

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: P243118

Luminaire Tested: S122DRP-H865D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243118
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-H865D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

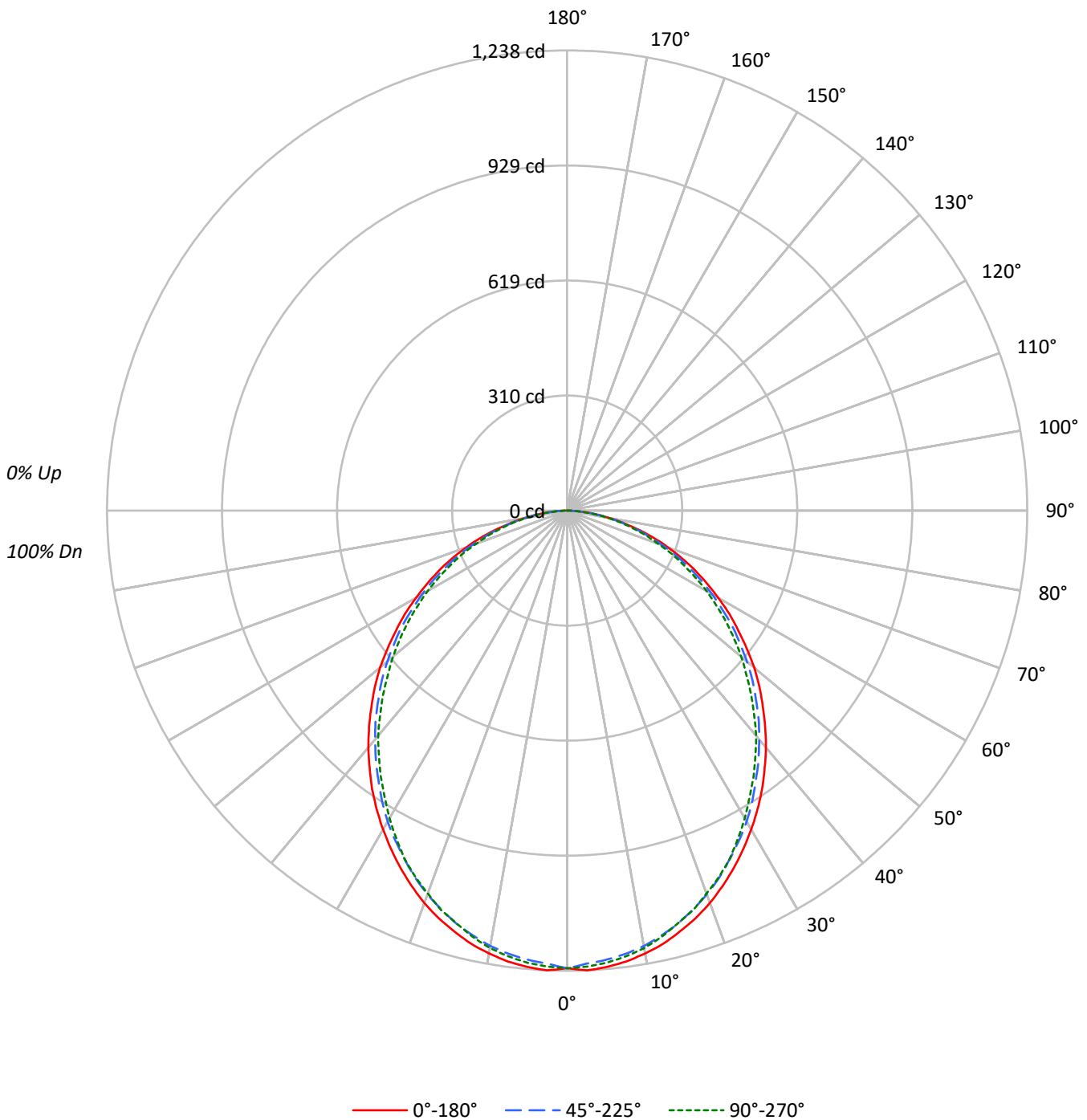
Lumens per Lamp: N/A
Luminaire Lumens: 3133.4 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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

