

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: P1060644

Luminaire Tested: S124RDR-H1020D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060644
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D840-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

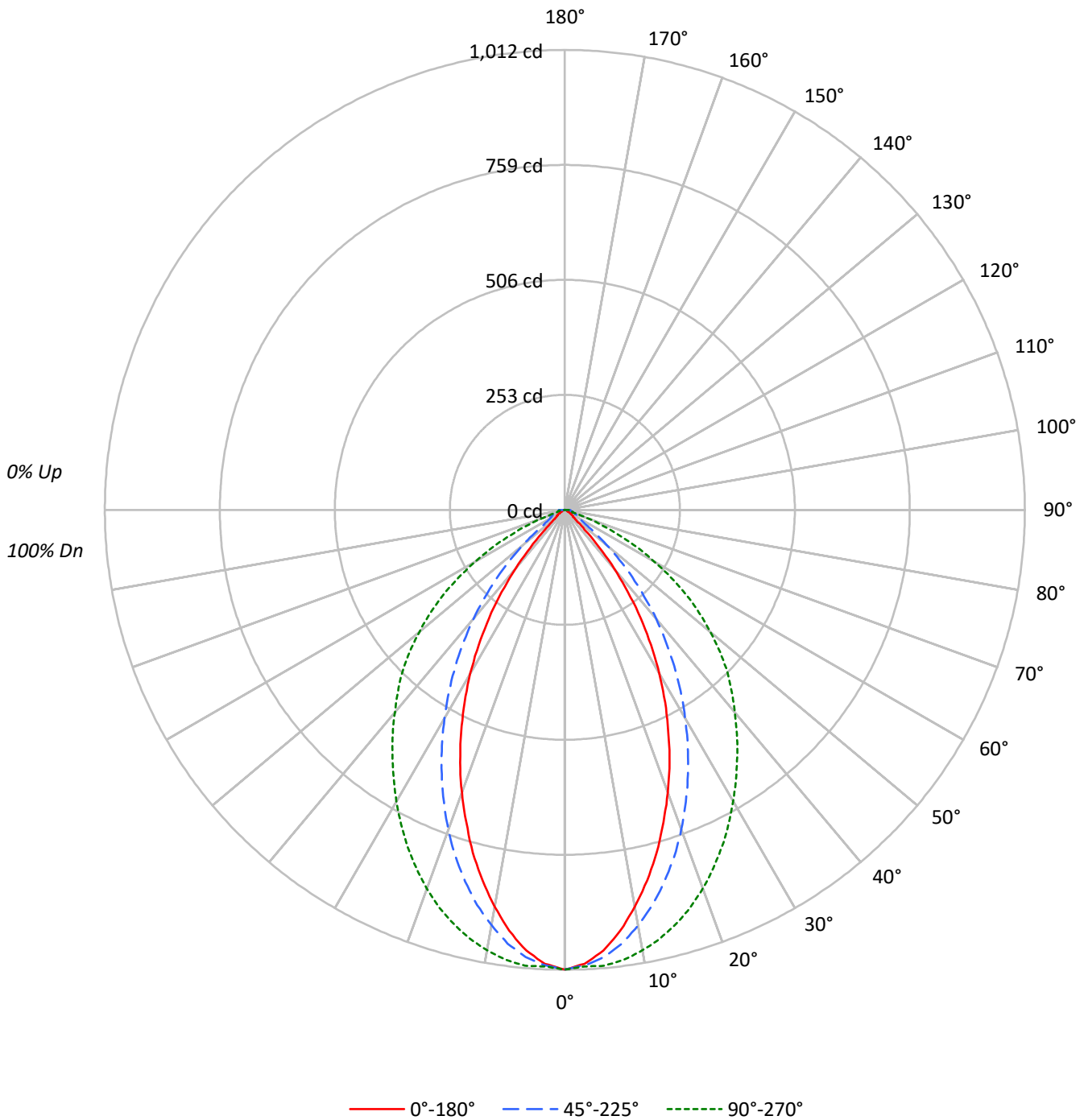
Lumens per Lamp: N/A
Luminaire Lumens: 1274.9 lumens
Efficiency: N/A
Efficacy: 40.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	98	98	96	95	95	93	92	90				
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72				
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65				
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59				
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54				
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49				
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45				
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42				
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8710	8710	8710
5°	8415	8539	8703
10°	7755	8118	8606
15°	6964	7546	8415
20°	6071	6865	8127
25°	5121	6091	7772
30°	4131	5265	7366
35°	3058	4406	6952
40°	1895	3509	6539
45°	751	2559	6160
50°	334	1606	5598
55°	267	838	4902
60°	184	634	3906
65°	120	630	2686
70°	118	569	1256
75°	156	552	552
80°	233	650	650
85°	464	1294	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6160 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.8	7.3
10°-20°	239.5	18.8
20°-30°	302.3	23.7
30°-40°	277.3	21.8
40°-50°	188.9	14.8
50°-60°	102.9	8.1
60°-70°	44.5	3.5
70°-80°	16.2	1.3
80°-90°	10.5	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°	634.5	49.8
0°-40°	911.9	71.5
0°-60°	1203.6	94.4
0°-90°	1274.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1274.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	974	987	988	998	1007	90
15°	781	808	846	907	944	217
25°	539	577	641	743	818	246
35°	291	334	419	552	661	180
45°	62	103	210	373	506	57
55°	18	19	56	205	326	16
65°	6	8	31	64	132	7
75°	5	15	17	17	17	5
85°	5	11	13	13	10	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.5	1011.5	1011.5	1011.5	1011.5
2.5°	999.7	1011.5	1003.2	1005.6	1005.6
5°	973.5	986.6	987.8	998.5	1006.8
7.5°	934.4	953.4	962.8	984.2	998.5
10°	886.9	909.4	928.4	965.2	984.2
