

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: P1056180

Luminaire Tested: S124R3DR-H575D850-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056180
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-H575D850-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

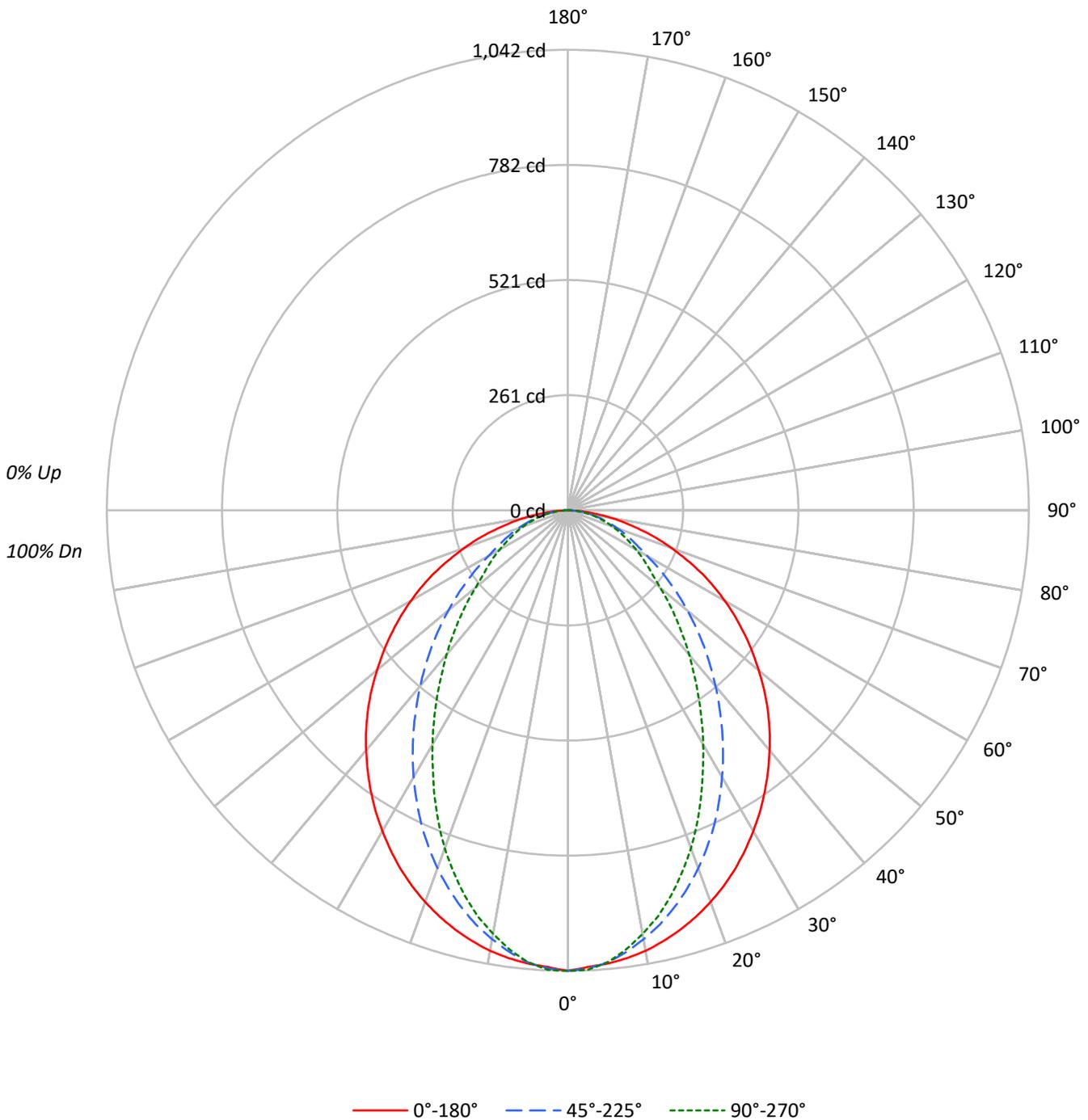
Lumens per Lamp: N/A
Luminaire Lumens: 2075.6 lumens
Efficiency: N/A
Efficacy: 120.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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°	9214	9214	9214
5°	9140	9119	9113
10°	9087	8847	8736
15°	8991	8514	8254
20°	8874	8109	7655
25°	8730	7645	6957
30°	8556	7116	6247
35°	8376	6563	5562
40°	8186	5991	4921
45°	7987	5437	4324
50°	7741	4851	3734
55°	7505	4267	3393
60°	7241	3660	3146
65°	6914	3320	2935
70°	6421	3074	2776
75°	5814	2828	2620
80°	5076	2617	2459
85°	3885	2414	2252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7987 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	4.7
10°-20°	263.2	12.7
20°-30°	364.4	17.6
30°-40°	391.1	18.8
40°-50°	355.7	17.1
50°-60°	280.1	13.5
60°-70°	191.7	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°	724.6	34.9
0°-40°	1115.7	53.8
0°-60°	1751.5	84.4
0°-90°	2075.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2075.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1042	1042	1042	1042	1042	
5°	1030	1041	1028	1022	1027	98
15°	982	972	930	905	902	277
25°	895	858	784	727	713	412
35°	776	715	608	534	515	485
45°	639	558	435	360	346	492
55°	487	394	277	223	220	435
65°	330	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°	1042.1	1042.1	1042.1	1042.1	1042.1
2.5°	1034.4	1046.7	1037.5	1039.0	1040.6
5°	1029.8	1041.3	1027.5	1022.2	1026.8
7.5°	1022.2	1029.8	1008.4	998.4	1003.0
