

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056210

Luminaire Tested: S124R3DR-H795D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056210
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H795D927-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

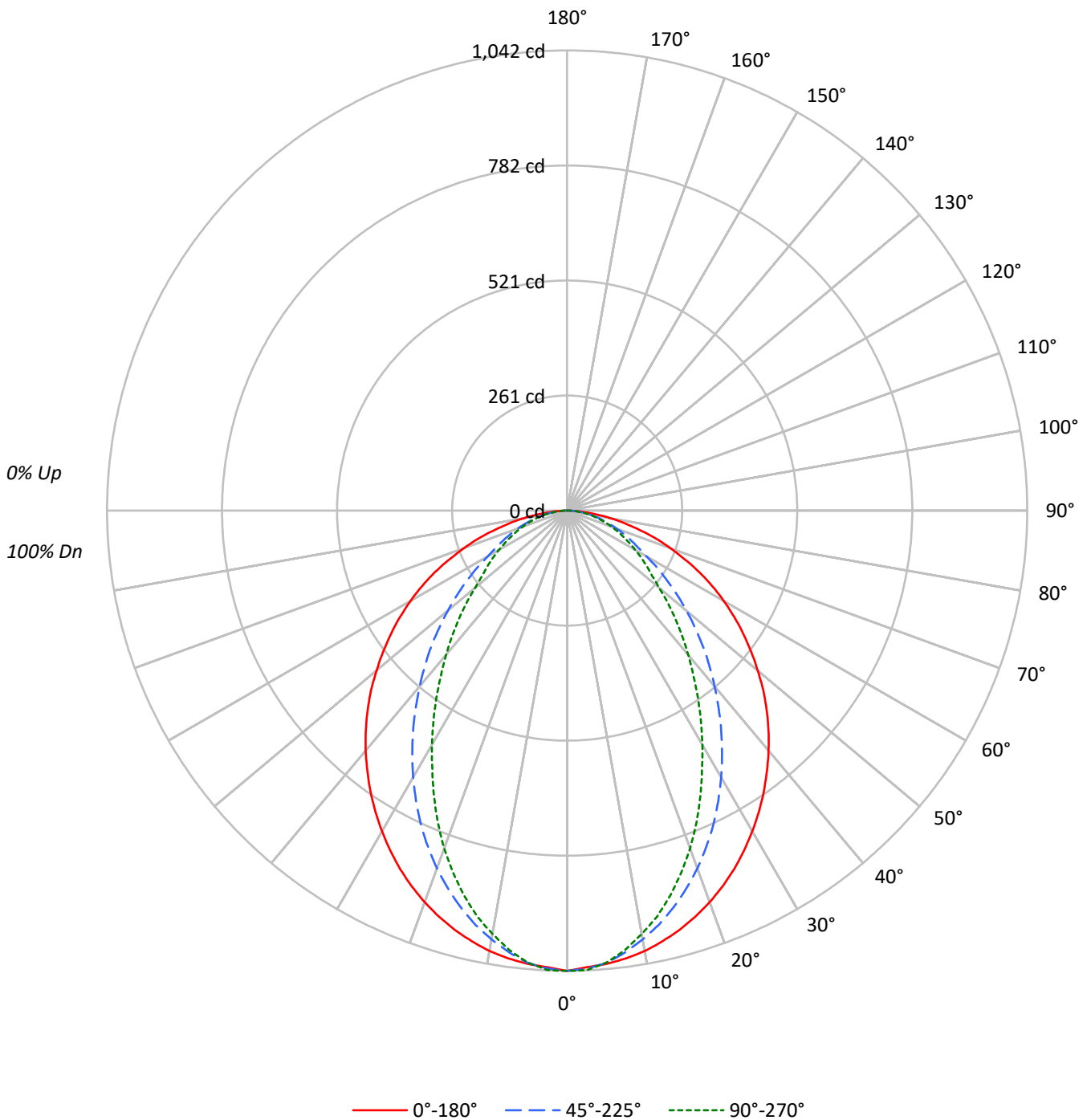
Lumens per Lamp: N/A
Luminaire Lumens: 2076.4 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9217	9217	9217
5°	9144	9123	9117
10°	9091	8850	8740
15°	8995	8517	8257
20°	8878	8112	7658
25°	8733	7648	6959
30°	8560	7119	6250
35°	8379	6566	5564
40°	8190	5994	4922
45°	7990	5439	4326
50°	7745	4854	3736
55°	7508	4268	3394
60°	7243	3662	3148
65°	6916	3322	2937
70°	6424	3074	2776
75°	5818	2828	2620
80°	5076	2617	2459
85°	3895	2414	2252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7990 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.1	4.7
10°-20°	263.3	12.7
20°-30°	364.5	17.6
30°-40°	391.3	18.8
40°-50°	355.8	17.1
50°-60°	280.2	13.5
60°-70°	191.8	9.2
70°-80°	103.2	5.0
80°-90°	29.2	1.4
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°	724.9	34.9
0°-40°	1116.1	53.8
0°-60°	1752.2	84.4
0°-90°	2076.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2076.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1042	1042	1042	1042	1042	
5°	1030	1042	1028	1023	1027	98
15°	983	972	930	905	902	277
25°	895	858	784	727	713	412
35°	776	716	608	535	516	486
45°	639	558	435	360	346	493
55°	487	394	277	223	220	436
65°	331	236	159	141	140	326
75°	170	104	83	76	77	182
85°	38	26	24	22	22	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1042.5	1042.5	1042.5	1042.5	1042.5
2.5°	1034.9	1047.1	1037.9	1039.5	1041.0
5°	1030.3	1041.8	1027.9	1022.6	1027.2
7.5°	1022.6	1030.3	1008.8	998.8	1003.4
10°	1012.6	1014.1	985.8	971.2	973.5
12.5°	998.8	995.0	960.4	939.7	941.3
15°	982.7	971.9	930.5	905.2	902.1
17.5°	964.3	946.6	897.5	865.3	859.2
20°	943.6	919.8	862.2	820.8	813.9
22.5°	920.6	889.9	823.9	774.8	764.8
25°	895.2	858.4	784.0	727.2	713.4
27.5°	867.6	824.7	741.0	678.9	661.3
30°	838.5	789.4	697.3	630.6	612.2
