

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: P243141

Luminaire Tested: S122DRP-H675D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243141
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-H675D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

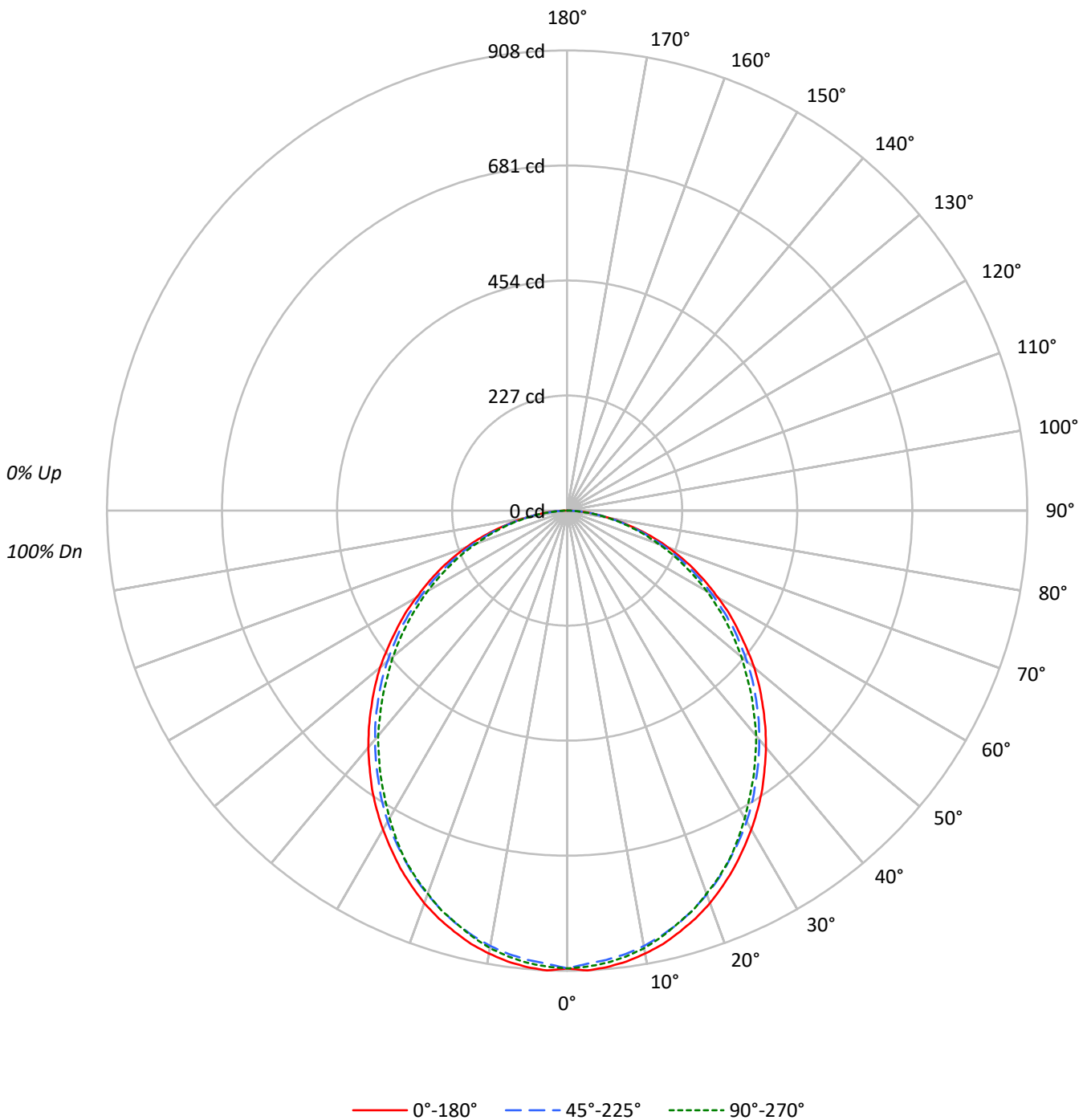
Lumens per Lamp: N/A
Luminaire Lumens: 2298.7 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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																												
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°	17206	17206	17206
5°	17289	17017	17128
10°	17166	16876	16957
15°	16959	16647	16632
20°	16707	16336	16303
25°	16362	15958	15941
30°	15986	15583	15418
35°	15605	15100	14907
40°	15175	14658	14429
45°	14713	14196	13838
50°	14286	13717	13299
55°	13685	13217	12719
60°	13101	12591	12114
65°	12534	11935	11407
70°	11779	11177	10620
75°	10723	10296	9803
80°	9313	9039	8677
85°	7999	7103	6556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14713 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	3.7
10°-20°	239.4	10.4
20°-30°	352.0	15.3
30°-40°	408.7	17.8
40°-50°	408.2	17.8
50°-60°	355.5	15.5
60°-70°	262.9	11.4
70°-80°	148.2	6.4
80°-90°	38.6	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°	676.5	29.4
0°-40°	1085.2	47.2
0°-60°	1848.9	80.4
0°-90°	2298.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	904	900	890	898	896	86
15°	860	856	844	848	843	243
25°	778	772	759	758	758	358
35°	671	664	649	644	641	419
45°	546	540	527	519	514	422
55°	412	409	398	387	383	369
65°	278	274	265	256	253	275
75°	146	145	140	135	133	155
85°	37	35	32	31	30	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	903.3	903.3	903.3	903.3	903.3
2.5°	908.3	904.2	895.0	902.5	900.8
5°	904.2	900.0	890.0	897.5	895.8
7.5°	897.5	893.4	882.5	890.0	887.5
10°	887.5	882.5	872.5	877.5	876.7
12.5°	875.9	870.9	859.2	863.4	861.7
15°	860.0	855.9	844.2	847.6	843.4
17.5°	843.4	836.7	825.9	829.2	826.7
20°	824.2	817.6	805.9	807.6	804.3
22.5°	801.8	795.1	784.3	784.3	782.6
25°	778.5	771.8	759.3	758.5	758.5
27.5°	752.6	746.8	734.3	731.8	730.2