10°	1012.2	1013.7	985.4	970.8	973.1
12.5°	998.4	994.6	960.1	939.4	940.9
15°	982.3	971.6	930.2	904.8	901.8
17.5°	963.9	946.3	897.2	865.0	858.8
20°	943.2	919.4	861.9	820.5	813.6
22.5°	920.2	889.5	823.6	774.5	764.5
25°	894.9	858.1	783.7	726.9	713.1
27.5°	867.3	824.3	740.7	678.6	661.0
30°	838.1	789.1	697.0	630.3	611.9
32.5°	808.2	753.0	652.6	582.0	562.8
35°	776.0	715.4	608.1	534.5	515.3
37.5°	743.0	676.3	562.8	488.5	468.5
40°	709.3	637.2	519.1	442.5	426.4
42.5°	674.8	597.4	476.2	399.5	384.9
45°	638.8	557.5	434.8	359.6	345.8
47.5°	602.0	516.8	392.6	322.1	309.0
50°	562.8	476.2	352.7	285.3	271.5
52.5°	525.3	434.8	314.4	249.2	242.3
55°	486.9	394.1	276.8	223.1	220.1
57.5°	448.6	353.5	242.3	202.4	199.4
60°	409.5	313.6	207.0	181.0	177.9
62.5°	370.4	274.5	181.0	160.3	158.7
65°	330.5	236.2	158.7	141.1	140.3
67.5°	288.3	199.4	138.8	124.2	123.5
70°	248.4	162.6	118.9	107.4	107.4
72.5°	210.9	128.8	100.5	91.3	91.3
75°	170.2	103.5	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	47.5	48.3
82.5°	67.5	42.2	36.8	34.5	34.5
85°	38.3	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	14.63	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	19.13	19.56
4H	2H	18.95	20.24	19.35	20.59	20.97	15.35	16.64	15.75	16.99	17.36
	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	22.08	23.03	23.47	17.90	18.86	18.33	19.28	19.72
	6H	22.29	23.13	22.74	23.57	24.03	18.51	19.35	18.97	19.80	20.25
	8H	22.51	23.29	22.97	23.74	24.20	18.73	19.51	19.19	19.96	20.43
	12H	22.66	23.36	23.14	23.84	24.31	18.90	19.60	19.38	20.08	20.55
8H	4H	21.71	22.49	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	20.63
	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	23.40	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	19.96	19.96	20.46	21.02