

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: P242280

Luminaire Tested: S122DRP-S485D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242280
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S485D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

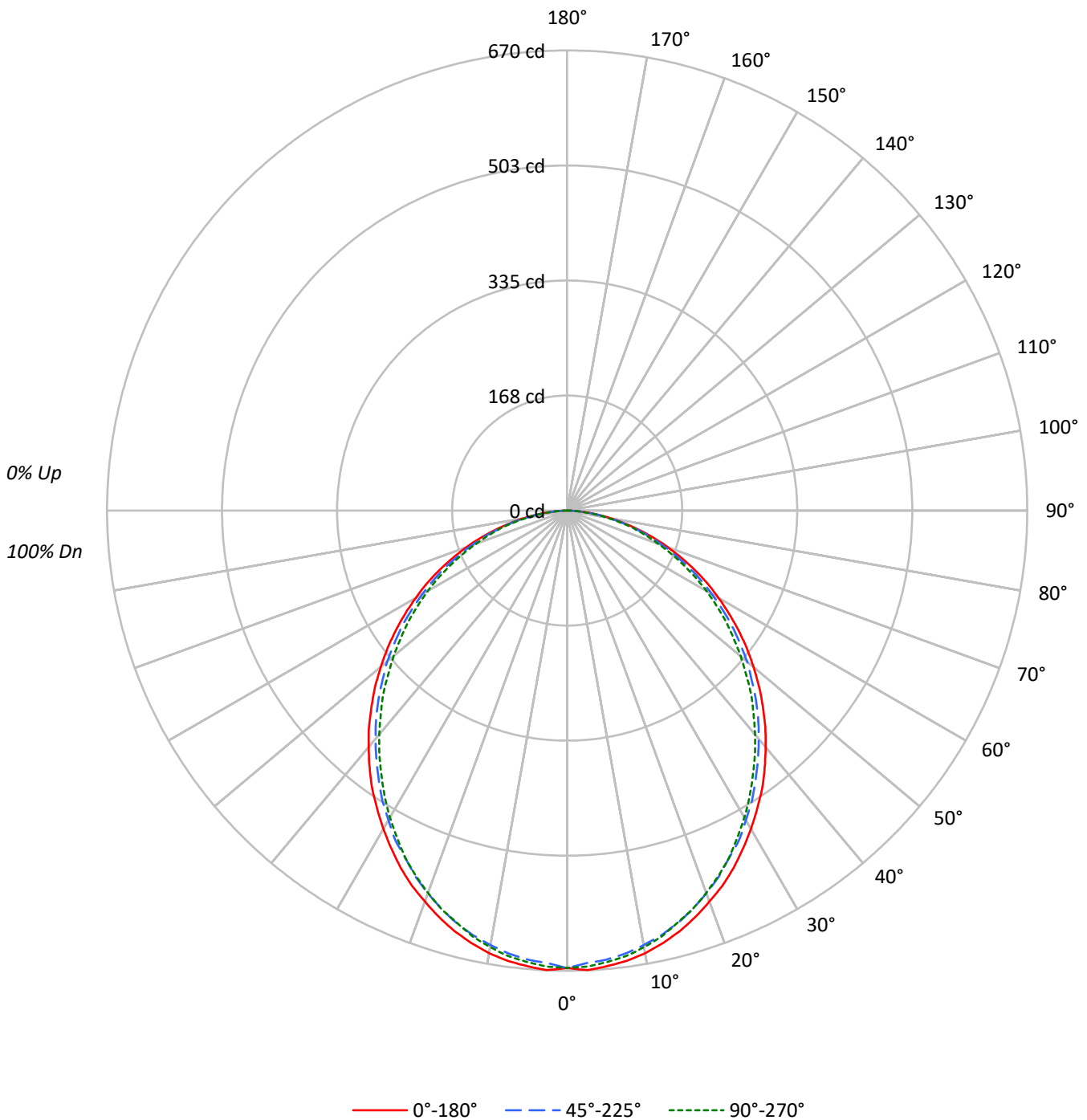
Lumens per Lamp: N/A
Luminaire Lumens: 1694.1 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
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	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100													100															
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84													84															
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71													71															
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60													60															
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51													51															
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45													45															
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39													39															
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35													35															
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31													31															
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28													28															
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26													26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12684	12684	12684
5°	12732	12549	12621
10°	12657	12421	12483
15°	12500	12260	12248
20°	12278	12018	12006
25°	12057	11721	11721
30°	11774	11448	11351
35°	11508	11122	10957
40°	11177	10794	10588
45°	10848	10468	10209
50°	10493	10132	9770
55°	10122	9737	9378
60°	9707	9269	8926
65°	9262	8802	8397
70°	8699	8237	7847
75°	7919	7588	7396
80°	7020	6812	6461
85°	5748	5464	4895

