

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: P1056200

Luminaire Tested: S124R3DR-H795D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056200
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H795D835-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

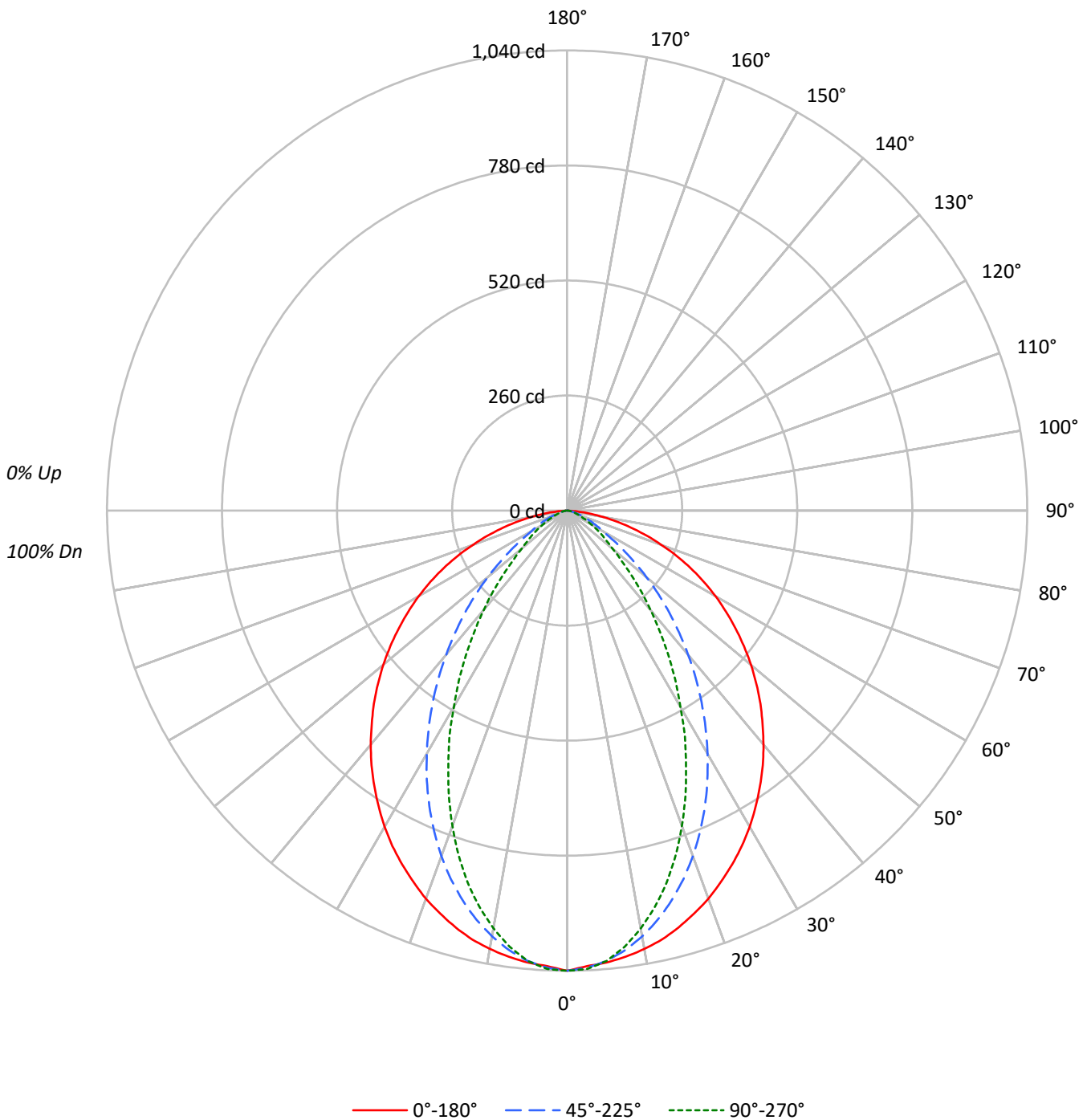
Lumens per Lamp: N/A
Luminaire Lumens: 1681.7 lumens
Efficiency: N/A
Efficacy: 70.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9195	9195	9195
5°	9101	9067	9067
10°	9033	8772	8607
15°	8925	8350	7960
20°	8783	7818	7134
25°	8606	7189	6198
30°	8424	6476	5220
35°	8205	5717	4296
40°	7968	4906	3386
45°	7725	4080	2531
50°	7459	3210	1851
55°	7165	2374	1478
60°	6849	1644	1130
65°	6441	1276	831
70°	5832	902	651
75°	5093	629	495
80°	4094	494	443
85°	2262	396	396

