

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: P1056038

Luminaire Tested: S124R3DR-S575D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056038
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-S575D835-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

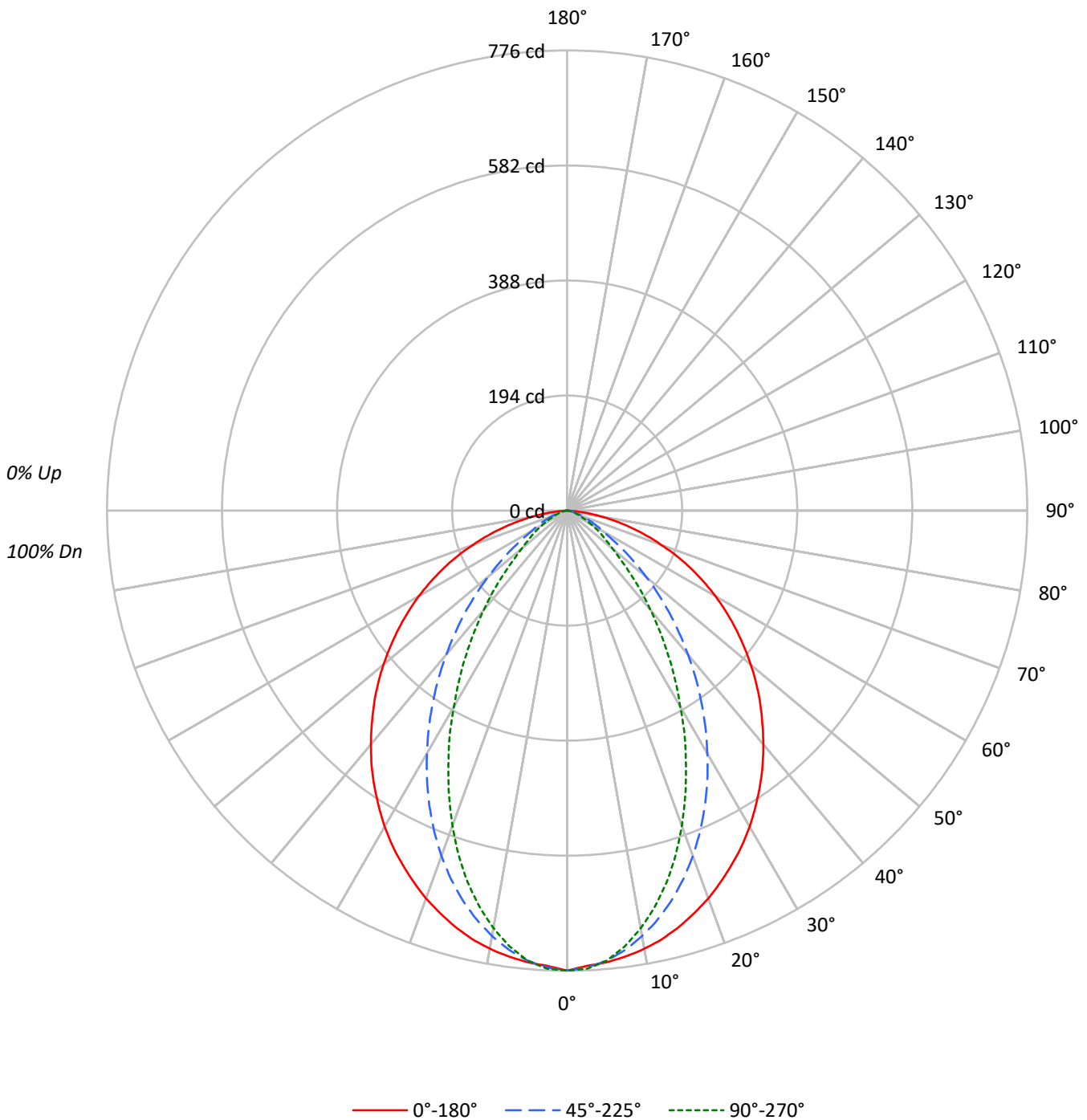
Lumens per Lamp: N/A
Luminaire Lumens: 1254.1 lumens
Efficiency: N/A
Efficacy: 65.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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°	6857	6857	6857
5°	6787	6762	6762
10°	6736	6541	6418
15°	6656	6227	5936
20°	6549	5830	5320
25°	6418	5362	4621
30°	6282	4829	3893
35°	6119	4263	3203
40°	5943	3659	2525
45°	5760	3043	1887
50°	5562	2393	1381
55°	5343	1770	1102
60°	5109	1225	843
65°	4803	952	619
70°	4351	672	486
75°	3799	468	369
80°	3050	367	331
85°	1684	294	294

