

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: P1060694

Luminaire Tested: S124RDR-H1020D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060694
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D940-X4F0-XX-UDD-WVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

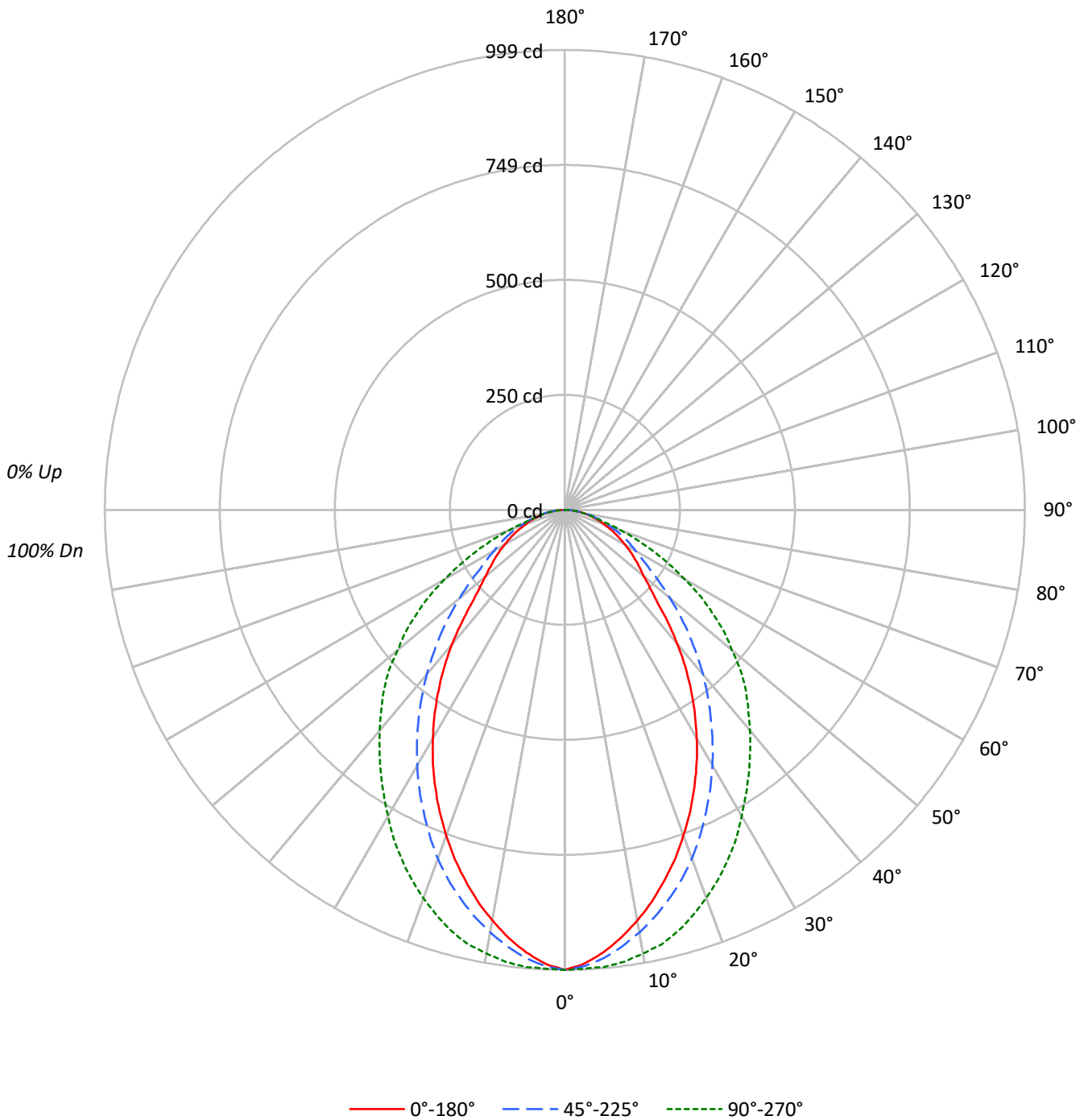
Lumens per Lamp: N/A
Luminaire Lumens: 1819.4 lumens
Efficiency: N/A
Efficacy: 58.3 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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										
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	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	100	96	93	91	87														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75	75	75	75	75	75	75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57														
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50	50	50	50	50	50	50														
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45														
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41	41	41	41	41	41	41														
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34	34	34	34	34	34	34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31	31	31	31	31	31	31														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8606	8606	8606
5°	8340	8449	8611
10°	7923	8152	8555
15°	7433	7798	8451
20°	6902	7392	8226
25°	6320	6888	7962
30°	5697	6375	7635
35°	5022	5814	7323
40°	4275	5241	7030
45°	3470	4631	6773
50°	3004	3985	6343
55°	2783	3381	5882
60°	2597	3048	5160
65°	2433	2861	4291
70°	2268	2639	3243
75°	2159	2439	2336
80°	2028	2232	1974
85°	1867	2075	1551