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10848 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.7	3.7
10°-20°	176.3	10.4
20°-30°	259.1	15.3
30°-40°	301.0	17.8
40°-50°	300.6	17.7
50°-60°	262.1	15.5
60°-70°	193.8	11.4
70°-80°	109.6	6.5
80°-90°	28.9	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°	498.1	29.4
0°-40°	799.1	47.2
0°-60°	1361.8	80.4
0°-90°	1694.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1694.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	666	663	656	661	660	63
15°	634	630	622	624	621	179
25°	574	569	558	559	558	264
35°	495	488	478	474	471	309
45°	403	398	389	382	379	311
55°	305	301	293	286	282	273
65°	206	202	195	190	186	203
75°	108	106	103	99	100	115
85°	26	26	25	23	22	31
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	665.9	665.9	665.9	665.9	665.9
2.5°	669.7	666.5	659.5	665.9	664.6
5°	665.9	663.3	656.3	661.4	660.1
7.5°	661.4	657.6	650.5	655.6	654.4
10°	654.4	649.9	642.2	647.3	645.4
12.5°	644.8	640.9	633.2	636.4	635.2
15°	633.9	630.0	621.7	624.3	621.1
17.5°	620.4	616.6	608.3	611.5	608.3
20°	605.7	601.9	592.9	594.8	592.3
22.5°	591.0	585.2	576.9	576.9	575.6
25°	573.7	568.6	557.7	559.0	557.7
27.5°	554.5	550.0	541.7	539.7	536.5
30°	535.3	530.1	520.5	518.6	516.1
32.5°	514.8	510.9	500.7	496.9	494.3
35°	494.9	488.5	478.3	474.4	471.2
37.5°	472.5	466.8	456.5	452.0	448.8
40°	449.5	444.3	434.1	428.3	425.8
42.5°	427.1	421.9	411.7	405.3	401.5
45°	402.7	398.2	388.6	381.6	379.0
47.5°	379.0	374.6	364.3	357.3	353.4
50°	354.1	350.9	341.9	332.9	329.7
52.5°	329.7	325.3	316.9	309.9	305.4
55°	304.8	300.9	293.2	285.6	282.4
57.5°	279.8	276.6	268.3	260.6	258.0
60°	254.8	252.3	243.3	236.3	234.3
62.5°	230.5	226.0	219.6	213.2	210.6
65°	205.5	201.7	195.3	189.5	186.3
67.5°	179.9	176.7	171.0	166.5	163.9
70°	156.2	153.7	147.9	143.4	140.9
72.5°	131.9	129.3	126.1	121.7	119.7
75°	107.6	106.3	103.1	99.2	100.5
77.5°	85.8	83.2	82.0	80.0	78.1
80°	64.0	63.4	62.1	60.2	58.9
82.5°	43.5	43.5	42.9	40.3	40.3
85°	26.3	25.6	25.0	23.0	22.4
87.5°	11.5	10.2	9.0	7.0	6.4
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	20.11	21.72	20.47	22.03	22.35	19.66	21.28	20.03	21.59	21.90
	3H	21.86	23.31	22.24	23.64	24.00	21.37	22.82	21.74	23.15	23.51
	4H	22.50	23.87	22.90	24.22	24.60	22.01	23.38	22.41	23.73	24.10
	6H	22.97	24.24	23.38	24.61	25.00	22.47	23.74	22.88	24.11	24.50
	8H	23.12	24.33	23.54	24.72	25.12	22.61	23.82	23.04	24.21	24.61
	12H	23.21	24.37	23.64	24.75	25.18	22.69	23.85	23.12	24.24	24.66
4H	2H	20.67	22.04	21.07	22.39	22.76	20.32	21.69	20.71	22.03	22.41
	3H	22.64	23.79	23.05	24.19	24.59	22.24	23.38	22.65	23.78	24.18
	4H	23.42	24.46	23.85	24.87	25.31	23.00	24.03	23.43	24.45	24.88
	6H	24.02	24.92	24.47	25.36	25.82	23.58	24.49	24.04	24.93	25.39
	8H	24.21	25.05	24.67	25.49	25.96	23.77	24.61	24.23	25.06	25.52
	12H	24.34	25.10	24.82	25.57	26.04	23.89	24.65	24.37	25.12	25.59
8H	4H	23.69	24.54	24.15	24.98	25.45	23.32	24.17	23.78	24.61	25.07
	6H	24.41	25.11	24.90	25.60	26.07	24.03	24.73	24.52	25.22	25.69
	8H	24.67	25.30	25.18	25.80	26.29	24.28	24.91	24.78	25.41	25.90
	12H	24.87	25.42	25.37	25.92	26.48	24.45	25.01	24.96	25.50	26.06
12H	4H	23.72	24.48	24.20	24.96	25.43	23.36	24.11	23.84	24.59	25.06
	6H	24.45	25.09	24.96	25.59	26.08	24.08	24.72	24.59	25.22	25.71
	8H	24.77	25.32	25.27	25.82	26.38	24.39	24.95	24.90	25.44	26.00