

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: P1056211

Luminaire Tested: S124R3DR-H795D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056211
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H795D930-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

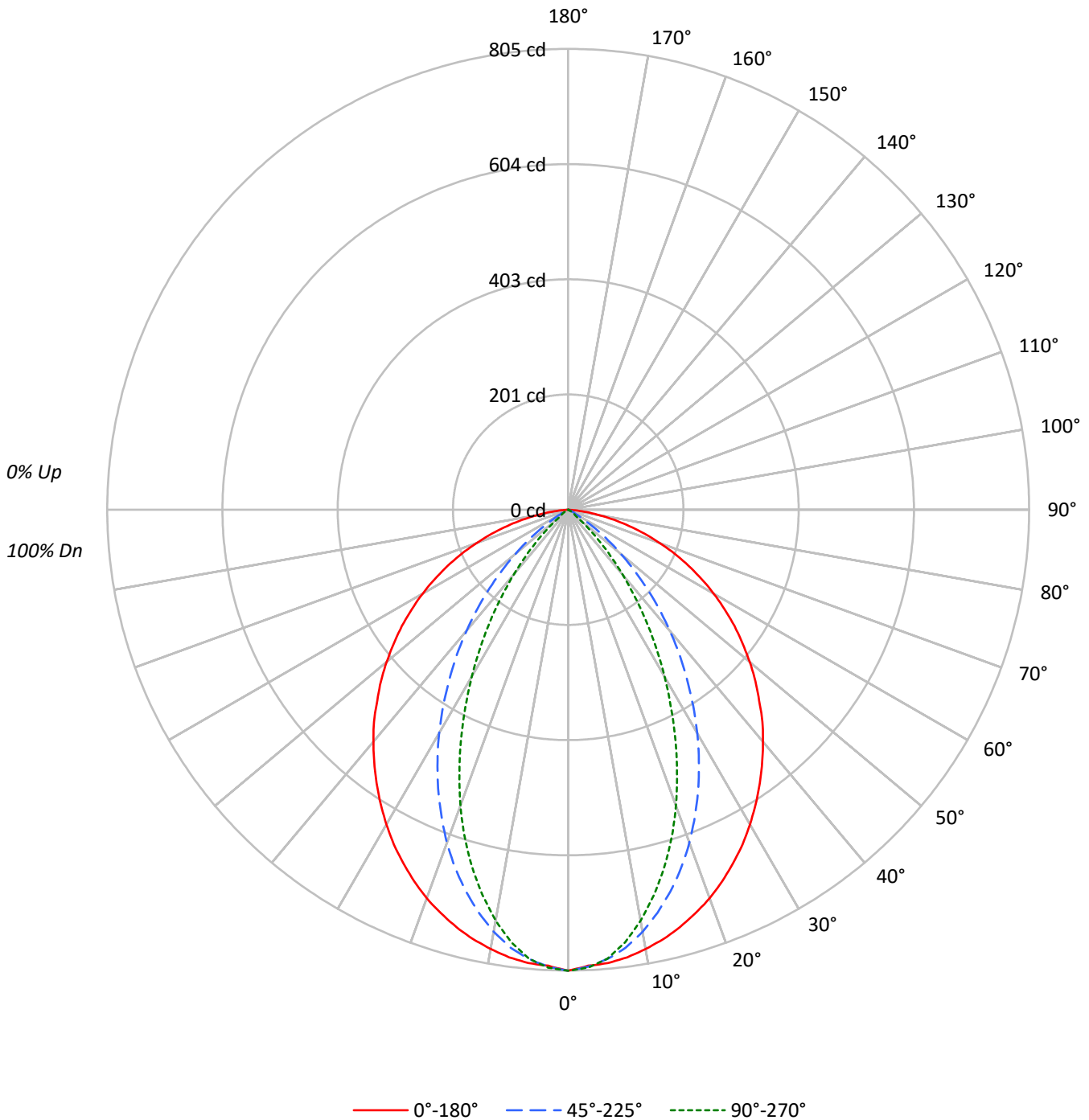
Lumens per Lamp: N/A
Luminaire Lumens: 1125.6 lumens
Efficiency: N/A
Efficacy: 47.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7120	7120	7120
5°	7056	6993	6986
10°	6995	6720	6542
15°	6909	6316	5926
20°	6797	5824	5178
25°	6646	5245	4321
30°	6481	4602	3433
35°	6297	3903	2557
40°	6106	3180	1704
45°	5893	2428	938
50°	5690	1662	260
55°	5464	900	171
60°	5193	279	97
65°	4856	182	50
70°	4387	83	21
75°	3775	27	0
80°	2856	0	0
85°	1197	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5893 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	6.6
10°-20°	195.0	17.3
20°-30°	252.0	22.4
30°-40°	240.9	21.4
40°-50°	180.2	16.0
50°-60°	107.2	9.5
60°-70°	54.4	4.8
70°-80°	18.9	1.7
80°-90°	2.6	0.2
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°	521.4	46.3
0°-40°	762.2	67.7
0°-60°	1049.6	93.3
0°-90°	1125.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1125.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	805	805	805	805	805	
5°	795	801	788	784	787	75
15°	755	739	690	658	647	213
25°	681	634	538	467	443	314
35°	583	503	362	269	237	365
45°	471	362	194	103	75	364
55°	354	220	58	13	11	316
65°	232	89	9	3	2	230
75°	110	12	1	1	0	117
85°	12	0	0	0	0	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	805.3	805.3	805.3	805.3	805.3
2.5°	797.4	806.9	799.0	799.8	800.6
5°	795.0	801.4	787.9	784.0	787.1
7.5°	788.7	791.1	771.4	761.1	761.9
10°	779.2	776.9	748.5	731.1	728.7
12.5°	768.2	760.3	720.8	695.6	690.0
15°	754.8	739.0	690.0	657.7	647.4
17.5°	739.0	716.1	656.1	613.4	600.8
20°	722.4	690.8	619.0	566.1	550.3
22.5°	702.7	662.4	578.7	516.3	496.6
25°	681.3	634.0	537.7	466.6	442.9
