

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: P242253

Luminaire Tested: S122DRP-S865D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242253
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-S865D927-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

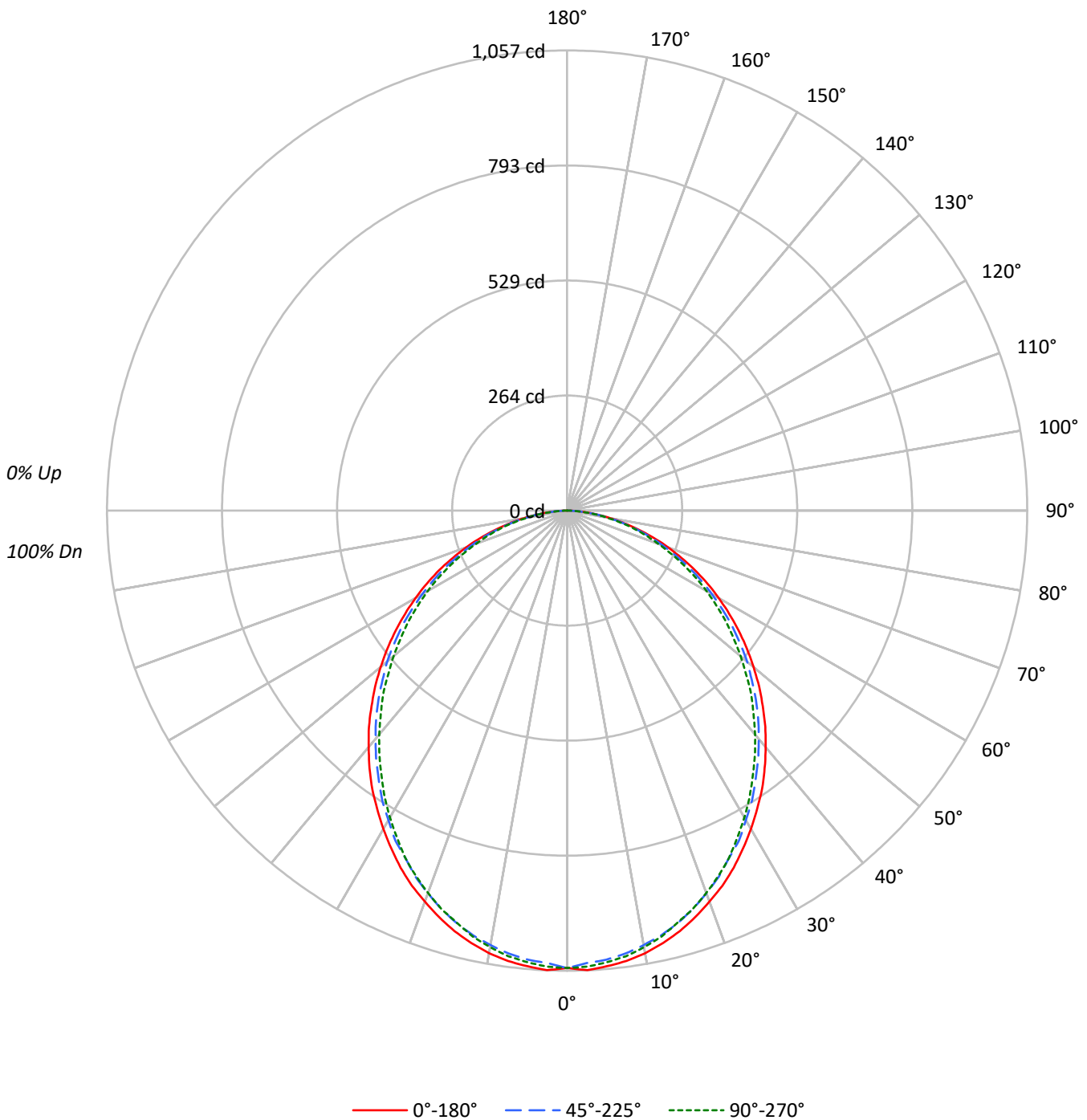
Lumens per Lamp: N/A
Luminaire Lumens: 2673.0 lumens
Efficiency: N/A
Efficacy: 76.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	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	27	38	32	27	37	32	27	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20012	20012	20012
5°	20088	19799	19914
10°	19970	19599	19696
15°	19722	19343	19323
20°	19372	18963	18942
25°	19024	18493	18493
30°	18576	18064	17908
35°	18158	17547	17289
40°	17634	17030	16704
45°	17116	16518	16111
50°	16556	15987	15418
55°	15970	15366	14794
60°	15318	14625	14084
65°	14616	13886	13251
70°	13728	12998	12380
75°	12489	11966	11672
80°	11079	10750	10190
85°	9048	8611	7737

