

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: P1060638

Luminaire Tested: S124RDR-H1020D835-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060638
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-H1020D835-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: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

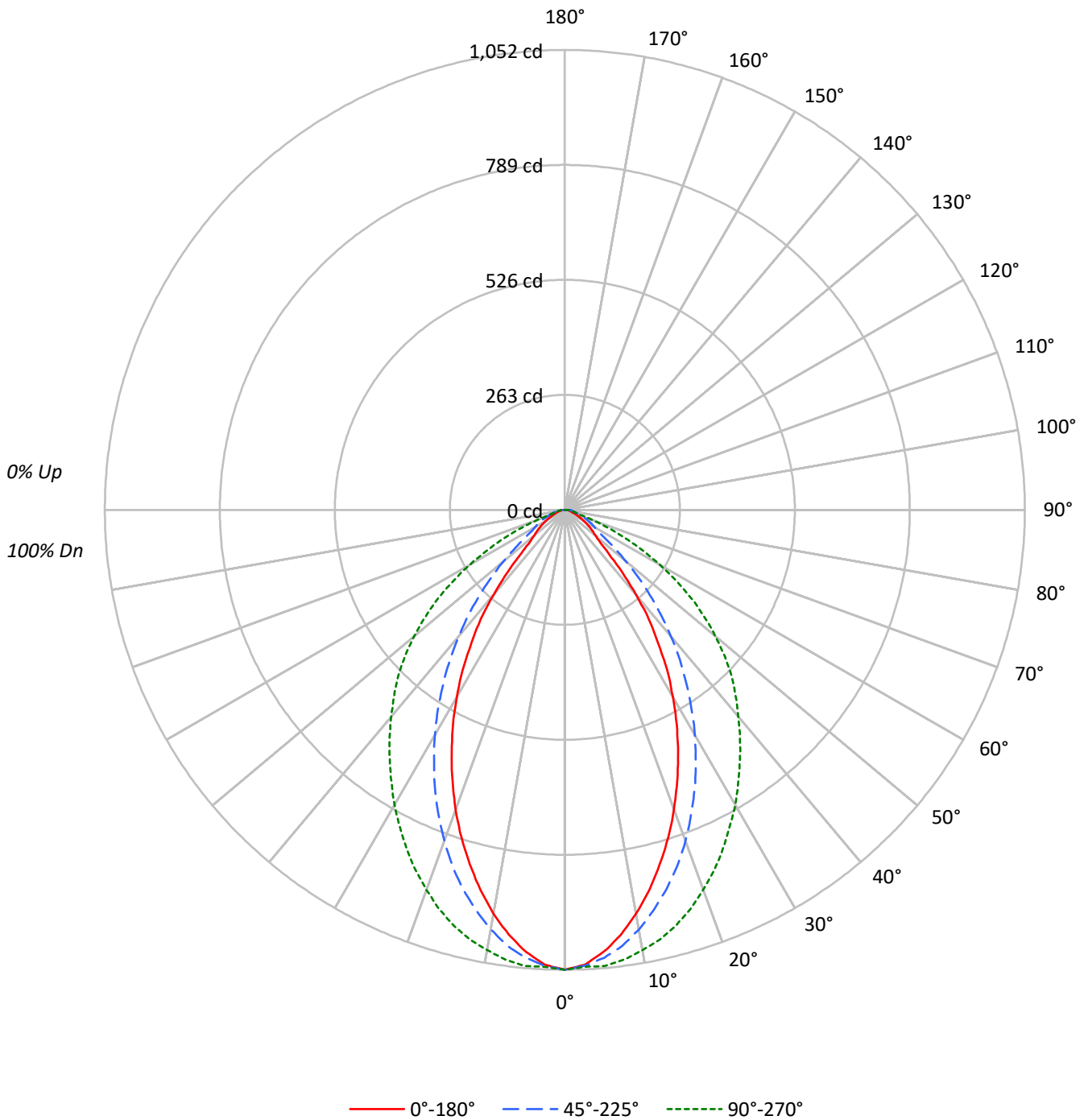
Lumens per Lamp: N/A
Luminaire Lumens: 1488.9 lumens
Efficiency: N/A
Efficacy: 47.7 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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°	9059	9059	9059
5°	8778	8890	9053
10°	8201	8520	8942
15°	7481	8006	8770
20°	6689	7389	8476
25°	5819	6678	8130
30°	4909	5913	7749
35°	3904	5091	7340
40°	2841	4241	6937
45°	1717	3349	6570
50°	1228	2425	6015
55°	1040	1641	5312
60°	851	1336	4292
65°	670	1198	3089
70°	561	1007	1626
75°	509	938	822
80°	526	932	818
85°	701	1393	929

