

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: P242267

Luminaire Tested: S122DRP-S865D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242267
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-S865D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

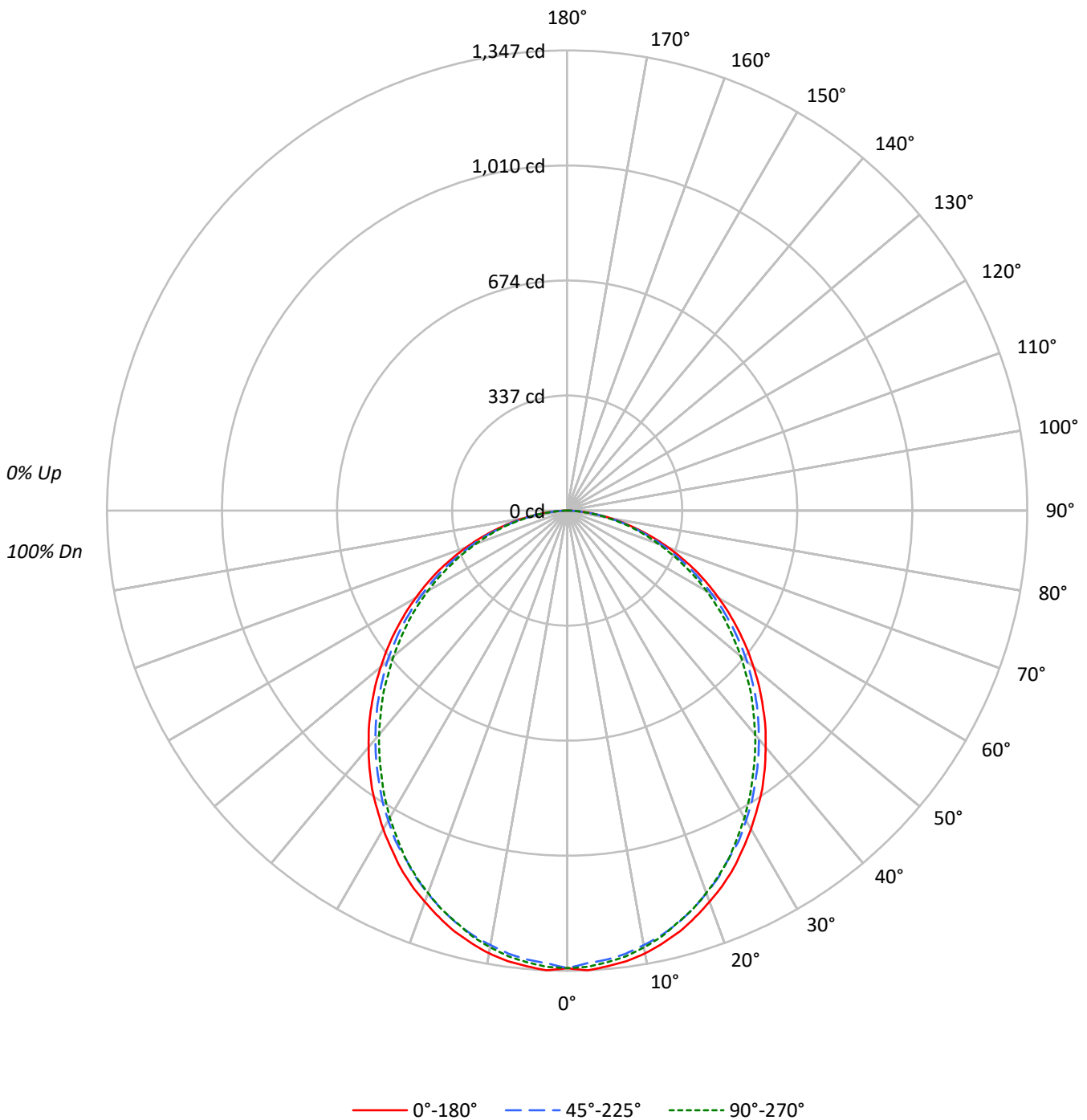
Lumens per Lamp: N/A
Luminaire Lumens: 3407.5 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P242267

CATALOG NUMBER: S122DRP-S865D840-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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°	25511	25511	25511
5°	25608	25239	25388
10°	25457	24983	25107
15°	25143	24659	24634
20°	24695	24172	24146
25°	24251	23575	23575
30°	23679	23028	22830
35°	23148	22369	22039
40°	22480	21710	21294
45°	21819	21057	20537
50°	21105	20379	19653
55°	20357	19586	18859
60°	19528	18644	17954
65°	18632	17704	16893
70°	17498	16568	15777
75°	15926	15256	14881
80°	14128	13700	12998
85°	11539	10971	9857

