

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: P1060695

Luminaire Tested: S124RDR-H1020D940-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060695
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-H1020D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

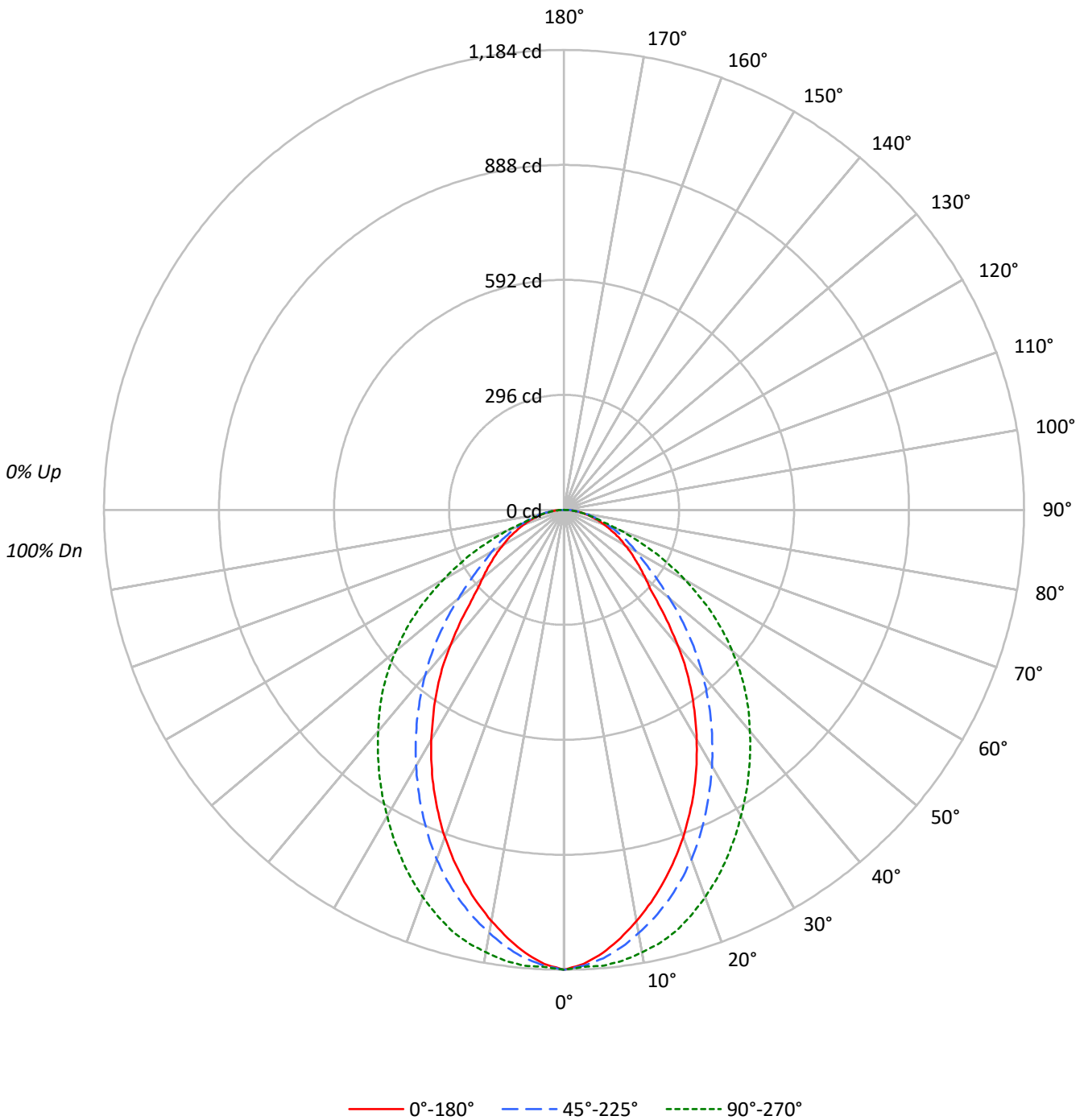
Lumens per Lamp: N/A
Luminaire Lumens: 2172.3 lumens
Efficiency: N/A
Efficacy: 69.6 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10195	10195	10195
5°	9898	10016	10179
10°	9399	9673	10113
15°	8836	9265	9994
20°	8218	8775	9726
25°	7536	8192	9407
30°	6792	7574	9052
35°	6013	6928	8712
40°	5111	6253	8362
45°	4184	5524	8037
50°	3663	4744	7565
55°	3366	4090	6999
60°	3121	3680	6171
65°	2924	3458	5165
70°	2744	3165	3877
75°	2578	2895	2825
80°	2390	2648	2390
85°	2174	2589	2075

