

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: P242272

Luminaire Tested: S122DRP-S865D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242272
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-S865D930-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

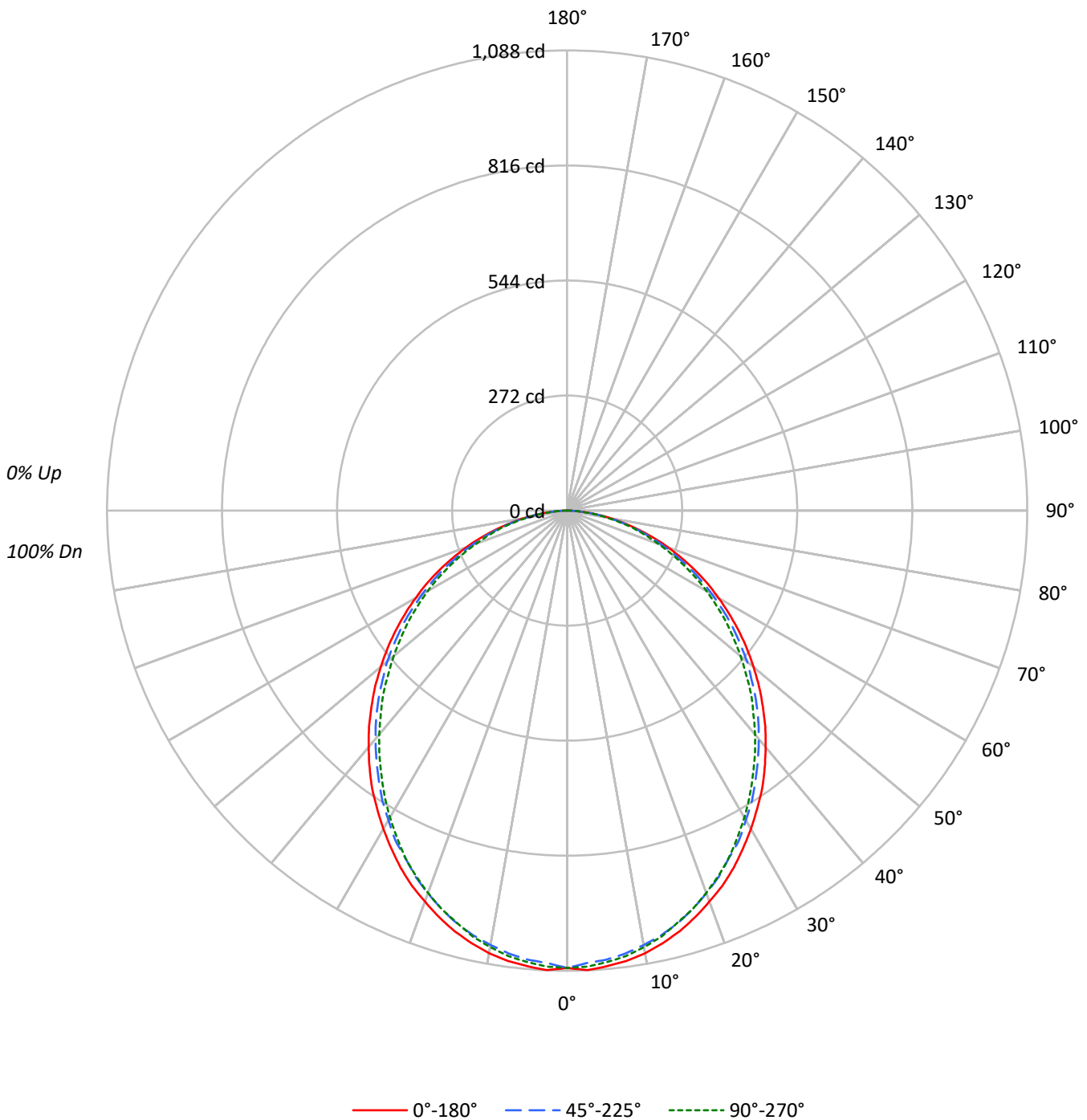
Lumens per Lamp: N/A
Luminaire Lumens: 2751.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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

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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	27	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20596	20596	20596
5°	20675	20377	20495
10°	20552	20169	20270
15°	20297	19909	19887
20°	19938	19516	19494
25°	19579	19033	19033
30°	19118	18592	18431
35°	18688	18061	17793
40°	18149	17527	17192
45°	17617	17000	16580
50°	17039	16452	15868
55°	16435	15814	15226
60°	15764	15051	14495
65°	15040	14292	13638
70°	14129	13377	12737
75°	12857	12320	12011
80°	11408	11068	10497
85°	9310	8851	7955