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17116 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.9	3.7
10°-20°	278.2	10.4
20°-30°	408.9	15.3
30°-40°	474.9	17.8
40°-50°	474.3	17.7
50°-60°	413.6	15.5
60°-70°	305.7	11.4
70°-80°	173.0	6.5
80°-90°	45.6	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°	786.0	29.4
0°-40°	1260.8	47.2
0°-60°	2148.7	80.4
0°-90°	2673.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1051	1051	1051	1051	1051	
5°	1051	1047	1036	1044	1042	100
15°	1000	994	981	985	980	282
25°	905	897	880	882	880	417
35°	781	771	755	749	744	488
45°	635	628	613	602	598	490
55°	481	475	463	451	446	430
65°	324	318	308	299	294	321
75°	170	168	163	157	159	181
85°	41	40	39	36	35	49
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1050.6	1050.6	1050.6	1050.6	1050.6
2.5°	1056.7	1051.6	1040.5	1050.6	1048.6
5°	1050.6	1046.6	1035.5	1043.6	1041.5
7.5°	1043.6	1037.5	1026.4	1034.5	1032.5
10°	1032.5	1025.4	1013.3	1021.3	1018.3
12.5°	1017.3	1011.2	999.1	1004.2	1002.1
15°	1000.1	994.1	980.9	985.0	979.9
17.5°	978.9	972.9	959.7	964.8	959.7
20°	955.7	949.6	935.5	938.5	934.5
22.5°	932.4	923.3	910.2	910.2	908.2
25°	905.2	897.1	879.9	881.9	879.9
27.5°	874.9	867.8	854.7	851.6	846.6
30°	844.6	836.5	821.3	818.3	814.2
32.5°	812.2	806.2	790.0	783.9	779.9
35°	780.9	770.8	754.6	748.6	743.5
37.5°	745.5	736.5	720.3	713.2	708.2
40°	709.2	701.1	684.9	675.8	671.8
42.5°	673.8	665.7	649.6	639.5	633.4
45°	635.4	628.4	613.2	602.1	598.1
47.5°	598.1	591.0	574.8	563.7	557.6
50°	558.7	553.6	539.5	525.3	520.3
52.5°	520.3	513.2	500.1	489.0	481.9
55°	480.9	474.8	462.7	450.6	445.5
57.5°	441.5	436.4	423.3	411.2	407.1
60°	402.1	398.0	383.9	372.8	369.7
62.5°	363.7	356.6	346.5	336.4	332.4
65°	324.3	318.2	308.1	299.0	294.0
67.5°	283.9	278.8	269.7	262.7	258.6
70°	246.5	242.5	233.4	226.3	222.3
72.5°	208.1	204.1	199.0	191.9	188.9
75°	169.7	167.7	162.6	156.6	158.6
77.5°	135.4	131.3	129.3	126.3	123.2
80°	101.0	100.0	98.0	95.0	92.9
82.5°	68.7	68.7	67.7	63.6	63.6
85°	41.4	40.4	39.4	36.4	35.4
87.5°	18.2	16.2	14.1	11.1	10.1
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	21.69	23.30	22.06	23.62	23.93	21.25	22.86	21.61	23.17	23.49
	3H	23.44	24.90	23.82	25.22	25.58	22.95	24.41	23.33	24.73	25.09
	4H	24.09	25.46	24.49	25.81	26.18	23.59	24.96	23.99	25.31	25.69
	6H	24.56	25.83	24.97	26.19	26.58	24.06	25.33	24.47	25.69	26.08
	8H	24.70	25.91	25.13	26.30	26.70	24.20	25.41	24.62	25.80	26.20
	12H	24.79	25.95	25.22	26.33	26.76	24.28	25.44	24.71	25.82	26.25
4H	2H	22.25	23.62	22.65	23.97	24.35	21.90	23.27	22.30	23.62	23.99
	3H	24.23	25.37	24.64	25.77	26.17	23.82	24.97	24.23	25.37	25.77
	4H	25.00	26.04	25.44	26.45	26.89	24.58	25.62	25.01	26.03	26.47
	6H	25.60	26.51	26.06	26.95	27.40	25.17	26.07	25.62	26.51	26.97
	8H	25.79	26.64	26.25	27.08	27.54	25.35	26.20	25.81	26.64	27.11
	12H	25.92	26.68	26.40	27.16	27.63	25.47	26.23	25.95	26.71	27.18
8H	4H	25.28	26.12	25.74	26.57	27.03	24.90	25.75	25.36	26.19	26.66
	6H	25.99	26.70	26.49	27.18	27.66	25.61	26.31	26.10	26.80	27.28
	8H	26.25	26.88	26.76	27.39	27.88	25.86	26.49	26.37	27.00	27.48
	12H	26.45	27.01	26.96	27.50	28.06	26.04	26.60	26.55	27.09	27.65
12H	4H	25.30	26.06	25.78	26.54	27.01	24.94	25.70	25.42	26.18	26.64
	6H	26.04	26.67	26.55	27.18	27.66	25.67	26.30	26.18	26.81	27.29
	8H	26.35	26.91	26.86	27.40	27.96	25.97	26.53	26.48	27.02	27.58