

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: P243232

Luminaire Tested: S122RDRP-H290D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243232
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H290D930-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

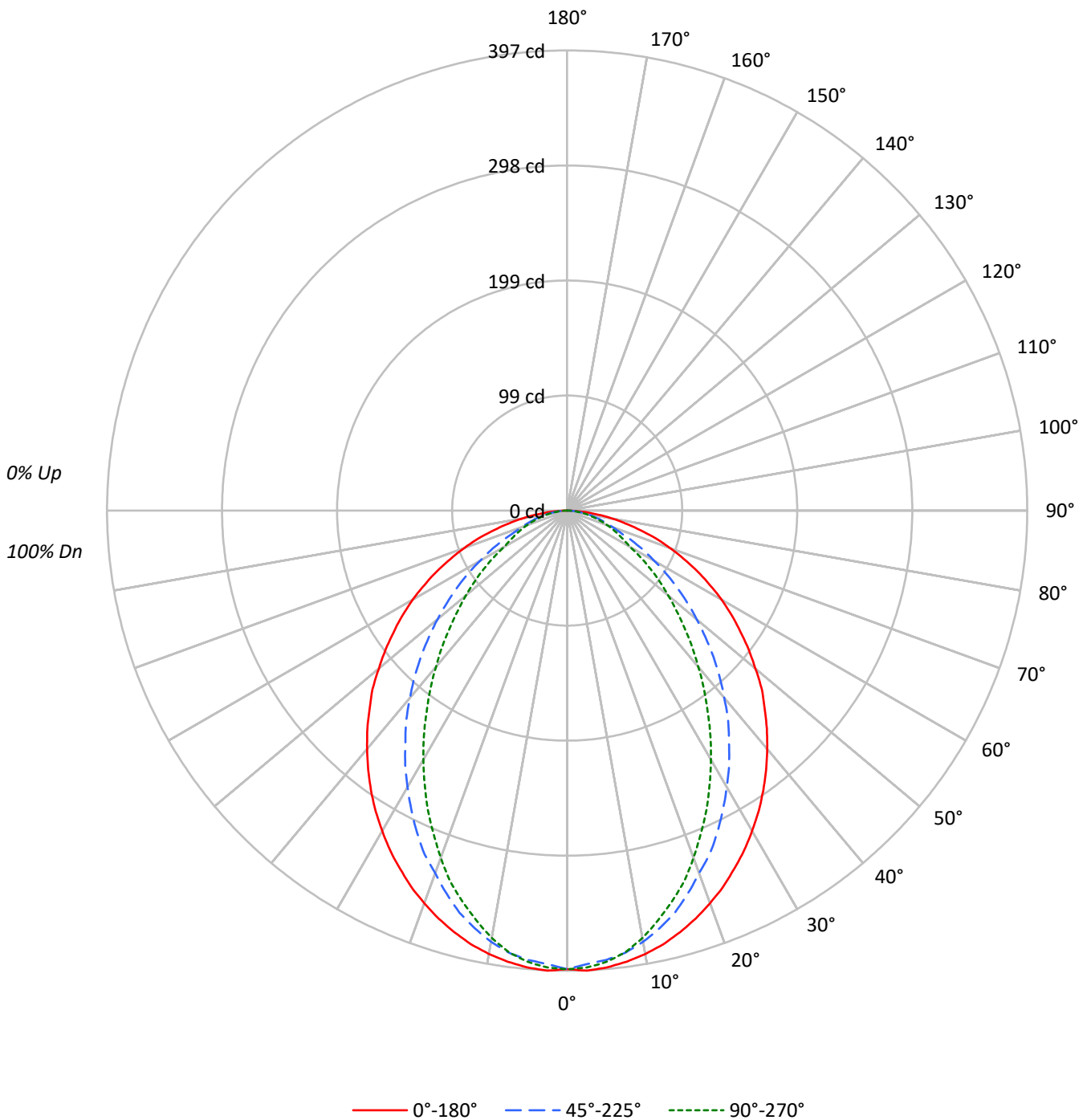
Lumens per Lamp: N/A
Luminaire Lumens: 811.3 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (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	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	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																												
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74																												
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64																												
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55																												
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49																												
6	74	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	37	49	42	37	48	42	37	47	41	37	35																												
9	60	47	39	34	59	47	39	34	46	39	34	44	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°	7535	7535	7535
5°	7564	7440	7472
10°	7512	7307	7241
15°	7424	7081	6886
20°	7305	6746	6462
25°	7167	6442	5983
30°	7018	6057	5457
35°	6857	5660	4913
40°	6679	5244	4379
45°	6492	4808	3852
50°	6282	4329	3378
55°	6064	3852	2912
60°	5863	3314	2381
65°	5598	2799	2199
70°	5263	2317	2055
75°	4798	2112	1884
80°	4311	1876	1689
85°	3584	1574	1486

