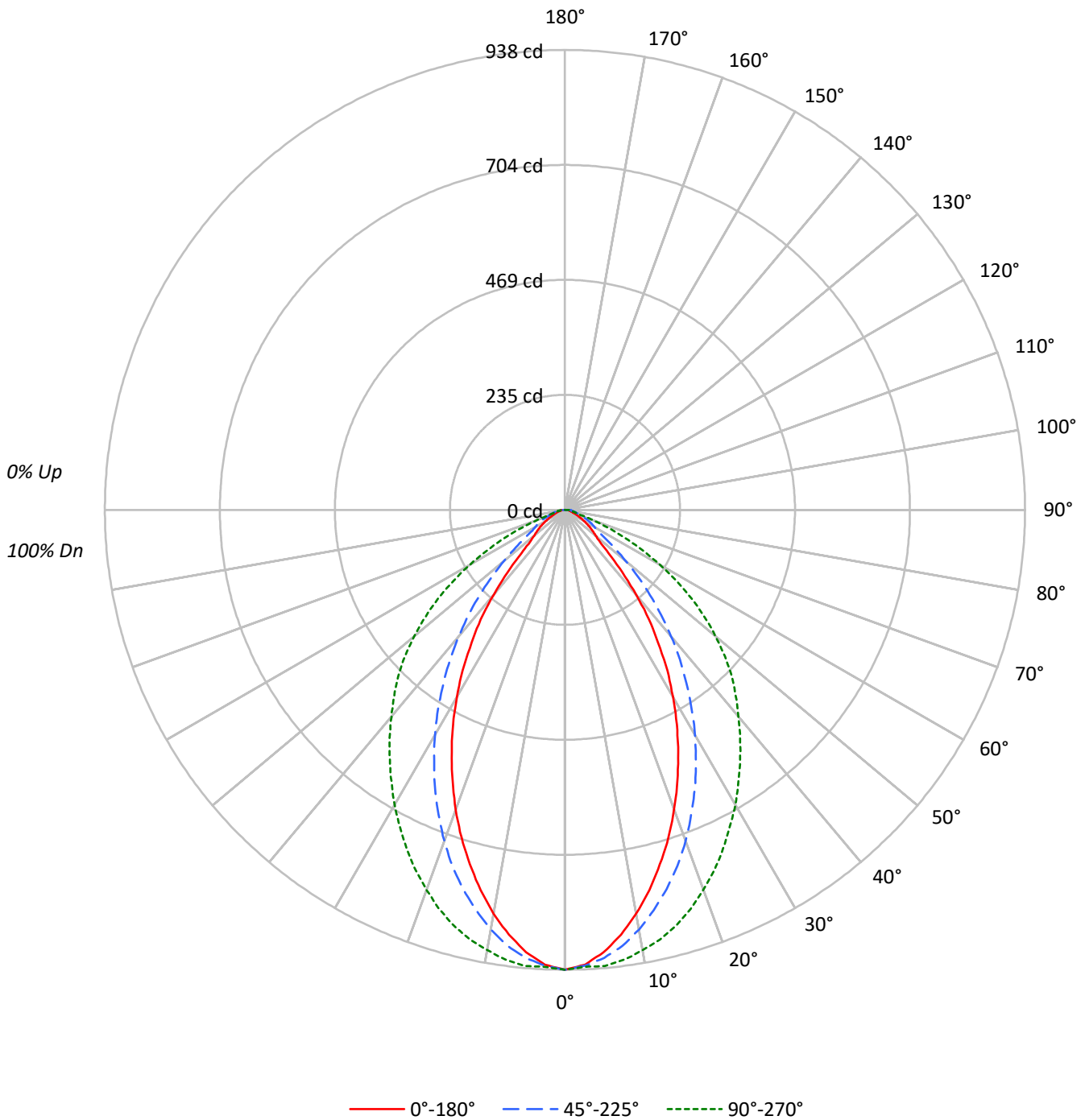
Lumens per Lamp: N/A
Luminaire Lumens: 1327.7 lumens
Efficiency: N/A
Efficacy: 42.6 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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			100	
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89			89	
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79			79	
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70			70	
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63			63	
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57			57	
6	79	67	60	54	77	67	59	54	65	59	54	63	58	53	62	57	53	51			51	
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47			47	
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43			43	
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39			39	
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36			36	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8077	8077	8077
5°	7827	7927	8072
10°	7313	7598	7973
15°	6671	7138	7821
20°	5965	6589	7558
25°	5189	5955	7250
30°	4377	5273	6910
35°	3482	4539	6545
40°	2533	3781	6185
45°	1532	2987	5859
50°	1096	2162	5364
55°	928	1464	4737
60°	758	1192	3827
65°	597	1068	2755
70°	501	896	1450
75°	452	838	732
80°	466	833	729
85°	622	1245	830

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5859 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.4	6.5
10°-20°	226.3	17.0
20°-30°	293.5	22.1
30°-40°	282.5	21.3
40°-50°	210.2	15.8
50°-60°	129.3	9.7
60°-70°	63.5	4.8
70°-80°	24.8	1.9
80°-90°	11.3	0.9
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°	606.2	45.7
0°-40°	888.7	66.9
0°-60°	1228.1	92.5
0°-90°	1327.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1327.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	938	938	938	938	938	
5°	906	919	917	926	934	84
15°	748	772	801	849	877	209
25°	546	575	627	705	763	250
35°	331	363	432	540	623	207
45°	126	156	245	378	481	104
55°	62	64	98	222	316	56
65°	29	31	52	84	135	30
75°	14	24	25	23	22	15
85°	6	12	13	13	8	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	938.0	938.0	938.0	938.0	938.0
2.5°	928.6	939.1	930.7	931.8	932.8
5°	905.5	919.2	917.1	925.5	933.8
7.5°	874.1	889.8	897.2	913.9	925.5
10°	836.4	854.2	868.9	896.1	911.8
12.5°	794.5	815.4	836.4	873.1	897.2
