

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: P1060704

Luminaire Tested: S124RDR-H1020D950-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060704
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D950-X4F0-XX-UDD-WVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

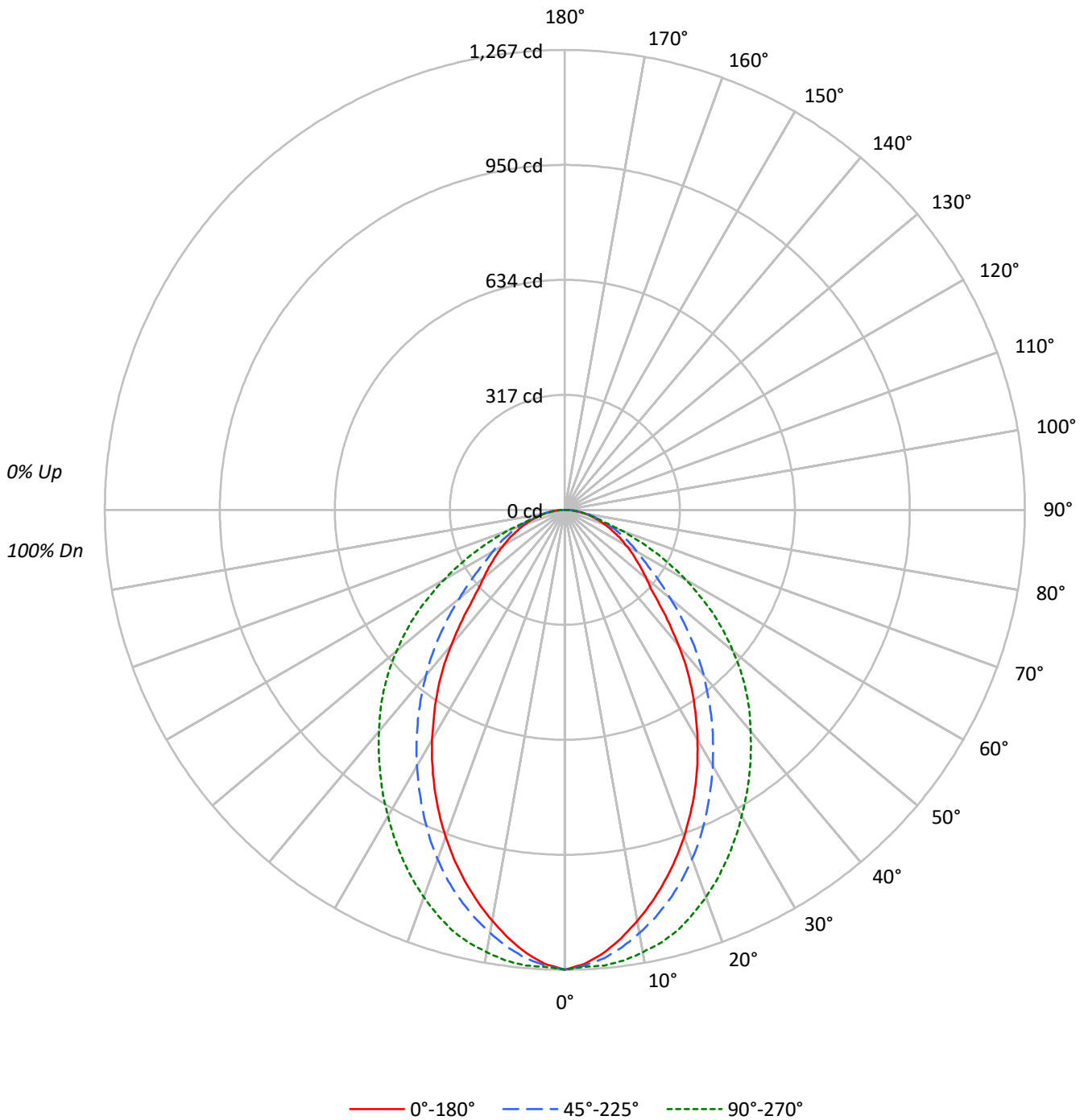
Lumens per Lamp: N/A
Luminaire Lumens: 2324.1 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67	65
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52	50
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10907	10907	10907
5°	10590	10716	10891
10°	10056	10349	10820
15°	9452	9912	10692
20°	8793	9388	10405
25°	8062	8765	10064
30°	7267	8103	9685
35°	6433	7411	9320
40°	5469	6691	8946
45°	4477	5910	8599
50°	3918	5076	8093
55°	3602	4375	7489
60°	3339	3939	6601
65°	3130	3700	5526
70°	2936	3386	4149
75°	2758	3094	3021
80°	2559	2837	2559
85°	2322	2766	2213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8599 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	5.0
10°-20°	314.9	13.6
20°-30°	430.5	18.5
30°-40°	452.4	19.5
40°-50°	392.6	16.9
50°-60°	296.2	12.7
60°-70°	192.0	8.3
70°-80°	98.5	4.2
80°-90°	29.9	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°	862.5	37.1
0°-40°	1314.9	56.6
0°-60°	2003.7	86.2
0°-90°	2324.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2324.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1267	1267	1267	1267	1267	
5°	1225	1242	1240	1250	1260	115
15°	1060	1086	1112	1162	1199	297
25°	848	879	922	993	1059	389
35°	612	646	705	799	887	381
45°	368	402	485	606	706	289
55°	240	247	291	414	499	216
65°	154	157	182	220	271	153
75°	83	93	93	94	91	88
85°	24	29	28	27	22	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1266.6	1266.6	1266.6	1266.6	1266.6
2.5°	1252.0	1267.7	1256.5	1258.7	1259.9
5°	1225.1	1241.9	1239.7	1249.8	1259.9
7.5°	1190.4	1210.5	1215.0	1235.2	1252.0
10°	1150.0	1172.4	1183.6	1216.1	1237.4
12.5°	1107.4	1129.8	1150.0	1191.5	1221.7
15°	1060.3	1086.1	1111.9	1162.3	1199.3
17.5°	1011.0	1037.9	1070.4	1125.3	1169.1
20°	959.5	986.4	1024.5	1083.9	1135.4
22.5°	904.5	934.8	975.2	1039.0	1099.6
25°	848.5	878.8	922.5	993.1	1059.2
