

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: P1060671

Luminaire Tested: S124RDR-H1020D930-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060671
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-H1020D930-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: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

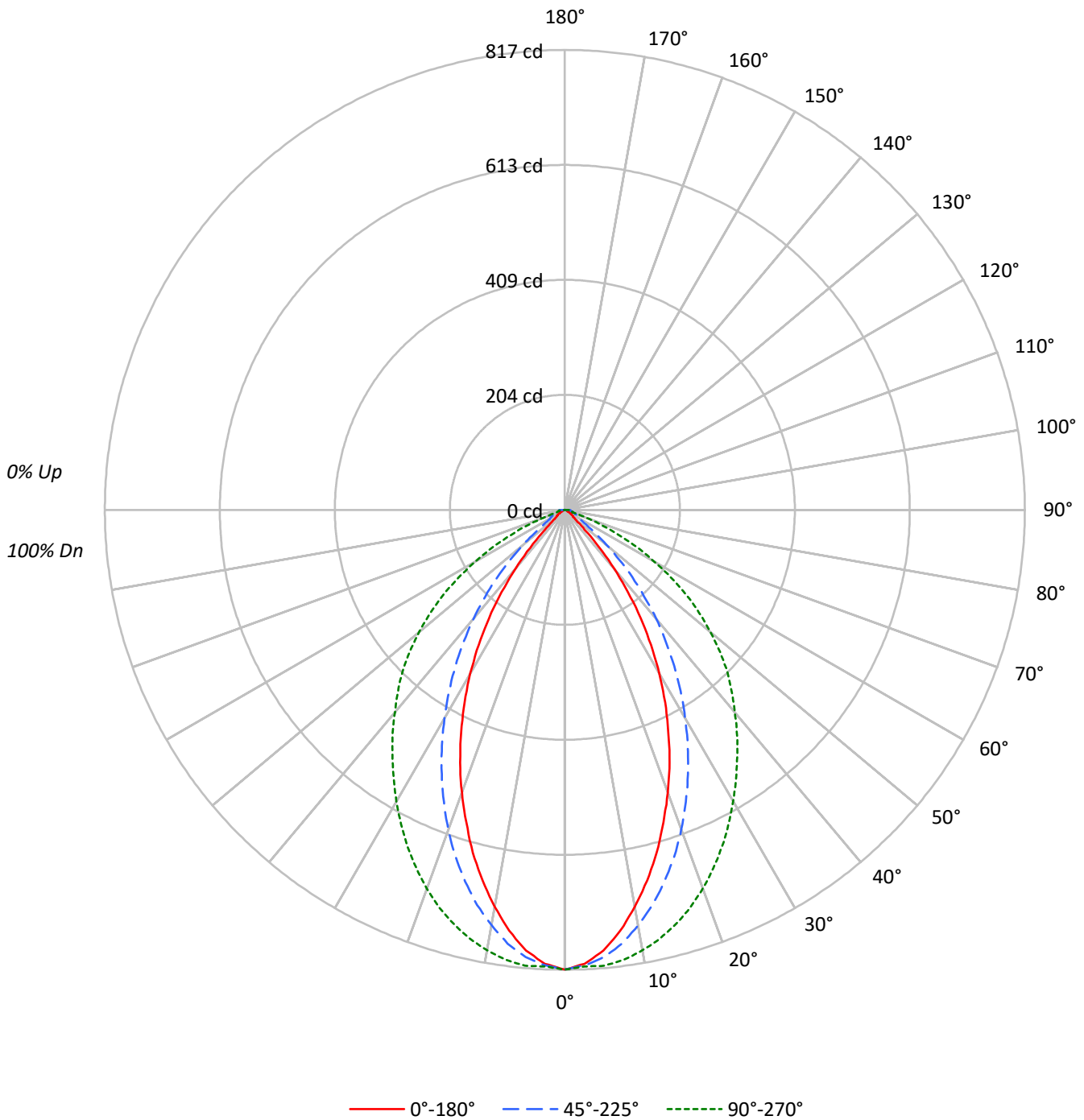
Lumens per Lamp: N/A
Luminaire Lumens: 1029.2 lumens
Efficiency: N/A
Efficacy: 33.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.96
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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°	7032	7032	7032
5°	6794	6894	7026
10°	6261	6554	6948
15°	5623	6092	6793
20°	4901	5542	6561
25°	4135	4918	6275
30°	3336	4251	5947
35°	2468	3556	5612
40°	1530	2834	5280
45°	606	2067	4972
50°	269	1297	4520
55°	216	676	3957
60°	148	512	3153
65°	98	507	2168
70°	96	458	1015
75°	126	446	446
80°	188	521	521
85°	375	1037	761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4972 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.9	7.3
10°-20°	193.3	18.8
20°-30°	244.0	23.7
30°-40°	223.9	21.8
40°-50°	152.5	14.8
50°-60°	83.1	8.1
60°-70°	35.9	3.5
70°-80°	13.1	1.3
80°-90°	8.4	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°	512.3	49.8
0°-40°	736.2	71.5
0°-60°	971.7	94.4
0°-90°	1029.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1029.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	817	817	817	817	817	
5°	786	796	798	806	813	73
15°	631	653	683	732	762	175
25°	435	466	518	600	660	199
35°	235	269	338	446	534	145
45°	50	83	170	301	408	46
55°	14	15	45	166	264	13
65°	5	7	25	52	106	6
75°	4	12	13	13	13	4
85°	4	9	10	10	8	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	816.6	816.6	816.6	816.6	816.6
2.5°	807.1	816.6	809.9	811.8	811.8
5°	786.0	796.5	797.5	806.1	812.8
7.5°	754.3	769.7	777.3	794.6	806.1
10°	716.0	734.2	749.5	779.3	794.6
12.5°	674.8	695.9	718.9	758.2	780.2
15°	630.7	652.7	683.4	732.3	762.0
17.5°	581.8	608.6	646.0	704.5	740.9
20°	534.8	561.7	604.8	670.9	716.0