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7725 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.5	5.7
10°-20°	257.8	15.3
20°-30°	343.8	20.4
30°-40°	346.2	20.6
40°-50°	283.9	16.9
50°-60°	194.0	11.5
60°-70°	108.4	6.4
70°-80°	43.0	2.6
80°-90°	8.2	0.5
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°	698.0	41.5
0°-40°	1044.2	62.1
0°-60°	1522.1	90.5
0°-90°	1681.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1681.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1040	1040	1040	1040	1040	
5°	1026	1037	1022	1017	1022	97
15°	975	964	912	880	870	275
25°	882	839	737	662	635	406
35°	760	680	530	429	398	475
45°	618	504	326	230	202	476
55°	465	326	154	103	96	416
65°	308	155	61	44	40	304
75°	149	41	18	16	14	160
85°	22	4	4	4	4	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1040.0	1040.0	1040.0	1040.0	1040.0
2.5°	1030.3	1042.9	1034.2	1035.2	1037.1
5°	1025.5	1037.1	1021.6	1016.8	1021.6
7.5°	1016.8	1025.5	1002.3	992.6	994.5
10°	1006.1	1009.0	977.1	960.6	958.7
12.5°	992.6	988.7	947.1	922.9	917.0
15°	975.1	964.5	912.2	880.2	869.6
17.5°	954.8	936.4	873.5	831.8	816.3
20°	933.5	906.4	830.9	777.6	758.2
22.5°	908.3	874.4	785.3	720.5	698.2
25°	882.2	838.6	736.9	662.4	635.3
27.5°	855.1	801.8	686.6	603.3	576.2
30°	825.1	762.1	634.3	544.2	511.3
32.5°	793.1	721.4	582.0	486.1	455.1
35°	760.2	679.8	529.7	429.0	398.0
37.5°	726.3	637.2	477.4	374.8	343.8
40°	690.4	593.6	425.1	323.4	293.4
42.5°	653.7	549.1	374.8	275.0	246.9
45°	617.8	504.5	326.3	229.5	202.4
47.5°	580.1	460.0	278.9	186.9	163.7
50°	542.3	415.4	233.4	150.1	134.6
52.5°	503.6	370.9	191.7	123.0	112.3
55°	464.8	326.3	154.0	102.6	95.9
57.5°	426.1	281.8	119.1	87.2	79.4
60°	387.3	238.2	93.0	70.7	63.9
62.5°	347.6	194.6	76.5	56.2	50.4
65°	307.9	154.9	61.0	43.6	39.7
67.5°	268.2	118.1	46.5	33.9	31.0
70°	225.6	84.2	34.9	26.1	25.2
72.5°	188.8	57.1	25.2	20.3	19.4
75°	149.1	40.7	18.4	15.5	14.5
77.5°	115.2	26.1	13.6	12.6	11.6
80°	80.4	14.5	9.7	8.7	8.7
82.5°	49.4	7.7	6.8	5.8	5.8
85°	22.3	3.9	3.9	3.9	3.9
87.5°	3.9	1.9	1.9	1.9	1.9
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	18.43	19.84	18.80	20.15	20.47	9.53	10.93	9.89	11.25	11.56
	3H	20.02	21.27	20.40	21.60	21.96	10.12	11.37	10.50	11.70	12.06
	4H	20.61	21.78	21.01	22.13	22.51	10.27	11.44	10.68	11.79	12.17
	6H	21.04	22.12	21.46	22.49	22.88	10.38	11.46	10.79	11.82	12.22
	8H	21.16	22.18	21.59	22.57	22.97	10.40	11.42	10.83	11.81	12.21
	12H	21.20	22.18	21.63	22.56	22.99	10.41	11.38	10.84	11.77	12.20
4H	2H	18.29	19.46	18.69	19.81	20.19	10.11	11.28	10.51	11.63	12.01
	3H	19.93	20.89	20.35	21.29	21.70	10.82	11.78	11.23	12.18	12.58
	4H	20.54	21.40	20.97	21.82	22.26	11.02	11.88	11.46	12.30	12.74
	6H	21.03	21.77	21.49	22.22	22.68	11.19	11.93	11.65	12.38	12.84
	8H	21.17	21.87	21.64	22.31	22.78	11.22	11.91	11.69	12.36	12.83
	12H	21.25	21.86	21.73	22.34	22.82	11.25	11.86	11.73	12.34	12.82
8H	4H	20.43	21.12	20.90	21.57	22.04	11.29	11.99	11.76	12.43	12.90
	6H	20.91	21.48	21.41	21.97	22.45	11.50	12.06	12.00	12.56	13.04
	8H	21.06	21.57	21.58	22.08	22.57	11.56	12.06	12.07	12.58	13.07
	12H	21.15	21.60	21.66	22.09	22.66	11.62	12.06	12.13	12.56	13.13
12H	4H	20.39	21.01	20.88	21.49	21.96	11.32	11.94	11.81	12.42	12.89
	6H	20.86	21.37	21.38	21.88	22.37	11.53	12.04	12.05	12.55	13.04
	8H	21.02	21.47	21.54	21.97	22.53	11.62	12.07	12.13	12.56	13.13