

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: P1060658

Luminaire Tested: S124RDR-H1020D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060658
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-H1020D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

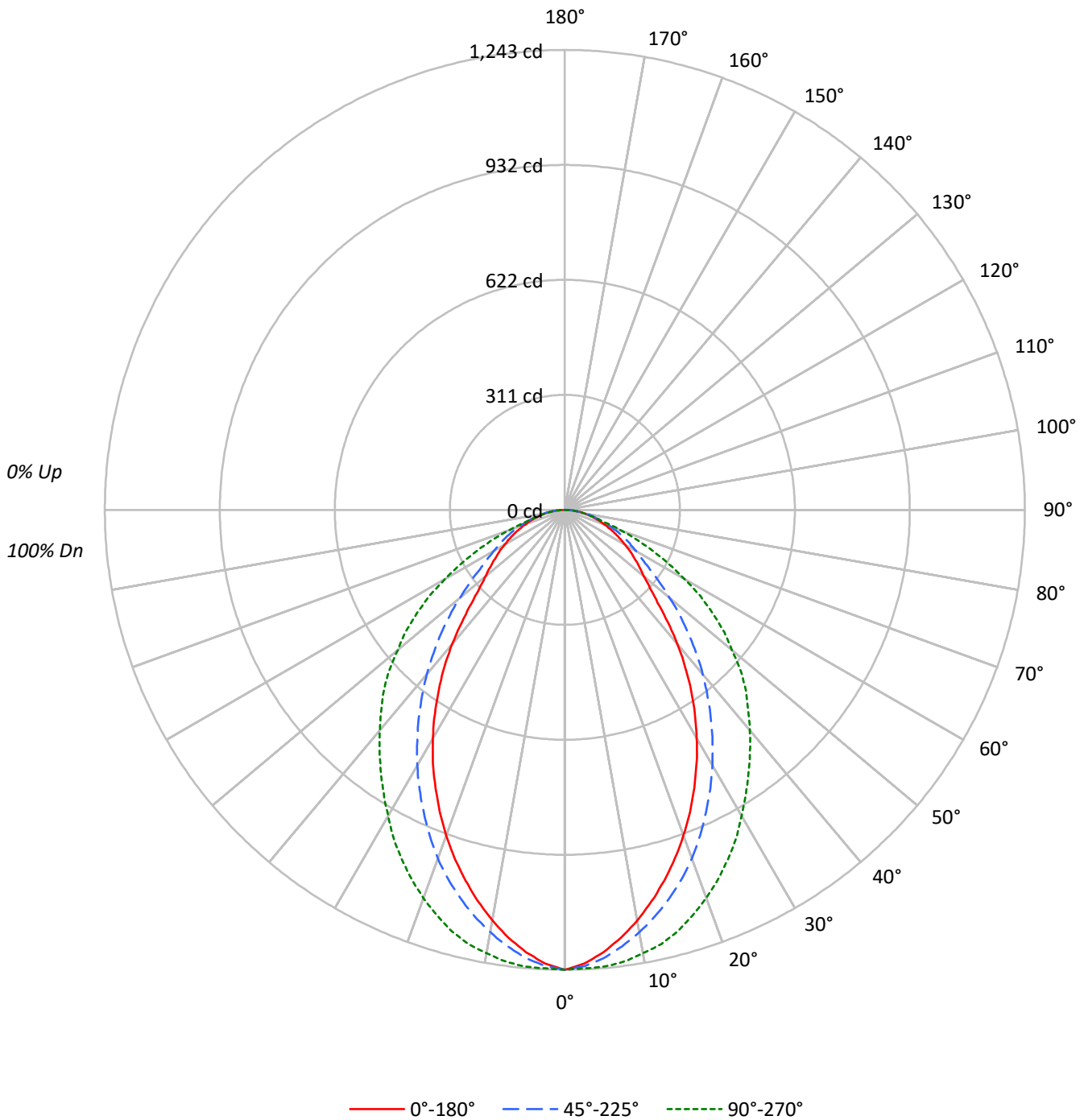
Lumens per Lamp: N/A
Luminaire Lumens: 2262.8 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10703	10703	10703
5°	10372	10507	10710
10°	9854	10139	10640
15°	9245	9698	10511
20°	8584	9193	10231
25°	7860	8565	9903
30°	7086	7928	9496
35°	6245	7231	9108
40°	5316	6518	8743
45°	4316	5759	8425
50°	3735	4957	7889
55°	3462	4205	7316
60°	3231	3792	6417
65°	3026	3558	5336
70°	2820	3281	4033
75°	2688	3034	2905
80°	2519	2777	2455
85°	2322	2579	1927