27.5°	790.2	821.6	868.7	947.1	1017.7
30°	730.8	764.4	814.9	897.8	974.0
32.5°	670.3	706.1	759.9	848.5	931.4
35°	612.0	645.6	705.0	799.2	886.6
37.5°	551.5	585.1	649.0	751.0	841.8
40°	486.5	523.4	595.2	700.5	795.8
42.5°	425.9	462.9	540.3	652.3	752.1
45°	367.6	402.4	485.3	606.4	706.1
47.5°	322.8	347.5	430.4	561.6	656.8
50°	292.5	303.8	378.9	512.2	604.1
52.5°	265.6	274.6	331.8	462.9	552.6
55°	239.9	246.6	291.4	413.6	498.8
57.5°	217.4	220.8	255.6	364.3	440.5
60°	193.9	198.4	228.7	313.8	383.3
62.5°	174.9	177.1	205.1	265.6	326.2
65°	153.6	156.9	181.6	219.7	271.2
67.5°	134.5	140.1	156.9	179.3	214.1
70°	116.6	124.4	134.5	145.7	164.8
72.5°	99.8	108.7	114.3	118.8	115.4
75°	82.9	93.0	93.0	94.2	90.8
77.5°	67.3	76.2	75.1	74.0	69.5
80°	51.6	59.4	57.2	56.0	51.6
82.5°	38.1	43.7	41.5	40.4	34.7
85°	23.5	29.1	28.0	26.9	22.4
87.5°	11.2	16.8	15.7	14.6	10.1
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	14.80	16.29	15.17	16.60	16.92	18.54	20.03	18.91	20.34	20.66
	3H	16.47	17.80	16.85	18.13	18.49	19.67	21.00	20.05	21.33	21.69
	4H	17.14	18.39	17.54	18.74	19.12	19.96	21.21	20.36	21.56	21.94
	6H	17.65	18.80	18.06	19.17	19.56	20.16	21.32	20.58	21.68	22.08
	8H	17.82	18.92	18.25	19.31	19.71	20.22	21.32	20.65	21.71	22.11
	12H	17.94	18.99	18.37	19.37	19.80	20.25	21.30	20.68	21.68	22.11
4H	2H	15.60	16.85	16.00	17.19	17.57	18.71	19.96	19.11	20.31	20.69
	3H	17.47	18.50	17.88	18.90	19.31	20.04	21.07	20.45	21.47	21.88
	4H	18.27	19.20	18.71	19.62	20.06	20.46	21.39	20.89	21.80	22.24
	6H	18.92	19.73	19.37	20.17	20.63	20.78	21.59	21.23	22.03	22.49
	8H	19.14	19.90	19.60	20.34	20.81	20.87	21.63	21.34	22.07	22.54
	12H	19.30	19.98	19.79	20.46	20.93	20.94	21.62	21.43	22.10	22.57
8H	4H	18.62	19.38	19.08	19.82	20.29	20.59	21.35	21.05	21.79	22.26
	6H	19.41	20.04	19.91	20.53	21.01	21.01	21.63	21.51	22.12	22.60
	8H	19.73	20.29	20.24	20.80	21.29	21.16	21.73	21.68	22.24	22.73
	12H	19.99	20.49	20.50	20.98	21.55	21.30	21.80	21.81	22.29	22.86
12H	4H	18.65	19.33	19.13	19.80	20.28	20.59	21.27	21.08	21.75	22.22
	6H	19.47	20.03	19.99	20.54	21.03	21.03	21.59	21.54	22.10	22.59
	8H	19.86	20.35	20.37	20.85	21.41	21.24	21.73	21.75	22.23	22.79