

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: P1060693

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060693
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-H1020D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

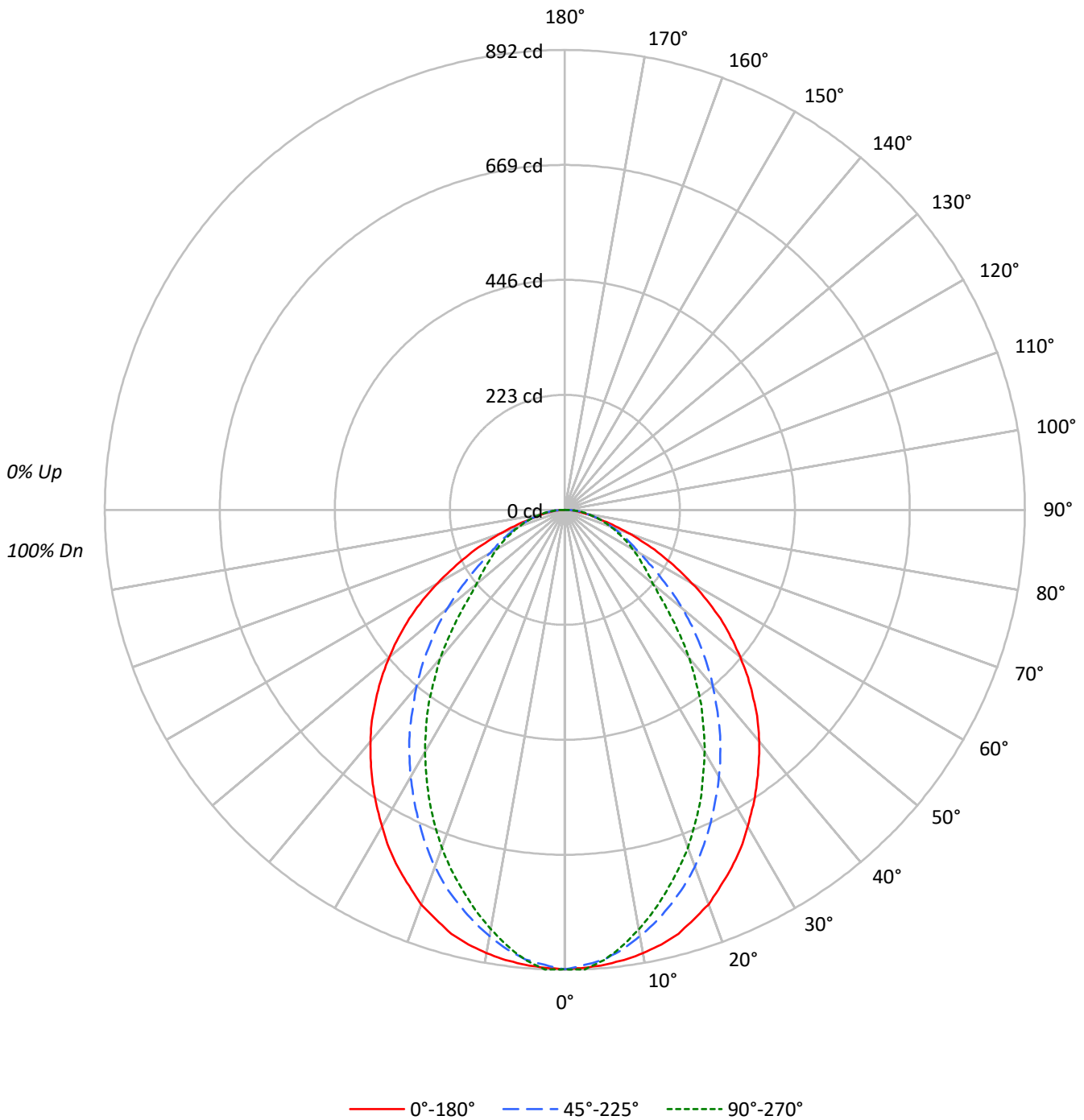
Lumens per Lamp: N/A
Luminaire Lumens: 1718.0 lumens
Efficiency: N/A
Efficacy: 55.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1060693

CATALOG NUMBER: S124RDR-H1020D940-X4F0-XX-UDD-WVL-B

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	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°	7673	7673	7673
5°	7656	7566	7575
10°	7635	7342	7223
15°	7588	7066	6814
20°	7464	6755	6390
25°	7271	6356	5909
30°	7048	5944	5392
35°	6824	5514	4843
40°	6591	5026	4226
45°	6298	4513	3532
50°	5947	3983	2987
55°	5532	3379	2767
60°	4905	2868	2614
65°	4181	2645	2474
70°	3268	2452	2347
75°	2229	2266	2266
80°	1919	2127	2182
85°	1660	2065	2272