30°	726.8	721.8	708.5	703.5	701.0
32.5°	699.4	692.7	680.2	674.4	670.2
35°	671.1	663.6	649.4	643.6	641.1
37.5°	640.2	632.8	620.3	615.3	610.3
40°	610.3	603.6	589.5	582.0	580.3
42.5°	578.6	572.0	559.5	551.2	546.2
45°	546.2	540.3	527.0	518.7	513.7
47.5°	514.5	507.9	496.2	486.2	479.6
50°	482.1	475.4	462.9	451.3	448.8
52.5°	446.3	442.1	429.6	418.8	415.5
55°	412.1	408.8	398.0	387.1	383.0
57.5°	379.7	375.5	363.0	354.7	349.7
60°	343.9	341.4	330.5	321.4	318.0
62.5°	310.5	307.2	298.1	288.9	284.7
65°	278.1	273.9	264.8	256.4	253.1
67.5°	244.8	240.6	233.1	226.5	223.1
70°	211.5	208.1	200.7	194.8	190.7
72.5°	179.0	175.7	169.0	163.2	162.4
75°	145.7	144.9	139.9	134.9	133.2
77.5°	114.9	114.1	110.7	108.2	106.6
80°	84.9	84.9	82.4	79.9	79.1
82.5°	58.3	59.1	56.6	54.9	54.9
85°	36.6	35.0	32.5	30.8	30.0
87.5°	15.0	12.5	11.7	9.2	8.3
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	21.17	22.78	21.54	23.09	23.41	20.74	22.35	21.11	22.67	22.98
	3H	22.92	24.38	23.30	24.70	25.06	22.44	23.90	22.82	24.22	24.58
	4H	23.57	24.94	23.97	25.29	25.66	23.07	24.44	23.47	24.78	25.16
	6H	24.03	25.29	24.44	25.66	26.05	23.53	24.80	23.94	25.16	25.55
	8H	24.17	25.38	24.59	25.76	26.16	23.67	24.88	24.09	25.27	25.67
	12H	24.26	25.42	24.69	25.80	26.23	23.75	24.91	24.18	25.29	25.72
4H	2H	21.73	23.10	22.13	23.45	23.82	21.39	22.76	21.79	23.11	23.48
	3H	23.71	24.85	24.11	25.25	25.65	23.30	24.45	23.71	24.85	25.25
	4H	24.49	25.52	24.92	25.93	26.37	24.05	25.09	24.48	25.50	25.94
	6H	25.07	25.97	25.53	26.42	26.87	24.64	25.54	25.09	25.98	26.44
	8H	25.26	26.10	25.72	26.54	27.01	24.82	25.66	25.28	26.11	26.57
	12H	25.39	26.15	25.87	26.63	27.09	24.94	25.69	25.42	26.17	26.64
8H	4H	24.76	25.60	25.22	26.04	26.51	24.37	25.22	24.83	25.66	26.13
	6H	25.46	26.16	25.95	26.65	27.12	25.07	25.77	25.56	26.26	26.74
	8H	25.71	26.34	26.22	26.85	27.33	25.32	25.95	25.83	26.46	26.94
	12H	25.92	26.47	26.42	26.96	27.52	25.50	26.05	26.00	26.54	27.10
12H	4H	24.78	25.54	25.26	26.02	26.49	24.41	25.17	24.89	25.64	26.11
	6H	25.50	26.13	26.01	26.64	27.12	25.13	25.76	25.64	26.26	26.75
	8H	25.81	26.37	26.32	26.86	27.42	25.43	25.99	25.94	26.48	27.04