

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: P1060656

Luminaire Tested: S124RDR-H1020D850-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060656
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-H1020D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

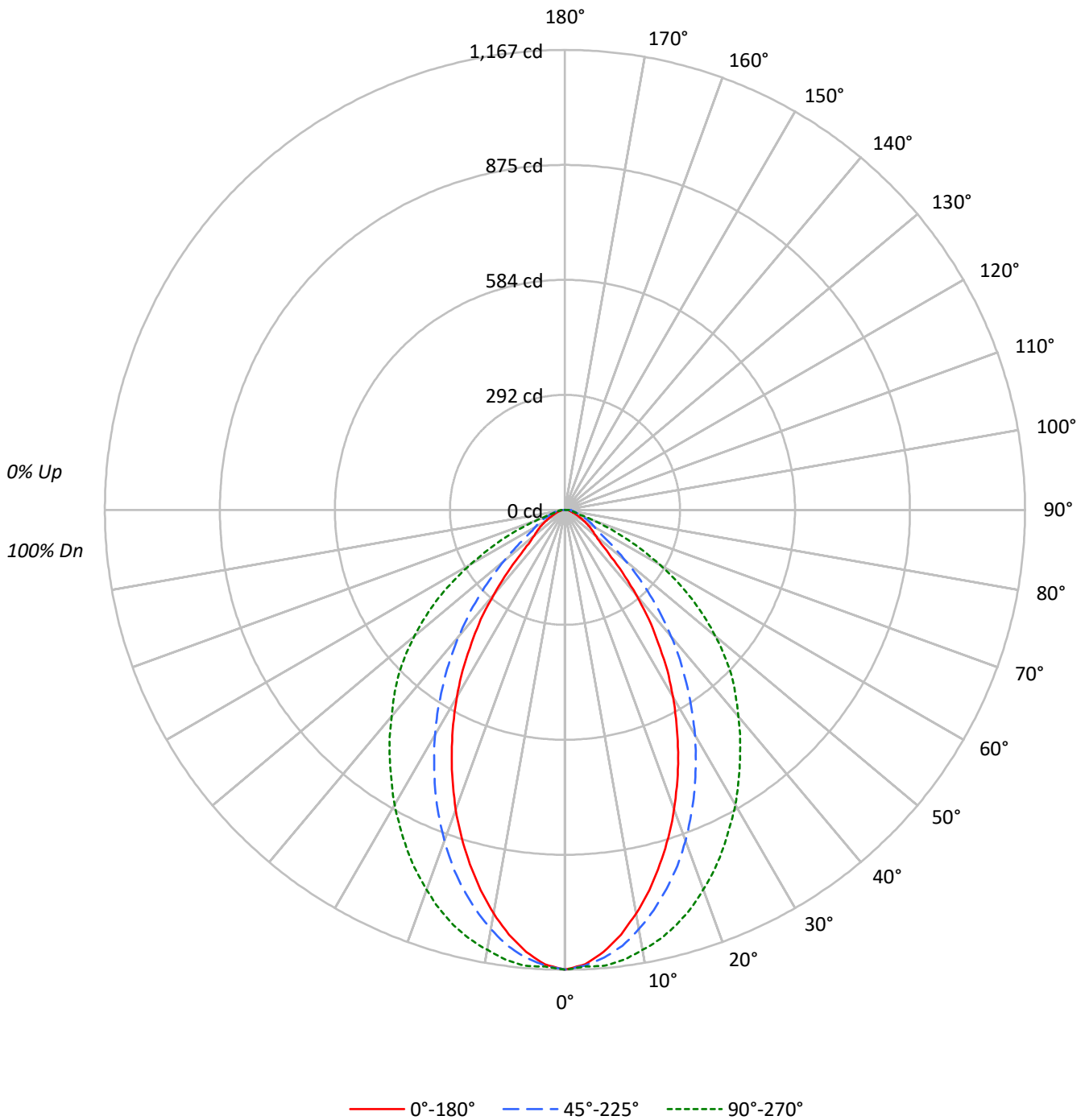
Lumens per Lamp: N/A
Luminaire Lumens: 1651.2 lumens
Efficiency: N/A
Efficacy: 52.9 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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°	10046	10046	10046
5°	9735	9859	10039
10°	9095	9449	9916
15°	8297	8878	9726
20°	7418	8194	9400
25°	6452	7406	9016
30°	5444	6559	8593
35°	4330	5645	8140
40°	3150	4703	7692
45°	1905	3714	7286
50°	1362	2689	6670
55°	1155	1820	5890
60°	942	1481	4759
65°	744	1328	3425
70°	624	1115	1805
75°	562	1041	912
80°	580	1036	903
85°	771	1541	1028