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5760 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.9	5.7
10°-20°	192.2	15.3
20°-30°	256.4	20.4
30°-40°	258.1	20.6
40°-50°	211.7	16.9
50°-60°	144.7	11.5
60°-70°	80.9	6.4
70°-80°	32.1	2.6
80°-90°	6.1	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°	520.5	41.5
0°-40°	778.7	62.1
0°-60°	1135.1	90.5
0°-90°	1254.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1254.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	776	776	776	776	776	
5°	765	773	762	758	762	73
15°	727	719	680	656	648	205
25°	658	625	550	494	474	303
35°	567	507	395	320	297	354
45°	461	376	243	171	151	355
55°	347	243	115	76	72	310
65°	230	116	46	32	30	227
75°	111	30	14	12	11	119
85°	17	3	3	3	3	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	775.6	775.6	775.6	775.6	775.6
2.5°	768.4	777.7	771.2	772.0	773.4
5°	764.7	773.4	761.9	758.3	761.9
7.5°	758.3	764.7	747.4	740.2	741.6
10°	750.3	752.5	728.6	716.4	714.9
12.5°	740.2	737.3	706.3	688.2	683.9
15°	727.2	719.3	680.3	656.4	648.5
17.5°	712.0	698.3	651.4	620.3	608.8
20°	696.1	675.9	619.6	579.9	565.4
22.5°	677.4	652.1	585.7	537.3	520.7
25°	657.9	625.4	549.6	493.9	473.7
27.5°	637.7	597.9	512.0	449.9	429.7
30°	615.3	568.3	473.0	405.8	381.3
32.5°	591.4	538.0	434.0	362.5	339.4
35°	566.9	506.9	395.0	319.9	296.8
37.5°	541.6	475.2	356.0	279.5	256.4
40°	514.9	442.7	317.0	241.2	218.8
42.5°	487.4	409.5	279.5	205.1	184.1
45°	460.7	376.2	243.4	171.1	150.9
47.5°	432.6	343.0	208.0	139.4	122.0
50°	404.4	309.8	174.0	111.9	100.4
52.5°	375.5	276.6	143.0	91.7	83.8
55°	346.6	243.4	114.8	76.5	71.5
57.5°	317.7	210.1	88.8	65.0	59.2
60°	288.9	177.6	69.3	52.7	47.7
62.5°	259.2	145.2	57.0	41.9	37.6
65°	229.6	115.5	45.5	32.5	29.6
67.5°	200.0	88.1	34.7	25.3	23.1
70°	168.3	62.8	26.0	19.5	18.8
72.5°	140.8	42.6	18.8	15.2	14.4
75°	111.2	30.3	13.7	11.6	10.8
77.5°	85.9	19.5	10.1	9.4	8.7
80°	59.9	10.8	7.2	6.5	6.5
82.5°	36.8	5.8	5.1	4.3	4.3
85°	16.6	2.9	2.9	2.9	2.9
87.5°	2.9	1.4	1.4	1.4	1.4
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	17.41	18.82	17.78	19.13	19.45	8.50	9.91	8.87	10.22	10.54
	3H	19.00	20.25	19.38	20.58	20.94	9.10	10.35	9.47	10.68	11.04
	4H	19.59	20.76	19.99	21.11	21.49	9.25	10.42	9.65	10.77	11.15
	6H	20.02	21.10	20.44	21.47	21.86	9.36	10.44	9.77	10.80	11.20
	8H	20.14	21.16	20.57	21.55	21.95	9.38	10.40	9.81	10.79	11.19
	12H	20.18	21.16	20.61	21.54	21.97	9.39	10.36	9.82	10.75	11.18
4H	2H	17.27	18.43	17.67	18.78	19.17	9.09	10.26	9.49	10.61	10.99
	3H	18.91	19.87	19.33	20.28	20.68	9.80	10.76	10.21	11.16	11.56
	4H	19.52	20.38	19.95	20.80	21.24	10.00	10.86	10.44	11.28	11.72
	6H	20.01	20.75	20.47	21.20	21.66	10.17	10.91	10.63	11.36	11.82
	8H	20.15	20.85	20.62	21.29	21.76	10.20	10.90	10.67	11.34	11.81
	12H	20.23	20.84	20.71	21.32	21.79	10.23	10.84	10.71	11.32	11.80
8H	4H	19.41	20.10	19.88	20.55	21.02	10.28	10.97	10.74	11.41	11.88
	6H	19.89	20.46	20.39	20.95	21.43	10.48	11.05	10.98	11.54	12.02
	8H	20.04	20.55	20.56	21.06	21.55	10.54	11.04	11.05	11.56	12.05
	12H	20.13	20.58	20.64	21.07	21.64	10.59	11.04	11.11	11.54	12.11
12H	4H	19.37	19.99	19.86	20.47	20.94	10.30	10.92	10.79	11.40	11.87
	6H	19.84	20.35	20.36	20.86	21.35	10.51	11.02	11.03	11.53	12.02
	8H	20.00	20.45	20.52	20.95	21.51	10.60	11.05	11.11	11.54	12.11