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6492 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.1	4.6
10°-20°	101.5	12.5
20°-30°	142.4	17.6
30°-40°	155.2	19.1
40°-50°	142.6	17.6
50°-60°	111.9	13.8
60°-70°	73.0	9.0
70°-80°	37.8	4.7
80°-90°	9.8	1.2
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°	281.0	34.6
0°-40°	436.2	53.8
0°-60°	690.7	85.1
0°-90°	811.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	811.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	396	396	396	396	396	
5°	396	394	389	392	391	38
15°	376	372	359	352	349	106
25°	341	329	306	292	285	157
35°	295	275	243	221	211	184
45°	241	216	178	153	143	186
55°	183	155	116	94	88	164
65°	124	94	62	50	49	123
75°	65	41	29	26	26	70
85°	16	8	7	7	7	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	395.6	395.6	395.6	395.6	395.6
2.5°	397.3	395.6	391.5	395.2	394.6
5°	395.6	393.5	389.1	391.8	390.8
7.5°	392.5	390.5	384.7	386.0	384.3
10°	388.4	385.7	377.8	376.5	374.4
12.5°	383.3	379.5	369.0	364.9	362.1
15°	376.5	372.0	359.1	351.9	349.2
17.5°	369.0	362.5	346.4	338.2	335.5
20°	360.4	352.9	332.8	324.2	318.8
22.5°	351.5	342.0	321.2	307.9	301.4
25°	341.0	329.0	306.5	291.5	284.7
27.5°	330.7	316.7	291.1	273.7	266.2
30°	319.1	303.8	275.4	255.3	248.1
32.5°	307.5	289.8	260.1	238.2	230.0
35°	294.9	275.4	243.4	220.8	211.3
37.5°	281.9	261.8	228.0	203.1	193.9
40°	268.6	246.1	210.9	185.0	176.1
42.5°	255.0	232.1	194.9	168.3	159.7
45°	241.0	216.4	178.5	152.6	143.0
47.5°	227.7	201.0	161.8	137.2	128.0
50°	212.0	185.7	146.1	121.2	114.0
52.5°	197.6	170.3	130.7	106.8	100.7
55°	182.6	155.3	116.0	94.2	87.7
57.5°	168.6	139.6	101.4	81.6	75.4
60°	153.9	124.6	87.0	68.9	62.5
62.5°	138.6	109.2	74.4	57.3	55.3
65°	124.2	94.2	62.1	50.5	48.8
67.5°	108.9	80.2	49.5	44.4	42.7
70°	94.5	66.6	41.6	37.9	36.9
72.5°	80.5	53.6	35.2	32.1	31.1
75°	65.2	40.6	28.7	26.3	25.6
77.5°	51.9	28.7	22.9	21.2	20.5
80°	39.3	20.8	17.1	16.0	15.4
82.5°	27.0	14.0	11.9	11.3	10.9
85°	16.4	7.9	7.2	6.8	6.8
87.5°	6.5	3.1	3.1	2.7	2.7
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	18.26	19.79	18.63	20.10	20.41	14.15	15.67	14.52	15.99	16.30
	3H	20.03	21.40	20.41	21.72	22.08	15.45	16.81	15.82	17.14	17.50
	4H	20.69	21.97	21.09	22.32	22.70	15.95	17.23	16.35	17.58	17.96
	6H	21.18	22.36	21.59	22.73	23.12	16.34	17.52	16.75	17.89	18.28
	8H	21.35	22.47	21.77	22.86	23.26	16.46	17.59	16.88	17.97	18.38
	12H	21.46	22.54	21.89	22.92	23.35	16.54	17.62	16.97	18.00	18.43
4H	2H	18.36	19.65	18.76	19.99	20.37	14.86	16.14	15.26	16.49	16.86
	3H	20.30	21.37	20.71	21.77	22.17	16.33	17.39	16.74	17.79	18.19
	4H	21.05	22.00	21.48	22.42	22.86	16.94	17.89	17.37	18.31	18.75
	6H	21.64	22.47	22.10	22.91	23.37	17.43	18.26	17.89	18.70	19.16
	8H	21.85	22.63	22.32	23.07	23.54	17.59	18.37	18.05	18.81	19.28
	12H	22.02	22.71	22.50	23.19	23.66	17.71	18.40	18.19	18.88	19.35
8H	4H	21.07	21.85	21.54	22.29	22.76	17.30	18.08	17.76	18.52	18.99
	6H	21.71	22.35	22.21	22.84	23.32	17.89	18.53	18.39	19.02	19.50
	8H	21.96	22.54	22.47	23.05	23.53	18.11	18.69	18.63	19.20	19.69
	12H	22.17	22.69	22.68	23.18	23.74	18.29	18.80	18.80	19.30	19.86
12H	4H	21.06	21.75	21.54	22.23	22.70	17.34	18.04	17.82	18.51	18.99
	6H	21.69	22.27	22.20	22.78	23.27	17.95	18.53	18.47	19.04	19.53
	8H	21.97	22.49	22.48	22.98	23.54	18.23	18.74	18.74	19.23	19.80