

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: P242547

Luminaire Tested: S123RDRP-S1000D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242547
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1000D930-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

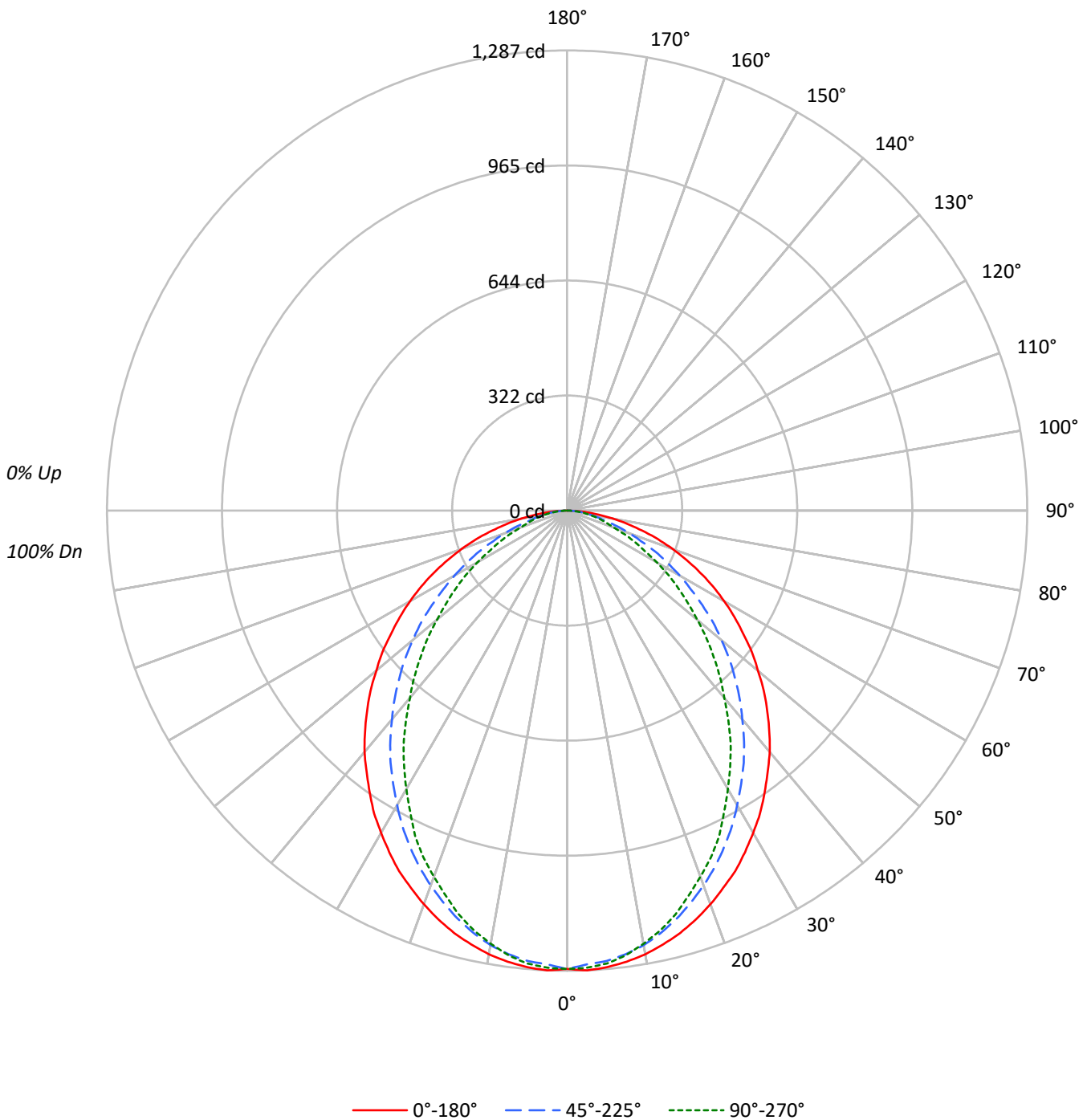
Lumens per Lamp: N/A
Luminaire Lumens: 2896.2 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86					86			
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73					73			
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62					62			
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54					54			
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42					42			
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28					28			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15539	15539	15539
5°	15599	15383	15472
10°	15510	15190	15139
15°	15343	14834	14678
20°	15115	14390	14055
25°	14879	13892	13447
30°	14566	13315	12587
35°	14247	12739	11801
40°	13951	12059	10825
45°	13563	11389	9946
50°	13136	10626	8959
55°	12701	9755	8041
60°	12301	8822	7033
65°	11779	7813	6023
70°	11128	6560	4862
75°	10177	5161	4576
80°	9074	4572	4209
85°	7663	4047	3755