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21819 cd/sqm

TEST NUMBER: P242267

CATALOG NUMBER: S122DRP-S865D840-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.1	3.7
10°-20°	354.7	10.4
20°-30°	521.2	15.3
30°-40°	605.4	17.8
40°-50°	604.6	17.7
50°-60°	527.2	15.5
60°-70°	389.7	11.4
70°-80°	220.5	6.5
80°-90°	58.2	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°	1001.9	29.4
0°-40°	1607.3	47.2
0°-60°	2739.1	80.4
0°-90°	3407.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3407.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1339	1339	1339	1339	1339	
5°	1339	1334	1320	1330	1328	127
15°	1275	1267	1250	1256	1249	359
25°	1154	1144	1122	1124	1122	531
35°	996	983	962	954	948	622
45°	810	801	782	768	762	625
55°	613	605	590	574	568	548
65°	413	406	393	381	375	409
75°	216	214	207	200	202	231
85°	53	52	50	46	45	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1339.3	1339.3	1339.3	1339.3	1339.3
2.5°	1347.1	1340.6	1326.5	1339.3	1336.8
5°	1339.3	1334.2	1320.0	1330.3	1327.8
7.5°	1330.3	1322.6	1308.4	1318.7	1316.2
10°	1316.2	1307.1	1291.7	1302.0	1298.1
12.5°	1296.8	1289.1	1273.7	1280.1	1277.5
15°	1275.0	1267.2	1250.5	1255.6	1249.2
17.5°	1247.9	1240.2	1223.4	1229.9	1223.4
20°	1218.3	1210.6	1192.5	1196.4	1191.2
22.5°	1188.7	1177.1	1160.3	1160.3	1157.8
25°	1153.9	1143.6	1121.7	1124.3	1121.7
27.5°	1115.3	1106.2	1089.5	1085.6	1079.2
30°	1076.6	1066.3	1047.0	1043.1	1038.0
32.5°	1035.4	1027.7	1007.1	999.4	994.2
35°	995.5	982.6	962.0	954.3	947.8
37.5°	950.4	938.8	918.2	909.2	902.8
40°	904.1	893.8	873.1	861.6	856.4
42.5°	859.0	848.7	828.1	815.2	807.5
45°	810.0	801.0	781.7	767.5	762.4
47.5°	762.4	753.4	732.8	718.6	710.9
50°	712.2	705.7	687.7	669.7	663.2
52.5°	663.2	654.2	637.5	623.3	614.3
55°	613.0	605.3	589.8	574.4	567.9
57.5°	562.8	556.3	539.6	524.1	519.0
60°	512.6	507.4	489.4	475.2	471.3
62.5°	463.6	454.6	441.7	428.8	423.7
65°	413.4	405.7	392.8	381.2	374.8
67.5°	361.9	355.4	343.9	334.8	329.7
70°	314.2	309.1	297.5	288.5	283.3
72.5°	265.3	260.1	253.7	244.7	240.8
75°	216.4	213.8	207.3	199.6	202.2
77.5°	172.6	167.4	164.8	161.0	157.1
80°	128.8	127.5	124.9	121.1	118.5
82.5°	87.6	87.6	86.3	81.1	81.1
85°	52.8	51.5	50.2	46.4	45.1
87.5°	23.2	20.6	18.0	14.2	12.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P242267

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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	22.54	24.15	22.90	24.46	24.77	22.09	23.70	22.46	24.02	24.33
	3H	24.29	25.74	24.66	26.07	26.43	23.79	25.25	24.17	25.58	25.94
	4H	24.93	26.30	25.33	26.65	27.03	24.44	25.81	24.84	26.15	26.53
	6H	25.40	26.67	25.81	27.03	27.43	24.90	26.17	25.31	26.53	26.92
	8H	25.54	26.76	25.97	27.14	27.54	25.04	26.25	25.47	26.64	27.04
	12H	25.64	26.80	26.06	27.18	27.61	25.12	26.28	25.55	26.66	27.09
4H	2H	23.10	24.47	23.49	24.81	25.19	22.74	24.11	23.14	24.46	24.84
	3H	25.07	26.22	25.48	26.62	27.02	24.66	25.81	25.07	26.21	26.61
	4H	25.85	26.88	26.28	27.30	27.73	25.42	26.46	25.86	26.87	27.31
	6H	26.44	27.35	26.90	27.79	28.25	26.01	26.92	26.47	27.36	27.81
	8H	26.63	27.48	27.09	27.92	28.39	26.20	27.04	26.66	27.49	27.95
	12H	26.77	27.53	27.25	28.00	28.47	26.31	27.07	26.79	27.55	28.02
8H	4H	26.12	26.97	26.58	27.41	27.88	25.75	26.59	26.21	27.04	27.50
	6H	26.84	27.54	27.33	28.03	28.50	26.45	27.16	26.95	27.65	28.12
	8H	27.10	27.73	27.61	28.23	28.72	26.70	27.33	27.21	27.84	28.33
	12H	27.30	27.85	27.80	28.34	28.90	26.88	27.44	27.39	27.93	28.49
12H	4H	26.15	26.91	26.63	27.38	27.85	25.78	26.54	26.26	27.02	27.49
	6H	26.88	27.51	27.39	28.02	28.51	26.51	27.14	27.02	27.65	28.14
	8H	27.20	27.75	27.70	28.24	28.80	26.82	27.37	27.32	27.87	28.43