22.5°	486.0	513.8	561.7	635.5	689.2
25°	435.2	465.8	517.6	600.0	660.4
27.5°	385.3	417.9	472.5	562.6	629.7
30°	335.5	368.1	427.5	524.3	598.1
32.5°	284.7	318.2	382.4	484.0	565.5
35°	234.8	269.3	338.3	445.7	533.9
37.5°	184.0	220.5	294.3	408.3	502.3
40°	136.1	172.5	252.1	370.9	469.7
42.5°	91.1	127.5	209.0	334.5	439.0
45°	49.8	83.4	169.7	301.0	408.3
47.5°	26.8	46.0	131.3	268.4	373.8
50°	20.1	24.9	96.8	233.9	337.4
52.5°	17.3	19.2	67.1	197.5	301.0
55°	14.4	15.3	45.0	165.8	263.6
57.5°	11.5	12.5	33.5	134.2	223.3
60°	8.6	10.5	29.7	103.5	183.1
62.5°	6.7	8.6	27.8	75.7	144.7
65°	4.8	6.7	24.9	51.8	106.4
67.5°	4.8	7.7	21.1	33.5	71.9
70°	3.8	10.5	18.2	22.0	40.3
72.5°	3.8	11.5	15.3	15.3	15.3
75°	3.8	12.5	13.4	13.4	13.4
77.5°	3.8	11.5	12.5	11.5	11.5
80°	3.8	10.5	10.5	10.5	10.5
82.5°	3.8	9.6	10.5	10.5	8.6
85°	3.8	8.6	10.5	10.5	7.7
87.5°	2.9	8.6	9.6	9.6	5.8
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	0.00	0.00	0.00	0.00	0.00	15.19	16.46	15.55	16.78	17.09
	3H	0.00	0.38	0.00	0.71	1.08	15.56	16.69	15.94	17.02	17.39
	4H	0.46	1.51	0.87	1.87	2.25	15.54	16.59	15.94	16.94	17.33
	6H	1.63	2.60	2.05	2.97	3.36	15.53	16.49	15.94	16.86	17.26
	8H	2.22	3.13	2.65	3.52	3.93	15.53	16.44	15.96	16.83	17.24
	12H	2.88	3.76	3.32	4.14	4.57	15.54	16.41	15.97	16.80	17.23
4H	2H	1.43	2.48	1.84	2.84	3.22	15.00	16.05	15.40	16.40	16.78
	3H	3.01	3.87	3.42	4.27	4.68	15.42	16.27	15.83	16.68	17.08
	4H	4.31	5.08	4.74	5.50	5.94	15.41	16.18	15.85	16.60	17.04
	6H	5.43	6.09	5.89	6.54	7.01	15.45	16.12	15.92	16.56	17.03
	8H	5.94	6.55	6.41	7.00	7.47	15.48	16.10	15.95	16.55	17.02
	12H	6.48	7.03	6.97	7.51	7.99	15.55	16.09	16.03	16.57	17.05
8H	4H	5.39	6.01	5.86	6.46	6.93	15.32	15.94	15.79	16.39	16.86
	6H	6.93	7.43	7.43	7.93	8.41	15.40	15.91	15.90	16.40	16.89
	8H	7.74	8.19	8.26	8.71	9.20	15.48	15.94	16.01	16.45	16.95
	12H	8.56	8.97	9.08	9.46	10.03	15.65	16.06	16.17	16.55	17.12
12H	4H	5.58	6.13	6.07	6.61	7.09	15.29	15.83	15.77	16.32	16.79
	6H	7.28	7.74	7.81	8.25	8.75	15.37	15.83	15.90	16.35	16.84
	8H	8.29	8.69	8.81	9.19	9.76	15.51	15.91	16.03	16.41	16.98