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6298 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.9	4.8
10°-20°	225.1	13.1
20°-30°	312.5	18.2
30°-40°	335.0	19.5
40°-50°	296.8	17.3
50°-60°	223.7	13.0
60°-70°	144.8	8.4
70°-80°	74.3	4.3
80°-90°	22.8	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°	620.6	36.1
0°-40°	955.6	55.6
0°-60°	1476.0	85.9
0°-90°	1718.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1718.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	886	887	875	876	876	84
15°	851	832	793	773	764	239
25°	765	724	669	633	622	352
35°	649	590	524	477	461	406
45°	517	450	371	313	290	399
55°	368	307	225	190	184	327
65°	205	165	130	122	121	203
75°	67	70	68	68	68	79
85°	17	18	21	23	23	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	891.0	891.0	891.0	891.0	891.0
2.5°	888.9	892.0	883.6	889.9	892.0
5°	885.7	886.8	875.3	876.3	876.3
7.5°	880.5	878.4	859.6	854.3	853.3
10°	873.2	866.9	839.7	829.2	826.1
12.5°	863.7	852.2	817.7	803.0	796.7
15°	851.2	832.3	792.6	772.7	764.3
17.5°	832.3	808.3	766.4	741.3	731.8
20°	814.5	782.1	737.1	705.7	697.3
22.5°	789.4	754.9	703.6	670.1	659.6
25°	765.3	724.5	669.0	633.4	621.9
27.5°	739.2	693.1	633.4	595.7	581.1
30°	708.8	659.6	597.8	558.0	542.3
32.5°	679.5	627.1	561.2	517.2	500.4
35°	649.1	590.5	524.5	477.4	460.7
37.5°	617.7	555.9	483.7	437.6	415.6
40°	586.3	521.4	447.1	394.7	375.9
42.5°	553.8	485.8	409.4	354.9	330.8
45°	517.2	450.2	370.6	313.0	290.0
47.5°	481.6	415.6	335.0	272.2	251.3
50°	443.9	379.0	297.3	236.6	223.0
52.5°	406.2	341.3	260.7	209.4	203.1
55°	368.5	306.8	225.1	189.5	184.3
57.5°	326.7	271.2	193.7	171.7	167.5
60°	284.8	232.4	166.5	155.0	151.8
62.5°	243.9	198.9	147.6	138.2	136.1
65°	205.2	165.4	129.8	122.5	121.4
67.5°	167.5	136.1	113.1	108.9	106.8
70°	129.8	108.9	97.4	95.3	93.2
72.5°	96.3	87.9	82.7	81.7	80.6
75°	67.0	70.1	68.1	68.1	68.1
77.5°	53.4	54.4	55.5	56.5	55.5
80°	38.7	41.9	42.9	45.0	44.0
82.5°	27.2	29.3	32.5	33.5	34.5
85°	16.8	17.8	20.9	23.0	23.0
87.5°	7.3	8.4	10.5	12.6	13.6
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	17.52	19.02	17.88	19.33	19.65	14.08	15.58	14.45	15.89	16.21
	3H	18.72	20.07	19.10	20.40	20.76	15.78	17.12	16.16	17.45	17.81
	4H	19.03	20.29	19.43	20.64	21.02	16.46	17.72	16.86	18.07	18.45
	6H	19.23	20.40	19.65	20.76	21.16	17.01	18.17	17.42	18.54	18.93
	8H	19.29	20.40	19.72	20.79	21.19	17.22	18.33	17.65	18.72	19.12
	12H	19.32	20.38	19.75	20.77	21.20	17.40	18.46	17.83	18.84	19.27
4H	2H	17.66	18.92	18.06	19.27	19.65	14.74	16.00	15.14	16.35	16.73
	3H	19.06	20.11	19.47	20.51	20.91	16.65	17.70	17.06	18.10	18.50
	4H	19.49	20.43	19.92	20.84	21.28	17.46	18.40	17.89	18.81	19.25
	6H	19.81	20.63	20.27	21.07	21.53	18.14	18.96	18.60	19.40	19.86
	8H	19.91	20.68	20.37	21.12	21.59	18.42	19.18	18.88	19.63	20.09
	12H	19.98	20.66	20.46	21.14	21.61	18.65	19.33	19.13	19.81	20.28
8H	4H	19.62	20.38	20.08	20.82	21.29	17.77	18.54	18.24	18.98	19.45
	6H	20.04	20.67	20.53	21.16	21.64	18.60	19.23	19.10	19.72	20.20
	8H	20.19	20.76	20.71	21.27	21.76	18.97	19.53	19.48	20.04	20.53
	12H	20.32	20.82	20.83	21.32	21.88	19.30	19.80	19.81	20.29	20.86
12H	4H	19.62	20.30	20.10	20.78	21.25	17.80	18.48	18.28	18.96	19.43
	6H	20.06	20.63	20.58	21.14	21.63	18.66	19.23	19.18	19.74	20.23
	8H	20.27	20.77	20.78	21.26	21.83	19.09	19.59	19.60	20.09	20.65