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17617 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.8	3.7
10°-20°	286.3	10.4
20°-30°	420.8	15.3
30°-40°	488.7	17.8
40°-50°	488.1	17.7
50°-60°	425.6	15.5
60°-70°	314.6	11.4
70°-80°	178.0	6.5
80°-90°	47.0	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°	808.9	29.4
0°-40°	1297.6	47.2
0°-60°	2211.4	80.4
0°-90°	2751.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2751.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1081	1081	1081	1081	1081	
5°	1081	1077	1066	1074	1072	103
15°	1029	1023	1010	1014	1008	290
25°	932	923	906	908	906	429
35°	804	793	777	770	765	502
45°	654	647	631	620	616	505
55°	495	489	476	464	458	443
65°	334	328	317	308	303	330
75°	175	173	167	161	163	186
85°	43	42	40	37	36	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1081.3	1081.3	1081.3	1081.3	1081.3
2.5°	1087.5	1082.3	1070.9	1081.3	1079.2
5°	1081.3	1077.1	1065.7	1074.0	1071.9
7.5°	1074.0	1067.8	1056.3	1064.7	1062.6
10°	1062.6	1055.3	1042.8	1051.1	1048.0
12.5°	1047.0	1040.7	1028.3	1033.5	1031.4
15°	1029.3	1023.1	1009.6	1013.7	1008.5
17.5°	1007.5	1001.2	987.7	992.9	987.7
20°	983.6	977.3	962.8	965.9	961.7
22.5°	959.7	950.3	936.8	936.8	934.7
25°	931.6	923.3	905.6	907.7	905.6
27.5°	900.4	893.1	879.6	876.5	871.3
30°	869.2	860.9	845.3	842.2	838.0
32.5°	835.9	829.7	813.1	806.8	802.7
35°	803.7	793.3	776.7	770.4	765.2
37.5°	767.3	757.9	741.3	734.0	728.8
40°	729.9	721.6	704.9	695.6	691.4
42.5°	693.5	685.2	668.5	658.1	651.9
45°	654.0	646.7	631.1	619.7	615.5
47.5°	615.5	608.2	591.6	580.2	573.9
50°	575.0	569.8	555.2	540.6	535.5
52.5°	535.5	528.2	514.7	503.2	495.9
55°	494.9	488.7	476.2	463.7	458.5
57.5°	454.4	449.2	435.6	423.2	419.0
60°	413.8	409.6	395.1	383.7	380.5
62.5°	374.3	367.0	356.6	346.2	342.1
65°	333.7	327.5	317.1	307.8	302.6
67.5°	292.2	287.0	277.6	270.3	266.2
70°	253.7	249.5	240.2	232.9	228.7
72.5°	214.2	210.0	204.8	197.5	194.4
75°	174.7	172.6	167.4	161.2	163.2
77.5°	139.3	135.2	133.1	130.0	126.8
80°	104.0	102.9	100.9	97.7	95.7
82.5°	70.7	70.7	69.7	65.5	65.5
85°	42.6	41.6	40.5	37.4	36.4
87.5°	18.7	16.6	14.6	11.4	10.4
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	21.79	23.40	22.16	23.72	24.03	21.35	22.96	21.71	23.27	23.59
	3H	23.54	25.00	23.92	25.32	25.68	23.05	24.51	23.43	24.83	25.19
	4H	24.19	25.56	24.59	25.91	26.28	23.69	25.06	24.09	25.41	25.79
	6H	24.66	25.93	25.07	26.29	26.68	24.16	25.43	24.57	25.79	26.18
	8H	24.80	26.01	25.23	26.40	26.80	24.30	25.51	24.72	25.90	26.30
	12H	24.89	26.05	25.32	26.43	26.86	24.38	25.54	24.81	25.92	26.35
4H	2H	22.35	23.72	22.75	24.07	24.45	22.00	23.37	22.40	23.72	24.09
	3H	24.33	25.47	24.74	25.87	26.27	23.92	25.07	24.33	25.47	25.87
	4H	25.10	26.14	25.54	26.55	26.99	24.68	25.72	25.11	26.13	26.57
	6H	25.70	26.61	26.16	27.05	27.50	25.27	26.17	25.72	26.61	27.07
	8H	25.89	26.74	26.35	27.18	27.65	25.45	26.30	25.91	26.74	27.21
	12H	26.02	26.78	26.50	27.26	27.73	25.57	26.33	26.05	26.81	27.28
8H	4H	25.38	26.22	25.84	26.67	27.13	25.00	25.85	25.46	26.29	26.76
	6H	26.09	26.80	26.59	27.28	27.76	25.71	26.41	26.20	26.90	27.38
	8H	26.35	26.98	26.86	27.49	27.98	25.96	26.59	26.47	27.10	27.58
	12H	26.55	27.11	27.06	27.60	28.16	26.14	26.70	26.65	27.19	27.75
12H	4H	25.40	26.16	25.88	26.64	27.11	25.04	25.80	25.52	26.28	26.74
	6H	26.14	26.77	26.65	27.28	27.76	25.77	26.40	26.28	26.91	27.39
	8H	26.45	27.01	26.96	27.50	28.06	26.07	26.63	26.58	27.12	27.68