TEST NUMBER: P243118

CATALOG NUMBER: S122DRP-H865D830-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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°	23455	23455	23455
5°	23566	23197	23350
10°	23399	23005	23115
15°	23119	22693	22672
20°	22776	22269	22222
25°	22301	21752	21729
30°	21792	21242	21018
35°	21269	20584	20321
40°	20685	19979	19668
45°	20055	19352	18862
50°	19472	18698	18126
55°	18657	18016	17338
60°	17855	17166	16514
65°	17086	16266	15549
70°	16056	15232	14474
75°	14616	14035	13365
80°	12702	12329	11825
85°	10906	9682	8939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20055 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.9	3.7
10°-20°	326.4	10.4
20°-30°	479.8	15.3
30°-40°	557.1	17.8
40°-50°	556.4	17.8
50°-60°	484.6	15.5
60°-70°	358.4	11.4
70°-80°	202.0	6.4
80°-90°	52.7	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°	922.1	29.4
0°-40°	1479.3	47.2
0°-60°	2520.3	80.4
0°-90°	3133.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3133.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1231	1231	1231	1231	1231	
5°	1232	1227	1213	1223	1221	117
15°	1172	1167	1151	1155	1150	331
25°	1061	1052	1035	1034	1034	489
35°	915	904	885	877	874	572
45°	744	737	718	707	700	575
55°	562	557	542	528	522	503
65°	379	373	361	350	345	375
75°	199	198	191	184	182	211
85°	50	48	44	42	41	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1231.4	1231.4	1231.4	1231.4	1231.4
2.5°	1238.2	1232.5	1220.0	1230.2	1228.0
5°	1232.5	1226.8	1213.2	1223.4	1221.2
7.5°	1223.4	1217.8	1203.0	1213.2	1209.8
10°	1209.8	1203.0	1189.4	1196.2	1195.1
12.5°	1193.9	1187.1	1171.2	1176.9	1174.6
15°	1172.4	1166.7	1150.8	1155.3	1149.7
17.5°	1149.7	1140.6	1125.8	1130.4	1127.0
20°	1123.6	1114.5	1098.6	1100.9	1096.3
22.5°	1092.9	1083.8	1069.1	1069.1	1066.8
25°	1061.1	1052.1	1035.0	1033.9	1033.9
27.5°	1026.0	1018.0	1001.0	997.6	995.3
30°	990.8	984.0	965.8	959.0	955.6
32.5°	953.3	944.2	927.2	919.3	913.6
35°	914.7	904.5	885.2	877.3	873.9
37.5°	872.8	862.5	845.5	838.7	831.9
40°	831.9	822.8	803.5	793.3	791.0
42.5°	788.8	779.7	762.7	751.3	744.5
45°	744.5	736.6	718.4	707.1	700.2
47.5°	701.4	692.3	676.4	662.8	653.7
50°	657.1	648.0	631.0	615.1	611.7
52.5°	608.3	602.6	585.6	570.9	566.3
55°	561.8	557.2	542.5	527.7	522.1
57.5°	517.5	511.8	494.8	483.5	476.7
60°	468.7	465.3	450.6	438.1	433.5
62.5°	423.3	418.8	406.3	393.8	388.1
65°	379.1	373.4	360.9	349.6	345.0
67.5°	333.7	328.0	317.8	308.7	304.2
70°	288.3	283.7	273.5	265.6	259.9
72.5°	244.0	239.5	230.4	222.4	221.3
75°	198.6	197.5	190.7	183.9	181.6
77.5°	156.6	155.5	150.9	147.5	145.3
80°	115.8	115.8	112.4	109.0	107.8
82.5°	79.4	80.6	77.2	74.9	74.9
85°	49.9	47.7	44.3	42.0	40.9
87.5°	20.4	17.0	15.9	12.5	11.3
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	22.25	23.86	22.61	24.17	24.48	21.82	23.43	22.18	23.74	24.06
	3H	24.00	25.45	24.38	25.78	26.14	23.52	24.97	23.90	25.30	25.66
	4H	24.65	26.01	25.04	26.36	26.74	24.14	25.51	24.54	25.86	26.24
	6H	25.10	26.37	25.51	26.74	27.13	24.61	25.87	25.02	26.24	26.63
	8H	25.24	26.45	25.67	26.84	27.24	24.75	25.96	25.17	26.35	26.74
	12H	25.33	26.49	25.76	26.88	27.30	24.83	25.99	25.26	26.37	26.80
4H	2H	22.81	24.17	23.20	24.52	24.90	22.47	23.83	22.86	24.18	24.56
	3H	24.78	25.93	25.19	26.32	26.72	24.38	25.53	24.79	25.92	26.32
	4H	25.56	26.60	25.99	27.01	27.45	25.13	26.16	25.56	26.58	27.01
	6H	26.15	27.05	26.60	27.49	27.95	25.71	26.62	26.17	27.06	27.51
	8H	26.33	27.18	26.79	27.62	28.09	25.90	26.74	26.36	27.18	27.65
	12H	26.47	27.23	26.95	27.70	28.17	26.01	26.77	26.49	27.25	27.72
8H	4H	25.83	26.68	26.29	27.12	27.59	25.45	26.30	25.91	26.74	27.20
	6H	26.53	27.24	27.03	27.72	28.20	26.15	26.85	26.64	27.34	27.81
	8H	26.79	27.42	27.30	27.93	28.41	26.40	27.03	26.91	27.53	28.02
	12H	26.99	27.55	27.50	28.04	28.60	26.57	27.13	27.08	27.62	28.18
12H	4H	25.86	26.62	26.34	27.09	27.56	25.48	26.24	25.97	26.72	27.19
	6H	26.58	27.21	27.09	27.71	28.20	26.20	26.83	26.71	27.34	27.83
	8H	26.88	27.44	27.39	27.93	28.49	26.51	27.06	27.01	27.55	28.11