

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: P243129

Luminaire Tested: S122DRP-H290D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243129
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H290D930-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

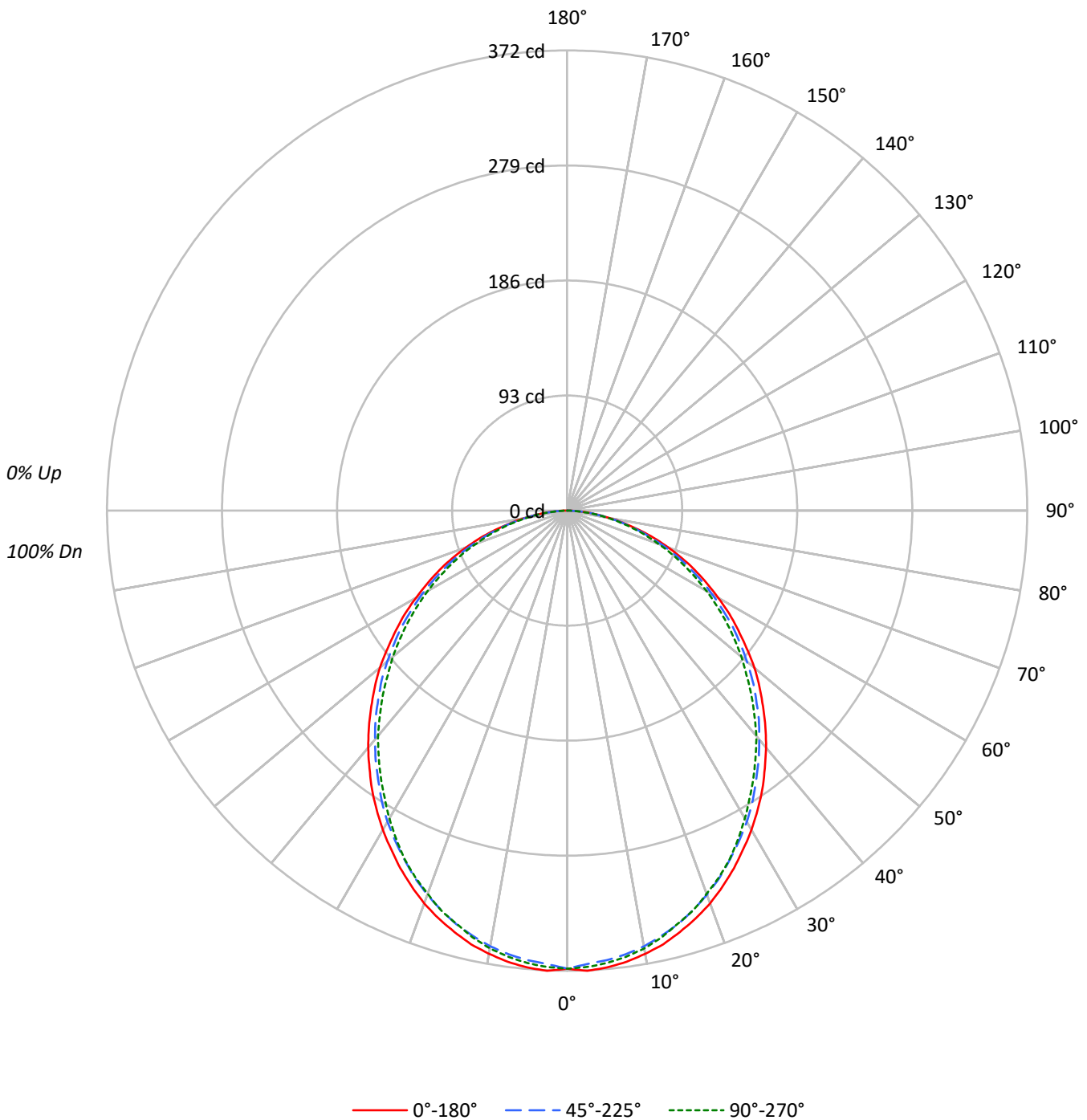
Lumens per Lamp: N/A
Luminaire Lumens: 942.3 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31
9	57	44	36	30	56	44	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7053	7053	7053
5°	7088	6977	7021
10°	7036	6918	6951
15°	6953	6825	6817
20°	6849	6697	6683
25°	6706	6543	6534
30°	6554	6389	6321
35°	6397	6190	6111
40°	6221	6007	5915
45°	6031	5819	5673
50°	5855	5624	5452
55°	5609	5416	5214
60°	5371	5162	4968
65°	5138	4890	4678
70°	4828	4583	4355
75°	4394	4217	4018
80°	3817	3708	3554
85°	3278	2907	2688

