

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: P243134

Luminaire Tested: S122DRP-H290D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243134
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-H290D935-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

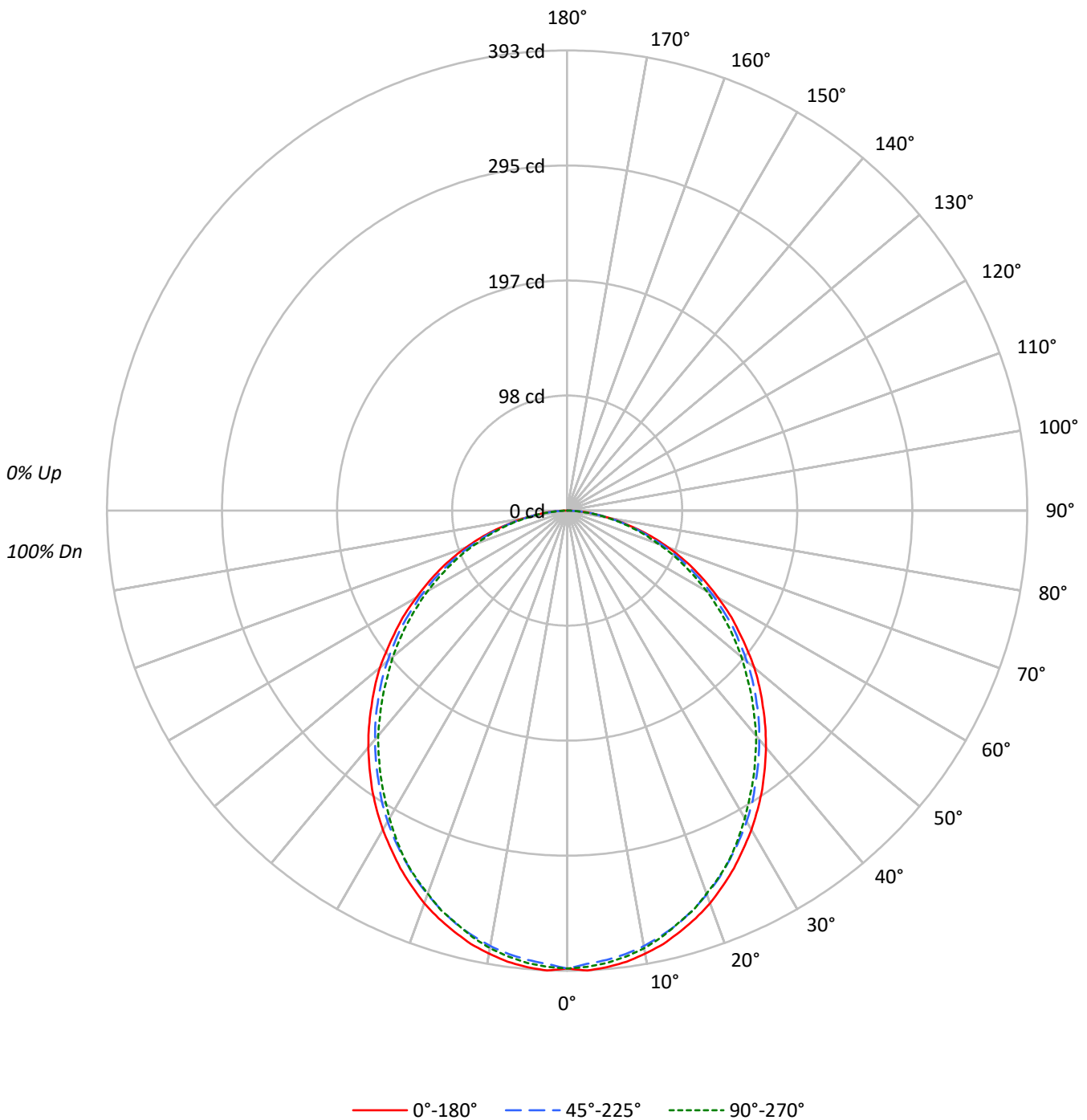
Lumens per Lamp: N/A
Luminaire Lumens: 995.1 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (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	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	43	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°	7450	7450	7450
5°	7484	7367	7415
10°	7431	7305	7340
15°	7342	7208	7200
20°	7232	7072	7058
25°	7083	6908	6902
30°	6922	6746	6675
35°	6755	6536	6453
40°	6569	6346	6246
45°	6368	6147	5991
50°	6184	5938	5758
55°	5924	5722	5506
60°	5672	5451	5246
65°	5427	5165	4940
70°	5101	4840	4595
75°	4644	4460	4246
80°	4037	3916	3751
85°	3475	3082	2841

