

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: P242375

Luminaire Tested: S122RDRP-S865D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242375
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S865D930-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

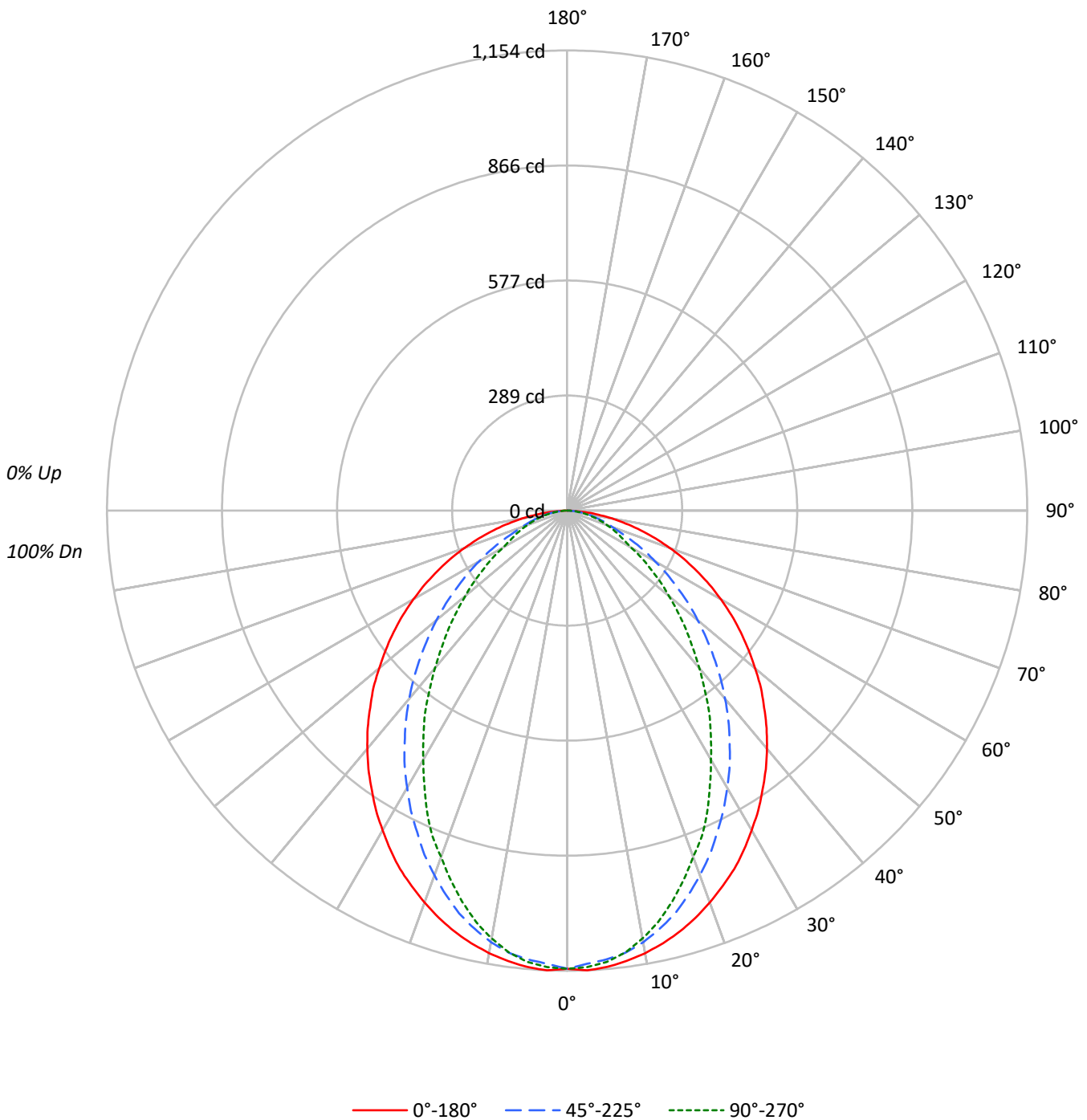
Lumens per Lamp: N/A
Luminaire Lumens: 2362.8 lumens
Efficiency: N/A
Efficacy: 67.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21884	21884	21884
5°	21968	21610	21728
10°	21798	21256	21075
15°	21548	20625	20031
20°	21201	19727	18736
25°	20847	18705	17482
30°	20351	17655	15871
35°	19872	16512	14456
40°	19390	15329	12823
45°	18821	14005	11343
50°	18239	12662	9889
55°	17644	11221	8495
60°	16952	9703	7051
65°	16167	8153	6418
70°	15226	6716	5903
75°	14079	6123	5512
80°	12428	5474	5013
85°	9769	4327	4327