15°	748.3	772.4	800.7	849.0	877.3
17.5°	701.2	725.3	762.0	817.5	853.1
20°	650.9	677.1	719.0	780.8	824.8
22.5°	598.5	626.8	672.9	743.1	795.5
25°	546.1	575.4	626.8	705.4	763.0
27.5°	493.6	521.9	577.5	665.5	728.4
30°	440.2	469.5	530.3	622.6	694.9
32.5°	388.8	416.1	481.1	581.7	658.2
35°	331.2	362.6	431.8	539.8	622.6
37.5°	281.9	310.2	384.6	497.8	586.9
40°	225.3	256.8	336.4	457.0	550.2
42.5°	172.9	204.4	290.3	416.1	515.7
45°	125.8	156.2	245.3	378.4	481.1
47.5°	95.4	113.2	201.2	341.7	442.3
50°	81.8	87.0	161.4	301.8	400.4
52.5°	72.3	74.4	125.8	262.0	358.4
55°	61.8	63.9	97.5	222.2	315.5
57.5°	52.4	53.5	78.6	184.5	269.4
60°	44.0	45.1	69.2	147.8	222.2
62.5°	36.7	37.7	61.8	114.2	177.1
65°	29.3	31.4	52.4	83.8	135.2
67.5°	24.1	28.3	44.0	58.7	94.3
70°	19.9	27.3	35.6	40.9	57.6
72.5°	16.8	25.2	30.4	29.3	28.3
75°	13.6	24.1	25.2	23.1	22.0
77.5°	11.5	21.0	21.0	18.9	17.8
80°	9.4	16.8	16.8	16.8	14.7
82.5°	8.4	13.6	14.7	14.7	11.5
85°	6.3	11.5	12.6	12.6	8.4
87.5°	4.2	10.5	11.5	10.5	6.3
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	7.05	8.39	7.41	8.70	9.02	16.21	17.55	16.58	17.87	18.18
	3H	8.16	9.35	8.54	9.68	10.04	16.72	17.91	17.10	18.24	18.60
	4H	8.67	9.78	9.08	10.14	10.52	16.74	17.85	17.14	18.20	18.58
	6H	9.11	10.13	9.52	10.50	10.89	16.75	17.77	17.16	18.14	18.53
	8H	9.30	10.26	9.73	10.66	11.06	16.75	17.72	17.18	18.11	18.52
	12H	9.48	10.40	9.91	10.79	11.22	16.76	17.68	17.19	18.06	18.49
4H	2H	8.19	9.30	8.59	9.65	10.03	16.10	17.21	16.51	17.56	17.95
	3H	9.53	10.44	9.94	10.84	11.25	16.69	17.60	17.11	18.01	18.41
	4H	10.27	11.08	10.70	11.50	11.94	16.75	17.57	17.19	17.98	18.43
	6H	10.87	11.58	11.34	12.02	12.49	16.83	17.53	17.29	17.98	18.44
	8H	11.12	11.77	11.59	12.22	12.69	16.86	17.51	17.33	17.96	18.43
	12H	11.35	11.93	11.84	12.42	12.89	16.90	17.48	17.38	17.96	18.44
8H	4H	10.73	11.39	11.20	11.84	12.31	16.71	17.37	17.18	17.81	18.28
	6H	11.58	12.12	12.08	12.62	13.10	16.84	17.38	17.34	17.87	18.35
	8H	11.99	12.47	12.51	12.99	13.48	16.92	17.41	17.44	17.92	18.41
	12H	12.41	12.84	12.92	13.33	13.90	17.04	17.47	17.56	17.96	18.54
12H	4H	10.79	11.37	11.27	11.85	12.32	16.68	17.26	17.17	17.75	18.22
	6H	11.72	12.20	12.24	12.71	13.21	16.82	17.30	17.34	17.82	18.31
	8H	12.24	12.67	12.75	13.16	13.73	16.95	17.38	17.47	17.88	18.45