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8425 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.8	5.1
10°-20°	308.4	13.6
20°-30°	421.2	18.6
30°-40°	441.2	19.5
40°-50°	381.9	16.9
50°-60°	287.0	12.7
60°-70°	185.1	8.2
70°-80°	94.9	4.2
80°-90°	28.3	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°	844.4	37.3
0°-40°	1285.6	56.8
0°-60°	1954.5	86.4
0°-90°	2262.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2262.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1200	1218	1216	1225	1239	112
15°	1037	1063	1088	1137	1179	291
25°	827	859	902	972	1042	380
35°	594	628	688	779	866	370
45°	354	391	473	589	692	279
55°	231	238	280	400	487	207
65°	148	151	175	211	262	148
75°	81	90	91	90	87	85
85°	24	27	26	25	20	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1242.9	1242.9	1242.9	1242.9	1242.9
2.5°	1227.2	1242.9	1233.8	1236.4	1240.3
5°	1199.9	1218.1	1215.5	1224.6	1239.0
7.5°	1166.0	1185.6	1189.5	1210.3	1231.2
10°	1126.9	1149.1	1159.5	1190.8	1216.8
12.5°	1083.9	1107.4	1125.6	1164.7	1202.5
15°	1037.0	1063.1	1087.8	1137.4	1179.0
17.5°	988.8	1014.9	1047.5	1102.2	1149.1
20°	936.7	965.4	1003.2	1060.5	1116.5
22.5°	883.3	913.3	953.7	1016.2	1081.3
25°	827.3	858.6	901.5	971.9	1042.3
27.5°	771.3	802.5	850.7	925.0	1001.9
30°	712.6	745.2	797.3	878.1	955.0
32.5°	654.0	689.2	742.6	828.6	910.7
35°	594.1	628.0	687.9	779.1	866.4
37.5°	534.2	569.3	633.2	730.9	822.1
40°	472.9	509.4	579.8	682.7	777.8
42.5°	411.7	450.8	525.0	633.2	733.5
45°	354.4	390.8	472.9	588.9	691.8
47.5°	311.4	336.1	420.8	545.9	644.9
50°	278.8	291.8	370.0	499.0	588.9
52.5°	254.0	263.2	323.1	448.2	543.3
55°	230.6	238.4	280.1	400.0	487.3
57.5°	209.8	213.7	247.5	353.1	433.8
60°	187.6	191.5	220.2	302.3	372.6
62.5°	168.1	170.7	198.0	254.0	316.6
65°	148.5	151.1	174.6	211.1	261.9
67.5°	130.3	134.2	152.4	172.0	208.5
70°	112.0	119.9	130.3	139.4	160.2
72.5°	96.4	104.2	109.4	112.0	113.3
75°	80.8	89.9	91.2	89.9	87.3
77.5°	65.1	73.0	73.0	70.4	67.7
80°	50.8	57.3	56.0	53.4	49.5
82.5°	37.8	41.7	40.4	37.8	33.9
85°	23.5	27.4	26.1	24.8	19.5
87.5°	11.7	15.6	14.3	13.0	7.8
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	14.67	16.15	15.03	16.47	16.78	18.44	19.93	18.81	20.24	20.55
	3H	16.32	17.65	16.70	17.98	18.34	19.56	20.89	19.93	21.21	21.58
	4H	16.99	18.24	17.39	18.59	18.97	19.85	21.09	20.25	21.44	21.82
	6H	17.51	18.66	17.92	19.02	19.42	20.04	21.19	20.46	21.56	21.95
	8H	17.69	18.78	18.12	19.17	19.57	20.10	21.19	20.52	21.58	21.98
	12H	17.81	18.86	18.25	19.24	19.67	20.12	21.17	20.55	21.55	21.98
4H	2H	15.45	16.70	15.85	17.05	17.43	18.60	19.85	19.00	20.20	20.57
	3H	17.31	18.35	17.72	18.75	19.15	19.91	20.95	20.32	21.35	21.75
	4H	18.12	19.05	18.56	19.47	19.91	20.32	21.25	20.75	21.67	22.11
	6H	18.77	19.58	19.23	20.02	20.48	20.64	21.44	21.09	21.89	22.35
	8H	19.00	19.75	19.46	20.20	20.66	20.73	21.48	21.19	21.93	22.40
	12H	19.17	19.84	19.65	20.32	20.79	20.79	21.46	21.27	21.94	22.41
8H	4H	18.47	19.23	18.94	19.67	20.14	20.45	21.21	20.92	21.65	22.12
	6H	19.26	19.89	19.76	20.38	20.86	20.87	21.49	21.36	21.98	22.46
	8H	19.59	20.14	20.10	20.65	21.14	21.02	21.58	21.53	22.09	22.58
	12H	19.85	20.34	20.36	20.84	21.40	21.14	21.63	21.65	22.13	22.69
12H	4H	18.50	19.17	18.98	19.65	20.12	20.46	21.13	20.94	21.61	22.08
	6H	19.33	19.89	19.84	20.40	20.89	20.89	21.45	21.40	21.96	22.45
	8H	19.71	20.21	20.22	20.70	21.27	21.09	21.58	21.60	22.08	22.64