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6570 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.8	6.5
10°-20°	253.8	17.0
20°-30°	329.1	22.1
30°-40°	316.9	21.3
40°-50°	235.7	15.8
50°-60°	145.0	9.7
60°-70°	71.2	4.8
70°-80°	27.8	1.9
80°-90°	12.7	0.9
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°	679.8	45.7
0°-40°	996.6	66.9
0°-60°	1377.3	92.5
0°-90°	1488.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1488.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1052	1052	1052	1052	1052	
5°	1016	1031	1028	1038	1047	94
15°	839	866	898	952	984	234
25°	612	645	703	791	856	280
35°	371	407	484	605	698	232
45°	141	175	275	424	540	117
55°	69	72	109	249	354	62
65°	33	35	59	94	152	34
75°	15	27	28	26	25	17
85°	7	13	14	14	9	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1052.0	1052.0	1052.0	1052.0	1052.0
2.5°	1041.4	1053.1	1043.7	1044.9	1046.1
5°	1015.5	1030.8	1028.4	1037.9	1047.3
7.5°	980.3	997.9	1006.1	1024.9	1037.9
10°	937.9	957.9	974.4	1004.9	1022.6
12.5°	890.9	914.4	937.9	979.1	1006.1
15°	839.2	866.2	898.0	952.0	983.8
17.5°	786.3	813.4	854.5	916.8	956.8
20°	729.9	759.3	806.3	875.6	925.0
22.5°	671.1	702.9	754.6	833.3	892.1
25°	612.4	645.3	702.9	791.0	855.7
27.5°	553.6	585.3	647.6	746.4	816.9
30°	493.7	526.6	594.7	698.2	779.3
32.5°	436.1	466.6	539.5	652.3	738.1
35°	371.4	406.7	484.3	605.3	698.2
37.5°	316.2	347.9	431.4	558.3	658.2
40°	252.7	288.0	377.3	512.5	617.1
42.5°	193.9	229.2	325.6	466.6	578.3
45°	141.0	175.1	275.0	424.3	539.5
47.5°	107.0	126.9	225.7	383.2	496.0
50°	91.7	97.6	181.0	338.5	449.0
52.5°	81.1	83.5	141.0	293.8	402.0
55°	69.3	71.7	109.3	249.2	353.8
57.5°	58.8	59.9	88.2	206.9	302.1
60°	49.4	50.5	77.6	165.7	249.2
62.5°	41.1	42.3	69.3	128.1	198.6
65°	32.9	35.3	58.8	94.0	151.6
67.5°	27.0	31.7	49.4	65.8	105.8
70°	22.3	30.6	40.0	45.8	64.6
72.5°	18.8	28.2	34.1	32.9	31.7
75°	15.3	27.0	28.2	25.9	24.7
77.5°	12.9	23.5	23.5	21.2	20.0
80°	10.6	18.8	18.8	18.8	16.5
82.5°	9.4	15.3	16.5	16.5	12.9
85°	7.1	12.9	14.1	14.1	9.4
87.5°	4.7	11.8	12.9	11.8	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	7.44	8.78	7.80	9.09	9.41	16.61	17.95	16.98	18.26	18.58
	3H	8.55	9.74	8.93	10.07	10.43	17.12	18.31	17.50	18.64	19.00
	4H	9.07	10.18	9.47	10.53	10.91	17.14	18.25	17.54	18.60	18.98
	6H	9.50	10.52	9.91	10.89	11.28	17.15	18.17	17.56	18.54	18.93
	8H	9.69	10.66	10.12	11.05	11.45	17.15	18.12	17.58	18.51	18.91
	12H	9.87	10.80	10.31	11.18	11.61	17.15	18.08	17.59	18.46	18.89
4H	2H	8.58	9.69	8.99	10.05	10.43	16.50	17.61	16.90	17.96	18.35
	3H	9.93	10.84	10.34	11.24	11.64	17.09	18.00	17.50	18.40	18.81
	4H	10.66	11.47	11.09	11.89	12.33	17.15	17.96	17.58	18.38	18.82
	6H	11.27	11.97	11.73	12.42	12.88	17.23	17.93	17.69	18.37	18.84
	8H	11.51	12.17	11.98	12.61	13.09	17.26	17.91	17.72	18.36	18.83
	12H	11.75	12.33	12.23	12.81	13.29	17.30	17.88	17.78	18.36	18.83
8H	4H	11.13	11.78	11.60	12.23	12.70	17.11	17.76	17.58	18.21	18.68
	6H	11.98	12.51	12.48	13.01	13.49	17.24	17.77	17.74	18.27	18.75
	8H	12.38	12.87	12.90	13.38	13.87	17.32	17.80	17.84	18.32	18.81
	12H	12.81	13.24	13.32	13.73	14.30	17.44	17.87	17.95	18.36	18.93
12H	4H	11.18	11.76	11.67	12.24	12.72	17.08	17.66	17.57	18.14	18.62
	6H	12.11	12.59	12.63	13.11	13.60	17.22	17.70	17.74	18.22	18.71
	8H	12.63	13.06	13.15	13.55	14.13	17.35	17.78	17.87	18.27	18.84