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7286 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.4	6.5
10°-20°	281.5	17.0
20°-30°	365.0	22.1
30°-40°	351.4	21.3
40°-50°	261.4	15.8
50°-60°	160.7	9.7
60°-70°	78.9	4.8
70°-80°	30.8	1.9
80°-90°	14.0	0.8
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°	753.9	45.7
0°-40°	1105.2	66.9
0°-60°	1527.4	92.5
0°-90°	1651.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1651.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1167	1167	1167	1167	1167	
5°	1126	1143	1140	1151	1161	105
15°	931	961	996	1056	1091	260
25°	679	716	780	877	949	311
35°	412	451	537	671	774	257
45°	156	194	305	471	598	130
55°	77	80	121	276	392	69
65°	36	39	65	104	168	37
75°	17	30	31	29	27	19
85°	8	14	16	16	10	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1166.6	1166.6	1166.6	1166.6	1166.6
2.5°	1154.9	1167.9	1157.5	1158.8	1160.1
5°	1126.2	1143.2	1140.5	1151.0	1161.4
7.5°	1087.1	1106.7	1115.8	1136.6	1151.0
10°	1040.2	1062.3	1080.6	1114.5	1134.0
12.5°	988.0	1014.1	1040.2	1085.8	1115.8
15°	930.7	960.7	995.9	1055.8	1091.0
17.5°	872.0	902.0	947.6	1016.7	1061.0
20°	809.5	842.1	894.2	971.1	1025.8
22.5°	744.3	779.5	836.8	924.2	989.3
25°	679.1	715.6	779.5	877.2	948.9
27.5°	613.9	649.1	718.2	827.7	905.9
30°	547.5	584.0	659.6	774.3	864.2
32.5°	483.6	517.5	598.3	723.4	818.6
35°	411.9	451.0	537.0	671.3	774.3
37.5°	350.6	385.8	478.4	619.2	730.0
40°	280.2	319.4	418.4	568.3	684.3
42.5°	215.1	254.2	361.1	517.5	641.3
45°	156.4	194.2	305.0	470.6	598.3
47.5°	118.6	140.8	250.3	424.9	550.1
50°	101.7	108.2	200.7	375.4	497.9
52.5°	89.9	92.5	156.4	325.9	445.8
55°	76.9	79.5	121.2	276.3	392.3
57.5°	65.2	66.5	97.8	229.4	335.0
60°	54.7	56.0	86.0	183.8	276.3
62.5°	45.6	46.9	76.9	142.1	220.3
65°	36.5	39.1	65.2	104.3	168.1
67.5°	30.0	35.2	54.7	73.0	117.3
70°	24.8	33.9	44.3	50.8	71.7
72.5°	20.9	31.3	37.8	36.5	35.2
75°	16.9	30.0	31.3	28.7	27.4
77.5°	14.3	26.1	26.1	23.5	22.2
80°	11.7	20.9	20.9	20.9	18.2
82.5°	10.4	16.9	18.2	18.2	14.3
85°	7.8	14.3	15.6	15.6	10.4
87.5°	5.2	13.0	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	7.80	9.14	8.17	9.46	9.77	16.97	18.31	17.33	18.62	18.94
	3H	8.91	10.10	9.29	10.43	10.80	17.48	18.67	17.85	19.00	19.36
	4H	9.43	10.54	9.83	10.89	11.27	17.50	18.61	17.90	18.96	19.34
	6H	9.86	10.88	10.28	11.25	11.65	17.51	18.53	17.92	18.90	19.29
	8H	10.05	11.02	10.48	11.41	11.82	17.51	18.48	17.94	18.87	19.27
	12H	10.23	11.16	10.67	11.54	11.97	17.51	18.44	17.94	18.82	19.25
4H	2H	8.95	10.06	9.35	10.41	10.79	16.86	17.97	17.26	18.32	18.70
	3H	10.29	11.20	10.70	11.60	12.00	17.45	18.36	17.86	18.76	19.17
	4H	11.02	11.84	11.46	12.25	12.70	17.51	18.32	17.94	18.74	19.18
	6H	11.63	12.33	12.09	12.78	13.25	17.58	18.29	18.05	18.73	19.20
	8H	11.87	12.53	12.34	12.98	13.45	17.61	18.27	18.08	18.72	19.19
	12H	12.11	12.69	12.59	13.17	13.65	17.65	18.24	18.14	18.72	19.19
8H	4H	11.49	12.15	11.96	12.59	13.06	17.47	18.12	17.94	18.57	19.04
	6H	12.34	12.88	12.84	13.37	13.85	17.59	18.13	18.10	18.63	19.11
	8H	12.74	13.23	13.27	13.74	14.23	17.68	18.16	18.20	18.68	19.17
	12H	13.17	13.59	13.68	14.09	14.66	17.80	18.22	18.31	18.72	19.29
12H	4H	11.54	12.13	12.03	12.61	13.08	17.44	18.02	17.93	18.50	18.98
	6H	12.47	12.96	12.99	13.47	13.96	17.58	18.06	18.10	18.57	19.07
	8H	12.99	13.42	13.51	13.91	14.48	17.71	18.14	18.22	18.63	19.20