

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: P1060630

Luminaire Tested: S124RDR-H1020D830-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060630
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D830-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

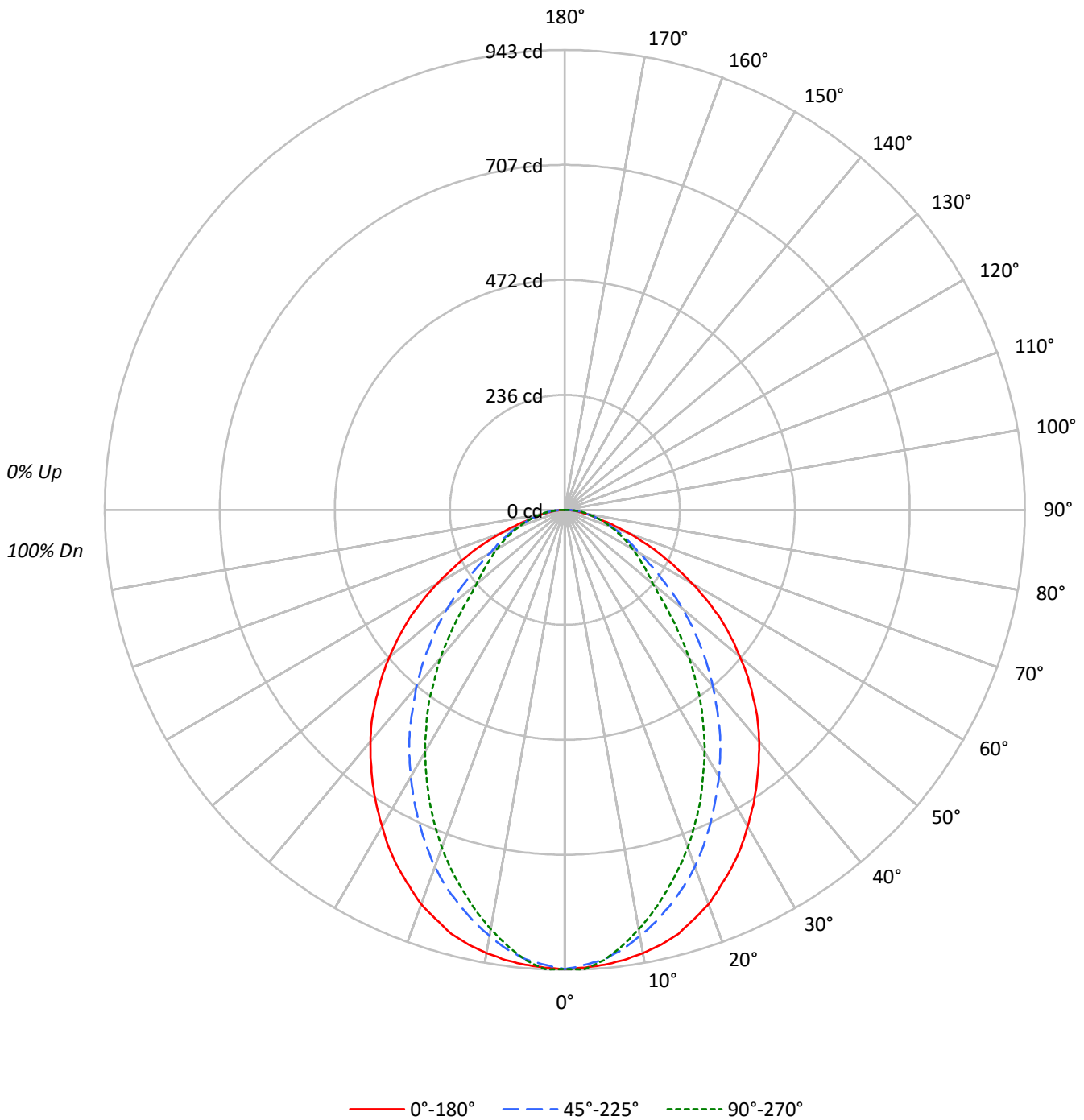
Lumens per Lamp: N/A
Luminaire Lumens: 1815.9 lumens
Efficiency: N/A
Efficacy: 58.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86			86	
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74			74	
3	93	84	76	71	91	82	75	70	79	74	69	77	72	68	74	70	66	64			64	
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56			56	
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50			50	
6	74	62	54	48	72	61	53	47	59	52	47	58	51	47	56	51	46	44			44	
7	69	57	48	43	68	56	48	43	54	47	42	53	47	42	52	46	42	40			40	
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36			36	
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33			33	
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30			30	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8110	8110	8110
5°	8093	7997	8007
10°	8070	7760	7634
15°	8021	7468	7202
20°	7890	7139	6754
25°	7687	6718	6245
30°	7450	6283	5699
35°	7212	5828	5118
40°	6966	5311	4466
45°	6658	4771	3733
50°	6286	4211	3158
55°	5848	3572	2925
60°	5184	3031	2764
65°	4419	2796	2616
70°	3454	2591	2480
75°	2356	2392	2392
80°	2028	2251	2306
85°	1749	2184	2401