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6368 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.8	3.7
10°-20°	103.6	10.4
20°-30°	152.4	15.3
30°-40°	176.9	17.8
40°-50°	176.7	17.8
50°-60°	153.9	15.5
60°-70°	113.8	11.4
70°-80°	64.2	6.4
80°-90°	16.7	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°	292.9	29.4
0°-40°	469.8	47.2
0°-60°	800.4	80.4
0°-90°	995.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	995.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	391	391	391	391	391	
5°	391	390	385	389	388	37
15°	372	370	366	367	365	105
25°	337	334	329	328	328	155
35°	290	287	281	279	278	182
45°	236	234	228	225	222	183
55°	178	177	172	168	166	160
65°	120	119	115	111	110	119
75°	63	63	61	58	58	67
85°	16	15	14	13	13	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	391.1	391.1	391.1	391.1	391.1
2.5°	393.2	391.4	387.5	390.7	390.0
5°	391.4	389.6	385.3	388.6	387.8
7.5°	388.6	386.8	382.1	385.3	384.2
10°	384.2	382.1	377.7	379.9	379.5
12.5°	379.2	377.0	372.0	373.8	373.1
15°	372.3	370.5	365.5	366.9	365.1
17.5°	365.1	362.2	357.6	359.0	357.9
20°	356.8	354.0	348.9	349.6	348.2
22.5°	347.1	344.2	339.5	339.5	338.8
25°	337.0	334.1	328.7	328.4	328.4
27.5°	325.8	323.3	317.9	316.8	316.1
30°	314.7	312.5	306.7	304.6	303.5
32.5°	302.8	299.9	294.5	292.0	290.2
35°	290.5	287.3	281.1	278.6	277.5
37.5°	277.2	273.9	268.5	266.4	264.2
40°	264.2	261.3	255.2	251.9	251.2
42.5°	250.5	247.6	242.2	238.6	236.4
45°	236.4	233.9	228.2	224.6	222.4
47.5°	222.8	219.9	214.8	210.5	207.6
50°	208.7	205.8	200.4	195.4	194.3
52.5°	193.2	191.4	186.0	181.3	179.9
55°	178.4	177.0	172.3	167.6	165.8
57.5°	164.4	162.6	157.2	153.5	151.4
60°	148.9	147.8	143.1	139.1	137.7
62.5°	134.4	133.0	129.0	125.1	123.3
65°	120.4	118.6	114.6	111.0	109.6
67.5°	106.0	104.2	100.9	98.0	96.6
70°	91.6	90.1	86.9	84.3	82.5
72.5°	77.5	76.1	73.2	70.6	70.3
75°	63.1	62.7	60.6	58.4	57.7
77.5°	49.7	49.4	47.9	46.9	46.1
80°	36.8	36.8	35.7	34.6	34.2
82.5°	25.2	25.6	24.5	23.8	23.8
85°	15.9	15.1	14.1	13.3	13.0
87.5°	6.5	5.4	5.0	4.0	3.6
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	19.87	18.63	20.19	20.50	17.83	19.44	18.20	19.76	20.07
	3H	20.02	21.47	20.39	21.80	22.16	19.53	20.99	19.91	21.31	21.67
	4H	20.66	22.03	21.06	22.38	22.75	20.16	21.53	20.56	21.87	22.25
	6H	21.12	22.39	21.53	22.75	23.14	20.62	21.89	21.03	22.25	22.64
	8H	21.26	22.47	21.68	22.86	23.26	20.76	21.97	21.18	22.36	22.76
	12H	21.35	22.51	21.78	22.89	23.32	20.84	22.00	21.27	22.38	22.81
4H	2H	18.82	20.19	19.22	20.54	20.91	18.48	19.85	18.88	20.19	20.57
	3H	20.80	21.94	21.21	22.34	22.74	20.39	21.54	20.80	21.94	22.34
	4H	21.58	22.61	22.01	23.03	23.46	21.14	22.18	21.57	22.59	23.03
	6H	22.16	23.07	22.62	23.51	23.96	21.73	22.63	22.18	23.07	23.53
	8H	22.35	23.19	22.81	23.64	24.10	21.91	22.75	22.37	23.20	23.66
	12H	22.48	23.24	22.96	23.72	24.19	22.03	22.78	22.51	23.26	23.73
8H	4H	21.85	22.69	22.31	23.14	23.60	21.46	22.31	21.93	22.75	23.22
	6H	22.55	23.25	23.04	23.74	24.22	22.16	22.86	22.65	23.35	23.83
	8H	22.80	23.43	23.31	23.94	24.43	22.41	23.04	22.92	23.55	24.03
	12H	23.01	23.57	23.52	24.06	24.62	22.59	23.14	23.09	23.63	24.20
12H	4H	21.87	22.63	22.35	23.11	23.58	21.50	22.26	21.98	22.73	23.20
	6H	22.59	23.22	23.10	23.73	24.22	22.22	22.85	22.73	23.35	23.84
	8H	22.90	23.46	23.41	23.95	24.51	22.52	23.08	23.03	23.57	24.13