

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: P242385

Luminaire Tested: S122RDRP-S865D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242385
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-S865D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

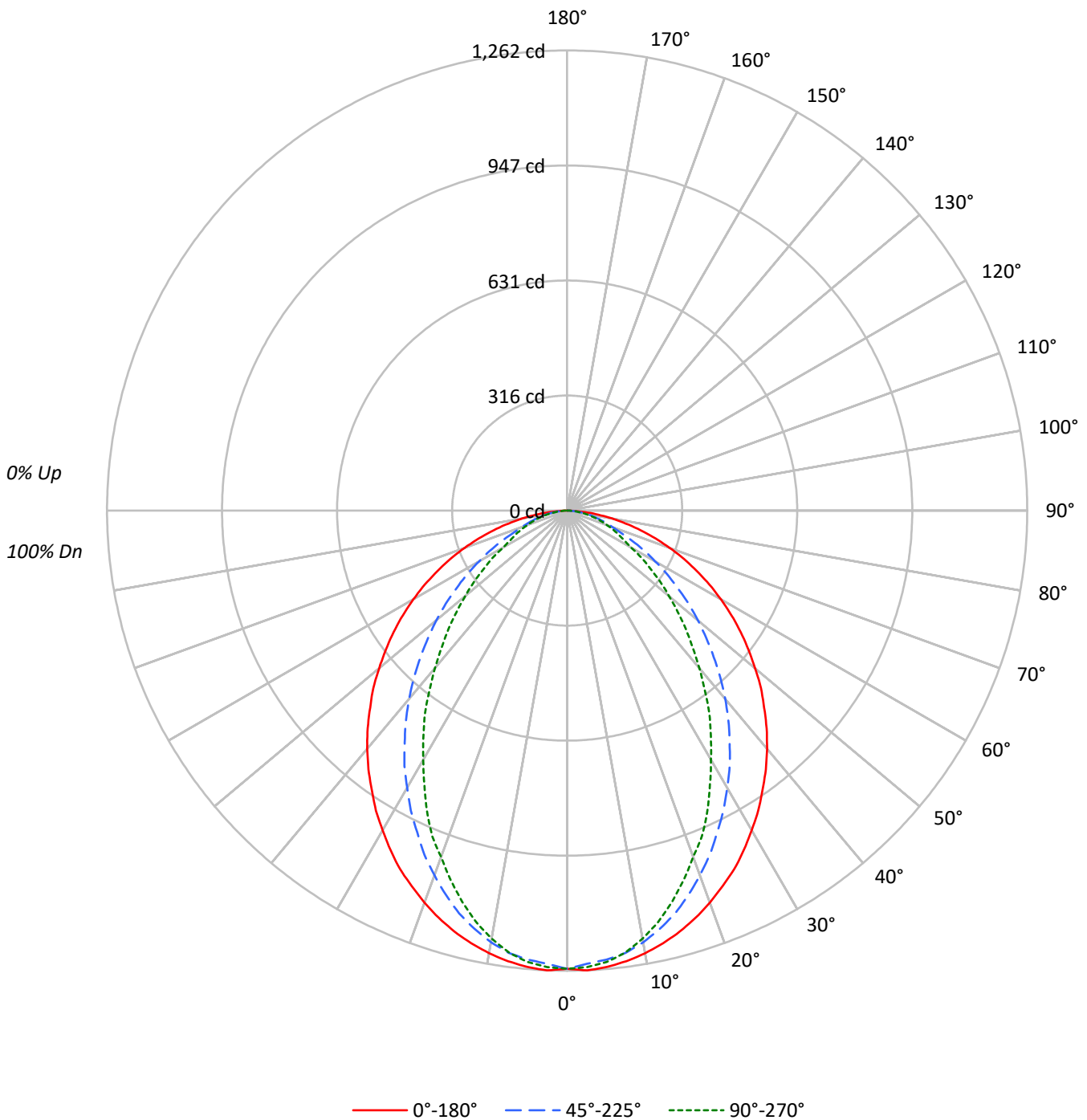
Lumens per Lamp: N/A
Luminaire Lumens: 2584.3 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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°	23933	23933	23933
5°	24025	23635	23765
10°	23842	23249	23049
15°	23567	22559	21909
20°	23189	21576	20491
25°	22799	20458	19119
30°	22261	19309	17358
35°	21735	18061	15812
40°	21207	16766	14024
45°	20586	15317	12405
50°	19949	13850	10816
55°	19298	12274	9288
60°	18541	10613	7711
65°	17681	8919	7022
70°	16657	7346	6460
75°	15396	6697	6027
80°	13591	5989	5485
85°	10687	4721	4721