27.5°	659.2	603.2	494.2	416.1	388.4
30°	634.8	570.8	450.8	364.8	336.3
32.5°	609.5	537.7	405.8	317.4	285.8
35°	583.4	502.9	361.6	269.2	236.9
37.5°	556.6	468.2	319.0	223.4	190.3
40°	529.0	432.7	275.5	180.0	147.6
42.5°	502.1	397.1	234.5	139.0	109.0
45°	471.3	361.6	194.2	103.4	75.0
47.5°	443.7	326.9	155.5	70.3	44.2
50°	413.7	289.8	120.8	41.1	18.9
52.5°	383.7	255.0	88.4	18.2	14.2
55°	354.5	220.3	58.4	13.4	11.1
57.5°	323.7	185.5	31.6	10.3	7.9
60°	293.7	151.6	15.8	7.9	5.5
62.5°	262.9	119.2	12.6	4.7	3.2
65°	232.1	89.2	8.7	3.2	2.4
67.5°	201.3	60.8	5.5	1.6	0.8
70°	169.7	37.1	3.2	0.8	0.8
72.5°	139.7	18.9	1.6	0.8	0.8
75°	110.5	11.8	0.8	0.8	0.0
77.5°	82.1	6.3	0.8	0.8	0.0
80°	56.1	2.4	0.0	0.0	0.0
82.5°	32.4	0.8	0.0	0.0	0.0
85°	11.8	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	17.27	18.60	17.64	18.92	19.23	0.00	0.00	0.00	0.00	0.00
	3H	18.82	19.99	19.20	20.32	20.69	0.00	0.00	0.00	0.00	0.00
	4H	19.41	20.51	19.81	20.86	21.24	0.00	0.00	0.00	0.00	0.00
	6H	19.83	20.83	20.24	21.20	21.60	0.00	0.00	0.00	0.00	0.00
	8H	19.93	20.88	20.36	21.27	21.67	0.00	0.00	0.00	0.00	0.00
	12H	19.95	20.86	20.38	21.24	21.67	0.00	0.00	0.00	0.00	0.00
4H	2H	17.05	18.15	17.45	18.50	18.88	0.00	0.00	0.00	0.00	0.00
	3H	18.61	19.51	19.03	19.91	20.32	0.00	0.00	0.00	0.00	0.00
	4H	19.20	20.00	19.63	20.42	20.86	0.00	0.00	0.00	0.00	0.00
	6H	19.66	20.35	20.12	20.79	21.26	0.00	0.00	0.00	0.00	0.00
	8H	19.78	20.42	20.25	20.87	21.34	0.00	0.00	0.00	0.00	0.00
	12H	19.82	20.38	20.31	20.87	21.34	0.00	0.00	0.00	0.00	0.00
8H	4H	19.06	19.70	19.53	20.15	20.62	0.00	0.00	0.00	0.00	0.14
	6H	19.50	20.02	20.01	20.52	21.00	0.00	0.00	0.00	0.00	0.00
	8H	19.62	20.09	20.14	20.60	21.10	0.00	0.00	0.00	0.00	0.00
	12H	19.67	20.08	20.18	20.58	21.15	0.00	0.00	0.00	0.00	0.00
12H	4H	19.02	19.58	19.50	20.06	20.54	0.00	0.00	0.00	0.04	0.51
	6H	19.44	19.91	19.96	20.42	20.92	0.00	0.00	0.00	0.00	0.36
	8H	19.58	19.99	20.09	20.48	21.06	0.00	0.00	0.00	0.00	0.32