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6773 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.3	5.1
10°-20°	248.0	13.6
20°-30°	338.6	18.6
30°-40°	354.8	19.5
40°-50°	307.1	16.9
50°-60°	230.8	12.7
60°-70°	148.8	8.2
70°-80°	76.3	4.2
80°-90°	22.8	1.3
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°	678.9	37.3
0°-40°	1033.7	56.8
0°-60°	1571.5	86.4
0°-90°	1819.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1819.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	999	999	999	999	999	
5°	965	980	977	985	996	90
15°	834	855	875	914	948	234
25°	665	690	725	782	838	305
35°	478	505	553	626	697	298
45°	285	314	380	474	556	225
55°	185	192	225	322	392	167
65°	119	122	140	170	211	119
75°	65	72	73	72	70	69
85°	19	22	21	20	16	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	999.4	999.4	999.4	999.4	999.4
2.5°	986.8	999.4	992.0	994.1	997.3
5°	964.8	979.5	977.4	984.7	996.2
7.5°	937.6	953.3	956.4	973.2	989.9
10°	906.1	923.9	932.3	957.5	978.4
12.5°	871.6	890.4	905.1	936.5	966.9
15°	833.8	854.8	874.7	914.5	948.0
17.5°	795.1	816.0	842.2	886.2	923.9
20°	753.2	776.2	806.6	852.7	897.7
22.5°	710.2	734.3	766.8	817.1	869.5
25°	665.2	690.3	724.9	781.5	838.0
27.5°	620.1	645.3	684.0	743.8	805.6
30°	573.0	599.2	641.1	706.0	767.9
32.5°	525.9	554.2	597.1	666.2	732.2
35°	477.7	504.9	553.1	626.4	696.6
37.5°	429.5	457.8	509.1	587.7	661.0
40°	380.3	409.6	466.2	548.9	625.4
42.5°	331.0	362.5	422.2	509.1	589.8
45°	284.9	314.3	380.3	473.5	556.2
47.5°	250.4	270.3	338.4	438.9	518.5
50°	224.2	234.7	297.5	401.2	473.5
52.5°	204.3	211.6	259.8	360.4	436.8
55°	185.4	191.7	225.2	321.6	391.8
57.5°	168.7	171.8	199.0	283.9	348.8
60°	150.8	154.0	177.0	243.0	299.6
62.5°	135.1	137.2	159.2	204.3	254.6
65°	119.4	121.5	140.4	169.7	210.6
67.5°	104.8	107.9	122.6	138.3	167.6
70°	90.1	96.4	104.8	112.1	128.8
72.5°	77.5	83.8	88.0	90.1	91.1
75°	64.9	72.3	73.3	72.3	70.2
77.5°	52.4	58.7	58.7	56.6	54.5
80°	40.9	46.1	45.0	42.9	39.8
82.5°	30.4	33.5	32.5	30.4	27.2
85°	18.9	22.0	21.0	19.9	15.7
87.5°	9.4	12.6	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	13.91	15.39	14.28	15.71	16.02	17.68	19.17	18.05	19.48	19.80
	3H	15.57	16.90	15.94	17.22	17.59	18.80	20.13	19.18	20.46	20.82
	4H	16.24	17.48	16.64	17.83	18.21	19.09	20.33	19.49	20.68	21.06
	6H	16.75	17.90	17.16	18.27	18.66	19.29	20.44	19.70	20.80	21.19
	8H	16.93	18.03	17.36	18.42	18.82	19.34	20.43	19.77	20.82	21.22
	12H	17.06	18.10	17.49	18.49	18.92	19.37	20.41	19.80	20.79	21.22
4H	2H	14.69	15.94	15.09	16.29	16.67	17.84	19.09	18.24	19.44	19.82
	3H	16.56	17.59	16.97	17.99	18.39	19.16	20.19	19.57	20.59	20.99
	4H	17.36	18.29	17.80	18.71	19.15	19.56	20.49	20.00	20.91	21.35
	6H	18.01	18.82	18.47	19.26	19.72	19.88	20.69	20.34	21.13	21.59
	8H	18.24	19.00	18.71	19.44	19.91	19.97	20.73	20.44	21.17	21.64
	12H	18.41	19.08	18.89	19.56	20.04	20.03	20.71	20.52	21.19	21.66
8H	4H	17.71	18.47	18.18	18.91	19.38	19.70	20.45	20.16	20.90	21.36
	6H	18.51	19.13	19.00	19.62	20.10	20.11	20.73	20.61	21.22	21.70
	8H	18.83	19.39	19.34	19.90	20.39	20.26	20.82	20.77	21.33	21.82
	12H	19.09	19.59	19.60	20.08	20.65	20.38	20.88	20.89	21.37	21.94
12H	4H	17.74	18.42	18.23	18.90	19.37	19.70	20.37	20.18	20.85	21.32
	6H	18.57	19.13	19.08	19.64	20.13	20.13	20.69	20.64	21.20	21.69
	8H	18.96	19.45	19.47	19.94	20.51	20.33	20.83	20.84	21.32	21.88