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20586 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	4.6
10°-20°	323.3	12.5
20°-30°	453.9	17.6
30°-40°	494.8	19.1
40°-50°	454.7	17.6
50°-60°	357.1	13.8
60°-70°	232.5	9.0
70°-80°	119.7	4.6
80°-90°	30.6	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°	895.0	34.6
0°-40°	1389.7	53.8
0°-60°	2201.6	85.2
0°-90°	2584.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2584.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1256	1251	1236	1246	1243	119
15°	1195	1183	1144	1122	1111	337
25°	1085	1048	973	927	910	499
35°	935	877	777	705	680	585
45°	764	688	569	488	460	590
55°	581	492	370	301	280	519
65°	392	300	198	159	156	389
75°	209	130	91	83	82	221
85°	49	25	22	22	22	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1256.5	1256.5	1256.5	1256.5	1256.5
2.5°	1262.2	1256.5	1244.0	1255.4	1253.1
5°	1256.5	1250.9	1236.1	1246.3	1242.9
7.5°	1246.3	1239.5	1223.6	1228.1	1222.4
10°	1232.7	1224.7	1202.0	1198.6	1191.7
12.5°	1215.6	1205.4	1174.7	1167.9	1155.3
15°	1195.1	1182.6	1144.0	1122.4	1111.0
17.5°	1171.3	1153.1	1105.3	1080.3	1062.1
20°	1144.0	1121.2	1064.4	1035.9	1010.9
22.5°	1114.4	1088.3	1022.3	983.6	966.6
25°	1084.8	1048.5	973.4	926.8	909.7
27.5°	1049.6	1010.9	927.9	874.5	848.3
30°	1012.1	968.9	877.9	819.9	789.2
32.5°	975.7	923.4	830.1	761.9	733.5
35°	934.7	876.7	776.7	705.0	680.0
37.5°	894.9	832.4	726.6	648.2	619.7
40°	852.9	784.6	674.3	593.6	564.0
42.5°	809.6	736.9	622.0	537.9	509.4
45°	764.2	688.0	568.6	487.8	460.5
47.5°	721.0	640.2	517.4	436.7	411.6
50°	673.2	592.5	467.4	388.9	365.0
52.5°	626.6	541.3	419.6	344.6	323.0
55°	581.1	492.4	369.6	301.3	279.7
57.5°	534.5	443.5	325.2	261.5	243.3
60°	486.7	395.7	278.6	220.6	202.4
62.5°	440.1	349.1	238.8	184.2	175.1
65°	392.3	300.2	197.9	159.2	155.8
67.5°	346.8	254.7	159.2	139.9	136.5
70°	299.1	210.4	131.9	120.5	116.0
72.5°	253.6	169.4	110.3	101.2	98.9
75°	209.2	129.6	91.0	83.0	81.9
77.5°	164.9	92.1	71.6	67.1	64.8
80°	123.9	66.0	54.6	50.0	50.0
82.5°	86.4	44.3	37.5	35.3	35.3
85°	48.9	25.0	21.6	21.6	21.6
87.5°	18.2	9.1	9.1	8.0	8.0
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	22.27	23.79	22.63	24.10	24.42	18.23	19.75	18.59	20.06	20.38
	3H	24.03	25.40	24.41	25.73	26.09	19.49	20.86	19.87	21.19	21.55
	4H	24.70	25.98	25.10	26.33	26.71	19.99	21.27	20.39	21.62	22.00
	6H	25.19	26.37	25.60	26.74	27.13	20.37	21.56	20.79	21.92	22.32
	8H	25.35	26.48	25.78	26.87	27.27	20.50	21.63	20.93	22.02	22.42
	12H	25.46	26.53	25.89	26.92	27.35	20.58	21.66	21.01	22.04	22.47
4H	2H	22.37	23.65	22.77	24.00	24.38	18.92	20.20	19.32	20.55	20.93
	3H	24.30	25.37	24.71	25.77	26.17	20.37	21.43	20.78	21.83	22.23
	4H	25.05	26.01	25.49	26.43	26.86	20.97	21.92	21.40	22.34	22.78
	6H	25.65	26.48	26.10	26.92	27.38	21.45	22.28	21.91	22.73	23.19
	8H	25.86	26.64	26.32	27.08	27.55	21.62	22.39	22.08	22.84	23.30
	12H	26.01	26.71	26.50	27.19	27.66	21.73	22.43	22.22	22.91	23.38
8H	4H	25.08	25.86	25.54	26.30	26.77	21.32	22.10	21.78	22.54	23.01
	6H	25.72	26.36	26.21	26.85	27.33	21.91	22.55	22.40	23.04	23.52
	8H	25.97	26.54	26.48	27.05	27.54	22.13	22.70	22.64	23.21	23.70
	12H	26.17	26.68	26.68	27.17	27.74	22.31	22.82	22.82	23.31	23.87
12H	4H	25.06	25.76	25.54	26.24	26.71	21.36	22.06	21.84	22.54	23.01
	6H	25.70	26.27	26.21	26.78	27.27	21.97	22.55	22.48	23.06	23.54
	8H	25.98	26.49	26.49	26.98	27.55	22.24	22.75	22.75	23.24	23.81