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8037 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.4	5.0
10°-20°	294.4	13.6
20°-30°	402.4	18.5
30°-40°	422.9	19.5
40°-50°	367.0	16.9
50°-60°	276.8	12.7
60°-70°	179.4	8.3
70°-80°	92.1	4.2
80°-90°	27.9	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°	806.2	37.1
0°-40°	1229.1	56.6
0°-60°	1872.9	86.2
0°-90°	2172.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2172.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1145	1161	1159	1168	1178	107
15°	991	1015	1039	1086	1121	278
25°	793	821	862	928	990	364
35°	572	604	659	747	829	356
45°	344	376	454	567	660	271
55°	224	230	272	387	466	202
65°	144	147	170	205	254	143
75°	78	87	87	88	85	82
85°	22	27	26	25	21	25
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1183.9	1183.9	1183.9	1183.9	1183.9
2.5°	1170.3	1184.9	1174.4	1176.5	1177.6
5°	1145.1	1160.8	1158.7	1168.2	1177.6
7.5°	1112.6	1131.5	1135.7	1154.5	1170.3
10°	1074.9	1095.9	1106.3	1136.7	1156.6
12.5°	1035.1	1056.1	1074.9	1113.7	1142.0
15°	991.1	1015.2	1039.3	1086.4	1121.0
17.5°	945.0	970.2	1000.5	1051.9	1092.7
20°	896.8	922.0	957.6	1013.1	1061.3
22.5°	845.5	873.8	911.5	971.2	1027.8
25°	793.1	821.4	862.2	928.2	990.1
27.5°	738.6	767.9	812.0	885.3	951.3
30°	683.1	714.5	761.7	839.2	910.4
32.5°	626.5	660.0	710.3	793.1	870.6
35°	572.0	603.5	659.0	747.0	828.7
37.5°	515.5	546.9	606.6	701.9	786.8
40°	454.7	489.3	556.3	654.8	743.9
42.5°	398.1	432.7	505.0	609.7	703.0
45°	343.6	376.1	453.6	566.8	660.0
47.5°	301.7	324.8	402.3	524.9	613.9
50°	273.4	283.9	354.1	478.8	564.7
52.5°	248.3	256.7	310.1	432.7	516.5
55°	224.2	230.5	272.4	386.6	466.2
57.5°	203.2	206.4	238.9	340.5	411.7
60°	181.2	185.4	213.7	293.4	358.3
62.5°	163.4	165.5	191.7	248.3	304.9
65°	143.5	146.7	169.7	205.3	253.5
67.5°	125.7	131.0	146.7	167.6	200.1
70°	109.0	116.3	125.7	136.2	154.0
72.5°	93.2	101.6	106.9	111.1	107.9
75°	77.5	87.0	87.0	88.0	84.9
77.5°	62.9	71.2	70.2	69.1	65.0
80°	48.2	55.5	53.4	52.4	48.2
82.5°	35.6	40.9	38.8	37.7	32.5
85°	22.0	27.2	26.2	25.1	21.0
87.5°	10.5	15.7	14.7	13.6	9.4
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	14.57	16.06	14.93	16.37	16.68	18.31	19.79	18.67	20.11	20.42
	3H	16.24	17.57	16.62	17.90	18.26	19.43	20.77	19.81	21.09	21.46
	4H	16.90	18.15	17.30	18.50	18.88	19.73	20.98	20.13	21.33	21.71
	6H	17.41	18.56	17.82	18.93	19.32	19.93	21.08	20.34	21.45	21.84
	8H	17.59	18.68	18.01	19.07	19.48	19.98	21.08	20.41	21.47	21.87
	12H	17.71	18.76	18.14	19.14	19.57	20.02	21.07	20.45	21.45	21.88
4H	2H	15.36	16.61	15.76	16.96	17.34	18.47	19.72	18.87	20.07	20.45
	3H	17.23	18.27	17.64	18.67	19.07	19.80	20.84	20.21	21.24	21.64
	4H	18.04	18.97	18.47	19.39	19.83	20.22	21.15	20.65	21.57	22.01
	6H	18.68	19.49	19.14	19.93	20.39	20.54	21.35	21.00	21.80	22.26
	8H	18.90	19.66	19.37	20.11	20.57	20.64	21.39	21.10	21.84	22.31
	12H	19.07	19.74	19.55	20.22	20.70	20.71	21.38	21.19	21.86	22.33
8H	4H	18.39	19.14	18.85	19.59	20.06	20.35	21.11	20.82	21.56	22.02
	6H	19.18	19.80	19.67	20.29	20.77	20.77	21.40	21.27	21.89	22.37
	8H	19.49	20.06	20.01	20.57	21.05	20.93	21.49	21.45	22.00	22.49
	12H	19.76	20.25	20.27	20.75	21.31	21.07	21.57	21.58	22.06	22.62
12H	4H	18.42	19.09	18.90	19.57	20.04	20.36	21.03	20.84	21.51	21.98
	6H	19.24	19.80	19.75	20.31	20.80	20.79	21.36	21.31	21.87	22.36
	8H	19.62	20.12	20.13	20.61	21.18	21.00	21.50	21.51	21.99	22.56