12.5°	835.8	861.9	890.4	939.1	966.4
15°	781.2	808.5	846.5	907.0	943.9
17.5°	720.7	753.9	800.2	872.6	917.7
20°	662.5	695.7	749.1	831.1	886.9
22.5°	601.9	636.4	695.7	787.1	853.6
25°	539.0	577.0	641.1	743.2	818.0
27.5°	477.3	517.6	585.3	696.9	780.0
30°	415.5	455.9	529.5	649.4	740.8
32.5°	352.6	394.2	473.7	599.6	700.5
35°	290.9	333.6	419.1	552.1	661.3
37.5°	227.9	273.1	364.5	505.8	622.1
40°	168.6	213.7	312.2	459.5	581.7
42.5°	112.8	157.9	258.8	414.3	543.8
45°	61.7	103.3	210.1	372.8	505.8
47.5°	33.2	57.0	162.7	332.4	463.0
50°	24.9	30.9	119.9	289.7	417.9
52.5°	21.4	23.7	83.1	244.6	372.8
55°	17.8	19.0	55.8	205.4	326.5
57.5°	14.2	15.4	41.6	166.2	276.6
60°	10.7	13.1	36.8	128.2	226.8
62.5°	8.3	10.7	34.4	93.8	179.3
65°	5.9	8.3	30.9	64.1	131.8
67.5°	5.9	9.5	26.1	41.6	89.0
70°	4.7	13.1	22.6	27.3	49.9
72.5°	4.7	14.2	19.0	19.0	19.0
75°	4.7	15.4	16.6	16.6	16.6
77.5°	4.7	14.2	15.4	14.2	14.2
80°	4.7	13.1	13.1	13.1	13.1
82.5°	4.7	11.9	13.1	13.1	10.7
85°	4.7	10.7	13.1	13.1	9.5
87.5°	3.6	10.7	11.9	11.9	7.1
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	0.00	0.00	0.00	0.13	0.44	15.93	17.21	16.29	17.52	17.83
	3H	0.00	1.10	0.35	1.43	1.80	16.30	17.44	16.68	17.77	18.13
	4H	1.18	2.24	1.59	2.59	2.97	16.28	17.33	16.69	17.69	18.07
	6H	2.36	3.33	2.78	3.70	4.09	16.27	17.24	16.69	17.61	18.00
	8H	2.95	3.86	3.38	4.25	4.66	16.27	17.19	16.70	17.58	17.98
	12H	3.62	4.49	4.05	4.87	5.30	16.28	17.16	16.72	17.54	17.97
4H	2H	2.17	3.23	2.58	3.58	3.96	15.74	16.79	16.14	17.14	17.53
	3H	3.76	4.62	4.17	5.02	5.43	16.16	17.02	16.57	17.42	17.83
	4H	5.04	5.81	5.48	6.23	6.68	16.16	16.92	16.59	17.34	17.79
	6H	6.17	6.83	6.63	7.28	7.75	16.20	16.86	16.66	17.31	17.77
	8H	6.68	7.30	7.15	7.74	8.22	16.23	16.84	16.70	17.29	17.76
	12H	7.23	7.77	7.71	8.25	8.73	16.29	16.84	16.78	17.32	17.79
8H	4H	6.13	6.75	6.60	7.19	7.67	16.07	16.68	16.54	17.13	17.60
	6H	7.67	8.18	8.18	8.68	9.16	16.15	16.65	16.65	17.15	17.63
	8H	8.48	8.94	9.01	9.46	9.95	16.23	16.68	16.75	17.20	17.69
	12H	9.31	9.72	9.83	10.21	10.78	16.40	16.80	16.92	17.30	17.87
12H	4H	6.32	6.87	6.81	7.35	7.82	16.03	16.58	16.52	17.06	17.53
	6H	8.03	8.49	8.56	9.00	9.50	16.12	16.57	16.64	17.09	17.58
	8H	9.05	9.45	9.56	9.94	10.52	16.26	16.66	16.77	17.15	17.73