32.5°	808.6	753.3	652.8	582.2	563.1
35°	776.3	715.7	608.3	534.7	515.5
37.5°	743.3	676.6	563.1	488.7	468.7
40°	709.6	637.5	519.3	442.6	426.5
42.5°	675.1	597.6	476.4	399.7	385.1
45°	639.0	557.7	435.0	359.8	346.0
47.5°	602.2	517.0	392.8	322.2	309.2
50°	563.1	476.4	352.9	285.4	271.6
52.5°	525.5	435.0	314.5	249.3	242.4
55°	487.1	394.3	276.9	223.2	220.2
57.5°	448.8	353.6	242.4	202.5	199.5
60°	409.6	313.8	207.1	181.0	178.0
62.5°	370.5	274.6	181.0	160.3	158.8
65°	330.6	236.3	158.8	141.2	140.4
67.5°	288.4	199.5	138.8	124.3	123.5
70°	248.5	162.6	118.9	107.4	107.4
72.5°	211.0	128.9	100.5	91.3	91.3
75°	170.3	103.6	82.8	75.9	76.7
77.5°	134.2	81.3	66.7	62.1	62.1
80°	99.7	60.6	51.4	47.6	48.3
82.5°	67.5	42.2	36.8	34.5	34.5
85°	38.4	26.1	23.8	22.2	22.2
87.5°	13.8	12.3	11.5	10.0	10.7
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	18.86	20.38	19.22	20.70	21.01	14.64	16.16	15.00	16.47	16.79
	3H	20.63	22.00	21.01	22.33	22.69	16.25	17.62	16.62	17.94	18.31
	4H	21.30	22.59	21.70	22.94	23.32	16.88	18.16	17.28	18.51	18.89
	6H	21.81	23.00	22.23	23.37	23.76	17.38	18.57	17.79	18.93	19.32
	8H	21.98	23.11	22.40	23.50	23.90	17.55	18.68	17.97	19.07	19.47
	12H	22.08	23.16	22.51	23.54	23.97	17.67	18.75	18.10	19.14	19.56
4H	2H	18.95	20.24	19.35	20.59	20.97	15.35	16.64	15.75	16.99	17.37
	3H	20.90	21.97	21.31	22.37	22.77	17.16	18.23	17.57	18.63	19.03
	4H	21.65	22.62	22.09	23.03	23.47	17.90	18.86	18.33	19.28	19.72
	6H	22.29	23.13	22.75	23.57	24.03	18.51	19.35	18.97	19.80	20.26
	8H	22.51	23.29	22.97	23.74	24.20	18.73	19.52	19.19	19.96	20.43
	12H	22.66	23.36	23.15	23.84	24.31	18.90	19.60	19.38	20.08	20.55
8H	4H	21.71	22.50	22.17	22.94	23.41	18.29	19.07	18.75	19.52	19.98
	6H	22.41	23.06	22.91	23.55	24.03	19.02	19.67	19.51	20.16	20.64
	8H	22.68	23.26	23.19	23.77	24.26	19.31	19.89	19.82	20.40	20.89
	12H	22.90	23.41	23.41	23.90	24.47	19.55	20.07	20.06	20.56	21.12
12H	4H	21.70	22.40	22.18	22.88	23.35	18.34	19.04	18.82	19.52	19.99
	6H	22.40	22.99	22.92	23.50	23.98	19.10	19.68	19.61	20.19	20.68
	8H	22.71	23.23	23.22	23.72	24.28	19.45	19.97	19.96	20.46	21.02