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18821 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.7	4.6
10°-20°	295.6	12.5
20°-30°	415.0	17.6
30°-40°	452.4	19.1
40°-50°	415.8	17.6
50°-60°	326.5	13.8
60°-70°	212.5	9.0
70°-80°	109.4	4.6
80°-90°	27.9	1.2
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°	818.3	34.6
0°-40°	1270.6	53.8
0°-60°	2012.9	85.2
0°-90°	2362.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2362.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1149	1149	1149	1149	1149	
5°	1149	1144	1130	1140	1136	109
15°	1093	1081	1046	1026	1016	308
25°	992	959	890	847	832	456
35°	855	802	710	645	622	535
45°	699	629	520	446	421	540
55°	531	450	338	276	256	475
65°	359	274	181	146	142	356
75°	191	118	83	76	75	202
85°	45	23	20	20	20	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1148.9	1148.9	1148.9	1148.9	1148.9
2.5°	1154.1	1148.9	1137.4	1147.8	1145.8
5°	1148.9	1143.7	1130.2	1139.5	1136.4
7.5°	1139.5	1133.3	1118.7	1122.9	1117.7
10°	1127.0	1119.8	1099.0	1095.8	1089.6
12.5°	1111.4	1102.1	1074.0	1067.8	1056.3
15°	1092.7	1081.3	1045.9	1026.2	1015.8
17.5°	1070.9	1054.3	1010.6	987.7	971.1
20°	1045.9	1025.1	973.2	947.2	924.3
22.5°	1018.9	995.0	934.7	899.3	883.7
25°	991.9	958.6	890.0	847.4	831.8
27.5°	959.6	924.3	848.4	799.5	775.6
30°	925.3	885.8	802.7	749.6	721.6
32.5°	892.1	844.2	759.0	696.6	670.6
35°	854.6	801.6	710.1	644.6	621.7
37.5°	818.2	761.1	664.4	592.6	566.6
40°	779.8	717.4	616.5	542.7	515.7
42.5°	740.3	673.7	568.7	491.8	465.8
45°	698.7	629.0	519.9	446.0	421.1
47.5°	659.2	585.4	473.1	399.2	376.4
50°	615.5	541.7	427.3	355.6	333.7
52.5°	572.9	494.9	383.7	315.0	295.3
55°	531.3	450.2	337.9	275.5	255.8
57.5°	488.7	405.5	297.4	239.1	222.5
60°	445.0	361.8	254.7	201.7	185.1
62.5°	402.4	319.2	218.3	168.4	160.1
65°	358.7	274.5	180.9	145.6	142.4
67.5°	317.1	232.9	145.6	127.9	124.8
70°	273.4	192.3	120.6	110.2	106.0
72.5°	231.9	154.9	100.9	92.5	90.5
75°	191.3	118.5	83.2	75.9	74.9
77.5°	150.8	84.2	65.5	61.3	59.3
80°	113.3	60.3	49.9	45.7	45.7
82.5°	79.0	40.5	34.3	32.2	32.2
85°	44.7	22.9	19.8	19.8	19.8
87.5°	16.6	8.3	8.3	7.3	7.3
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	21.96	23.48	22.32	23.79	24.11	17.91	19.44	18.28	19.75	20.06
	3H	23.72	25.09	24.10	25.41	25.78	19.18	20.55	19.56	20.87	21.24
	4H	24.39	25.67	24.79	26.02	26.39	19.68	20.96	20.08	21.31	21.69
	6H	24.88	26.06	25.29	26.43	26.82	20.06	21.25	20.48	21.61	22.01
	8H	25.04	26.17	25.47	26.56	26.96	20.19	21.31	20.61	21.70	22.11
	12H	25.14	26.22	25.58	26.61	27.03	20.27	21.35	20.70	21.73	22.16
4H	2H	22.06	23.34	22.46	23.69	24.07	18.61	19.89	19.01	20.24	20.62
	3H	23.99	25.06	24.40	25.46	25.86	20.05	21.12	20.47	21.52	21.92
	4H	24.74	25.70	25.18	26.11	26.55	20.65	21.61	21.09	22.03	22.46
	6H	25.33	26.17	25.79	26.61	27.07	21.14	21.97	21.60	22.42	22.88
	8H	25.55	26.33	26.01	26.77	27.24	21.30	22.08	21.77	22.52	22.99
	12H	25.70	26.40	26.18	26.88	27.35	21.42	22.12	21.90	22.59	23.07
8H	4H	24.77	25.54	25.23	25.99	26.46	21.01	21.79	21.47	22.23	22.70
	6H	25.40	26.05	25.90	26.54	27.02	21.59	22.24	22.09	22.73	23.20
	8H	25.65	26.23	26.17	26.74	27.23	21.81	22.39	22.33	22.90	23.39
	12H	25.86	26.37	26.37	26.86	27.43	21.99	22.50	22.50	23.00	23.56
12H	4H	24.75	25.45	25.23	25.92	26.39	21.05	21.75	21.53	22.22	22.70
	6H	25.38	25.96	25.90	26.47	26.96	21.66	22.23	22.17	22.74	23.23
	8H	25.67	26.18	26.18	26.67	27.24	21.93	22.44	22.44	22.93	23.50