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6031 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	3.7
10°-20°	98.1	10.4
20°-30°	144.3	15.3
30°-40°	167.6	17.8
40°-50°	167.3	17.8
50°-60°	145.7	15.5
60°-70°	107.8	11.4
70°-80°	60.8	6.4
80°-90°	15.8	1.7
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°	277.3	29.4
0°-40°	444.9	47.2
0°-60°	757.9	80.4
0°-90°	942.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	942.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	370	370	370	370	370	
5°	371	369	365	368	367	35
15°	353	351	346	348	346	99
25°	319	316	311	311	311	147
35°	275	272	266	264	263	172
45°	224	222	216	213	211	173
55°	169	168	163	159	157	151
65°	114	112	108	105	104	113
75°	60	59	57	55	55	64
85°	15	14	13	13	12	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	370.3	370.3	370.3	370.3	370.3
2.5°	372.4	370.7	366.9	370.0	369.3
5°	370.7	369.0	364.9	367.9	367.2
7.5°	367.9	366.2	361.8	364.9	363.8
10°	363.8	361.8	357.7	359.7	359.4
12.5°	359.1	357.0	352.2	353.9	353.3
15°	352.6	350.9	346.1	347.5	345.7
17.5°	345.7	343.0	338.6	339.9	338.9
20°	337.9	335.2	330.4	331.1	329.7
22.5°	328.7	326.0	321.5	321.5	320.8
25°	319.1	316.4	311.3	310.9	310.9
27.5°	308.5	306.2	301.0	300.0	299.3
30°	298.0	295.9	290.5	288.4	287.4
32.5°	286.7	284.0	278.9	276.5	274.8
35°	275.1	272.0	266.2	263.8	262.8
37.5°	262.5	259.4	254.3	252.2	250.2
40°	250.2	247.4	241.6	238.6	237.9
42.5°	237.2	234.5	229.4	225.9	223.9
45°	223.9	221.5	216.0	212.6	210.6
47.5°	210.9	208.2	203.4	199.3	196.6
50°	197.6	194.9	189.8	185.0	184.0
52.5°	182.9	181.2	176.1	171.7	170.3
55°	168.9	167.6	163.1	158.7	157.0
57.5°	155.6	153.9	148.8	145.4	143.4
60°	141.0	139.9	135.5	131.7	130.4
62.5°	127.3	125.9	122.2	118.4	116.7
65°	114.0	112.3	108.5	105.1	103.8
67.5°	100.3	98.6	95.6	92.8	91.5
70°	86.7	85.3	82.3	79.9	78.2
72.5°	73.4	72.0	69.3	66.9	66.6
75°	59.7	59.4	57.3	55.3	54.6
77.5°	47.1	46.8	45.4	44.4	43.7
80°	34.8	34.8	33.8	32.8	32.4
82.5°	23.9	24.2	23.2	22.5	22.5
85°	15.0	14.3	13.3	12.6	12.3
87.5°	6.1	5.1	4.8	3.8	3.4
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	18.07	19.68	18.44	19.99	20.31	17.64	19.25	18.01	19.57	19.88
	3H	19.82	21.28	20.20	21.60	21.96	19.34	20.80	19.72	21.13	21.49
	4H	20.47	21.84	20.87	22.19	22.56	19.97	21.34	20.37	21.69	22.06
	6H	20.93	22.20	21.34	22.56	22.95	20.43	21.70	20.84	22.06	22.46
	8H	21.07	22.28	21.49	22.67	23.06	20.57	21.78	21.00	22.17	22.57
	12H	21.16	22.32	21.59	22.70	23.13	20.65	21.81	21.08	22.19	22.62
4H	2H	18.63	20.00	19.03	20.35	20.72	18.29	19.66	18.69	20.01	20.38
	3H	20.61	21.75	21.02	22.15	22.55	20.21	21.35	20.62	21.75	22.15
	4H	21.39	22.42	21.82	22.83	23.27	20.96	21.99	21.39	22.40	22.84
	6H	21.97	22.88	22.43	23.32	23.77	21.54	22.44	21.99	22.88	23.34
	8H	22.16	23.00	22.62	23.44	23.91	21.72	22.57	22.18	23.01	23.47
	12H	22.29	23.05	22.77	23.53	24.00	21.84	22.60	22.32	23.07	23.54
8H	4H	21.66	22.50	22.12	22.95	23.41	21.28	22.12	21.74	22.56	23.03
	6H	22.36	23.06	22.85	23.55	24.02	21.97	22.68	22.47	23.16	23.64
	8H	22.61	23.24	23.12	23.75	24.24	22.22	22.85	22.73	23.36	23.84
	12H	22.82	23.37	23.32	23.86	24.43	22.40	22.96	22.91	23.45	24.01
12H	4H	21.68	22.44	22.16	22.92	23.39	21.31	22.07	21.79	22.55	23.02
	6H	22.40	23.03	22.91	23.54	24.02	22.03	22.66	22.54	23.17	23.65
	8H	22.71	23.27	23.22	23.76	24.32	22.33	22.89	22.84	23.38	23.94