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13563 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.5	4.2
10°-20°	335.2	11.6
20°-30°	482.7	16.7
30°-40°	543.6	18.8
40°-50°	520.0	18.0
50°-60°	425.6	14.7
60°-70°	287.0	9.9
70°-80°	143.9	5.0
80°-90°	37.6	1.3
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°	938.5	32.4
0°-40°	1482.0	51.2
0°-60°	2427.6	83.8
0°-90°	2896.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2896.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1282	1282	1282	1282	1282	
5°	1282	1277	1264	1274	1272	122
15°	1223	1211	1182	1177	1170	345
25°	1112	1086	1039	1017	1005	512
35°	963	925	861	816	798	603
45°	791	744	664	605	580	611
55°	601	550	462	401	380	539
65°	411	354	272	222	210	406
75°	217	167	110	100	98	232
85°	55	32	29	27	27	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1282.0	1282.0	1282.0	1282.0	1282.0
2.5°	1287.2	1283.0	1270.5	1282.0	1279.9
5°	1282.0	1276.8	1264.3	1273.6	1271.6
7.5°	1272.6	1267.4	1251.8	1258.0	1254.9
10°	1260.1	1252.8	1234.1	1235.2	1230.0
12.5°	1242.5	1234.1	1210.2	1209.2	1202.9
15°	1222.7	1211.3	1182.1	1177.0	1169.7
17.5°	1198.8	1186.3	1149.9	1139.5	1129.1
20°	1171.8	1155.1	1115.6	1102.1	1089.6
22.5°	1141.6	1121.8	1079.2	1061.5	1050.1
25°	1112.5	1086.5	1038.7	1016.8	1005.4
27.5°	1077.1	1049.1	997.1	968.0	950.3
30°	1040.7	1009.6	951.3	916.0	899.3
32.5°	1004.4	968.0	905.6	866.1	848.4
35°	962.8	925.3	860.9	816.2	797.5
37.5°	921.2	880.6	813.1	763.1	740.3
40°	881.7	835.9	762.1	708.0	684.1
42.5°	837.0	791.2	714.3	654.0	633.2
45°	791.2	744.4	664.4	605.1	580.2
47.5°	746.5	694.5	615.5	551.0	529.2
50°	696.6	647.7	563.5	499.1	475.1
52.5°	651.9	597.8	514.7	447.1	426.3
55°	601.0	550.0	461.6	401.3	380.5
57.5°	555.2	500.1	410.7	353.5	335.8
60°	507.4	450.2	363.9	307.8	290.1
62.5°	459.6	402.4	316.1	264.1	245.4
65°	410.7	353.5	272.4	221.5	210.0
67.5°	361.8	303.6	224.6	186.1	173.6
70°	314.0	257.8	185.1	148.7	137.2
72.5°	266.2	211.1	146.6	118.5	115.4
75°	217.3	167.4	110.2	99.8	97.7
77.5°	172.6	126.8	86.3	80.1	78.0
80°	130.0	87.3	65.5	62.4	60.3
82.5°	89.4	54.1	46.8	43.7	43.7
85°	55.1	32.2	29.1	27.0	27.0
87.5°	25.0	13.5	13.5	12.5	11.4
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	20.98	22.53	21.34	22.85	23.16	18.35	19.91	18.72	20.22	20.53
	3H	22.76	24.15	23.13	24.48	24.84	19.46	20.86	19.84	21.19	21.55
	4H	23.42	24.73	23.82	25.08	25.45	19.86	21.17	20.26	21.52	21.89
	6H	23.90	25.11	24.31	25.48	25.87	20.18	21.39	20.59	21.75	22.15
	8H	24.05	25.21	24.47	25.59	25.99	20.29	21.44	20.71	21.83	22.23
	12H	24.15	25.26	24.58	25.64	26.07	20.36	21.47	20.79	21.85	22.28
4H	2H	21.24	22.55	21.64	22.90	23.28	19.06	20.38	19.46	20.72	21.10
	3H	23.20	24.29	23.61	24.69	25.09	20.34	21.43	20.75	21.83	22.23
	4H	23.97	24.95	24.40	25.37	25.81	20.82	21.80	21.25	22.22	22.66
	6H	24.57	25.42	25.02	25.87	26.32	21.24	22.09	21.70	22.54	23.00
	8H	24.76	25.56	25.22	26.00	26.47	21.39	22.19	21.85	22.63	23.10
	12H	24.91	25.62	25.39	26.10	26.57	21.50	22.21	21.98	22.69	23.16
8H	4H	24.03	24.83	24.49	25.27	25.74	21.14	21.94	21.60	22.39	22.85
	6H	24.69	25.35	25.18	25.84	26.32	21.66	22.32	22.15	22.81	23.28
	8H	24.92	25.52	25.43	26.02	26.51	21.86	22.45	22.37	22.96	23.45
	12H	25.12	25.65	25.63	26.14	26.70	22.03	22.56	22.54	23.05	23.61
12H	4H	24.02	24.73	24.50	25.21	25.68	21.19	21.90	21.67	22.38	22.85
	6H	24.68	25.27	25.19	25.78	26.27	21.72	22.31	22.23	22.82	23.31
	8H	24.95	25.47	25.46	25.96	26.53	21.97	22.50	22.48	22.99	23.55