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6658 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	4.8
10°-20°	238.0	13.1
20°-30°	330.4	18.2
30°-40°	354.1	19.5
40°-50°	313.7	17.3
50°-60°	236.4	13.0
60°-70°	153.1	8.4
70°-80°	78.6	4.3
80°-90°	24.1	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°	655.9	36.1
0°-40°	1010.0	55.6
0°-60°	1560.1	85.9
0°-90°	1815.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1815.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	942	942	942	942	942	
5°	936	937	925	926	926	89
15°	900	880	838	817	808	253
25°	809	766	707	670	657	372
35°	686	624	554	505	487	429
45°	547	476	392	331	306	422
55°	390	324	238	200	195	346
65°	217	175	137	130	128	215
75°	71	74	72	72	72	84
85°	18	19	22	24	24	20
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	941.8	941.8	941.8	941.8	941.8
2.5°	939.5	942.9	934.0	940.6	942.9
5°	936.2	937.3	925.2	926.3	926.3
7.5°	930.7	928.5	908.6	903.0	901.9
10°	922.9	916.3	887.5	876.5	873.1
12.5°	913.0	900.8	864.3	848.8	842.2
15°	899.7	879.8	837.7	816.7	807.9
17.5°	879.8	854.3	810.1	783.5	773.5
20°	861.0	826.7	779.1	745.9	737.0
22.5°	834.4	797.9	743.7	708.3	697.2
25°	809.0	765.8	707.1	669.5	657.3
27.5°	781.3	732.6	669.5	629.7	614.2
30°	749.2	697.2	631.9	589.8	573.2
32.5°	718.2	662.9	593.2	546.7	529.0
35°	686.1	624.1	554.4	504.6	486.9
37.5°	652.9	587.6	511.3	462.6	439.3
40°	619.7	551.1	472.5	417.2	397.3
42.5°	585.4	513.5	432.7	375.2	349.7
45°	546.7	475.9	391.8	330.9	306.5
47.5°	509.1	439.3	354.1	287.7	265.6
50°	469.2	400.6	314.3	250.1	235.7
52.5°	429.4	360.8	275.6	221.3	214.7
55°	389.5	324.2	237.9	200.3	194.8
57.5°	345.3	286.6	204.7	181.5	177.1
60°	301.0	245.7	176.0	163.8	160.5
62.5°	257.8	210.3	156.0	146.1	143.9
65°	216.9	174.8	137.2	129.5	128.4
67.5°	177.1	143.9	119.5	115.1	112.9
70°	137.2	115.1	102.9	100.7	98.5
72.5°	101.8	93.0	87.4	86.3	85.2
75°	70.8	74.1	71.9	71.9	71.9
77.5°	56.4	57.5	58.7	59.8	58.7
80°	40.9	44.3	45.4	47.6	46.5
82.5°	28.8	31.0	34.3	35.4	36.5
85°	17.7	18.8	22.1	24.3	24.3
87.5°	7.7	8.9	11.1	13.3	14.4
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	17.71	19.21	18.08	19.52	19.84	14.28	15.77	14.64	16.09	16.40
	3H	18.92	20.26	19.29	20.59	20.95	15.97	17.32	16.35	17.64	18.01
	4H	19.22	20.48	19.62	20.83	21.21	16.65	17.91	17.05	18.26	18.64
	6H	19.43	20.59	19.84	20.96	21.35	17.20	18.36	17.61	18.73	19.12
	8H	19.48	20.59	19.91	20.98	21.38	17.42	18.52	17.84	18.91	19.31
	12H	19.52	20.58	19.95	20.96	21.39	17.59	18.65	18.02	19.03	19.46
4H	2H	17.85	19.11	18.25	19.46	19.84	14.94	16.20	15.34	16.54	16.92
	3H	19.26	20.30	19.67	20.70	21.10	16.85	17.89	17.26	18.29	18.69
	4H	19.68	20.62	20.11	21.04	21.48	17.65	18.59	18.08	19.00	19.44
	6H	20.01	20.82	20.46	21.27	21.73	18.34	19.15	18.79	19.60	20.06
	8H	20.10	20.87	20.57	21.31	21.78	18.61	19.37	19.07	19.82	20.29
	12H	20.17	20.86	20.66	21.33	21.81	18.84	19.52	19.32	20.00	20.47
8H	4H	19.81	20.57	20.27	21.02	21.48	17.96	18.73	18.43	19.17	19.64
	6H	20.23	20.86	20.73	21.35	21.83	18.79	19.43	19.29	19.92	20.39
	8H	20.39	20.95	20.90	21.46	21.95	19.16	19.73	19.67	20.24	20.72
	12H	20.52	21.02	21.03	21.51	22.07	19.49	19.99	20.00	20.49	21.05
12H	4H	19.81	20.50	20.30	20.98	21.45	17.99	18.67	18.47	19.15	19.62
	6H	20.25	20.82	20.77	21.33	21.82	18.85	19.42	19.37	19.93	20.42
	8H	20.46	20.96	20.97	21.46	22.02	19.29	19.79	19.80	20.28	20.84