

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931264

Luminaire Tested: DFN2DS-TR2F0-040DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931264
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR2F0-040DS830-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

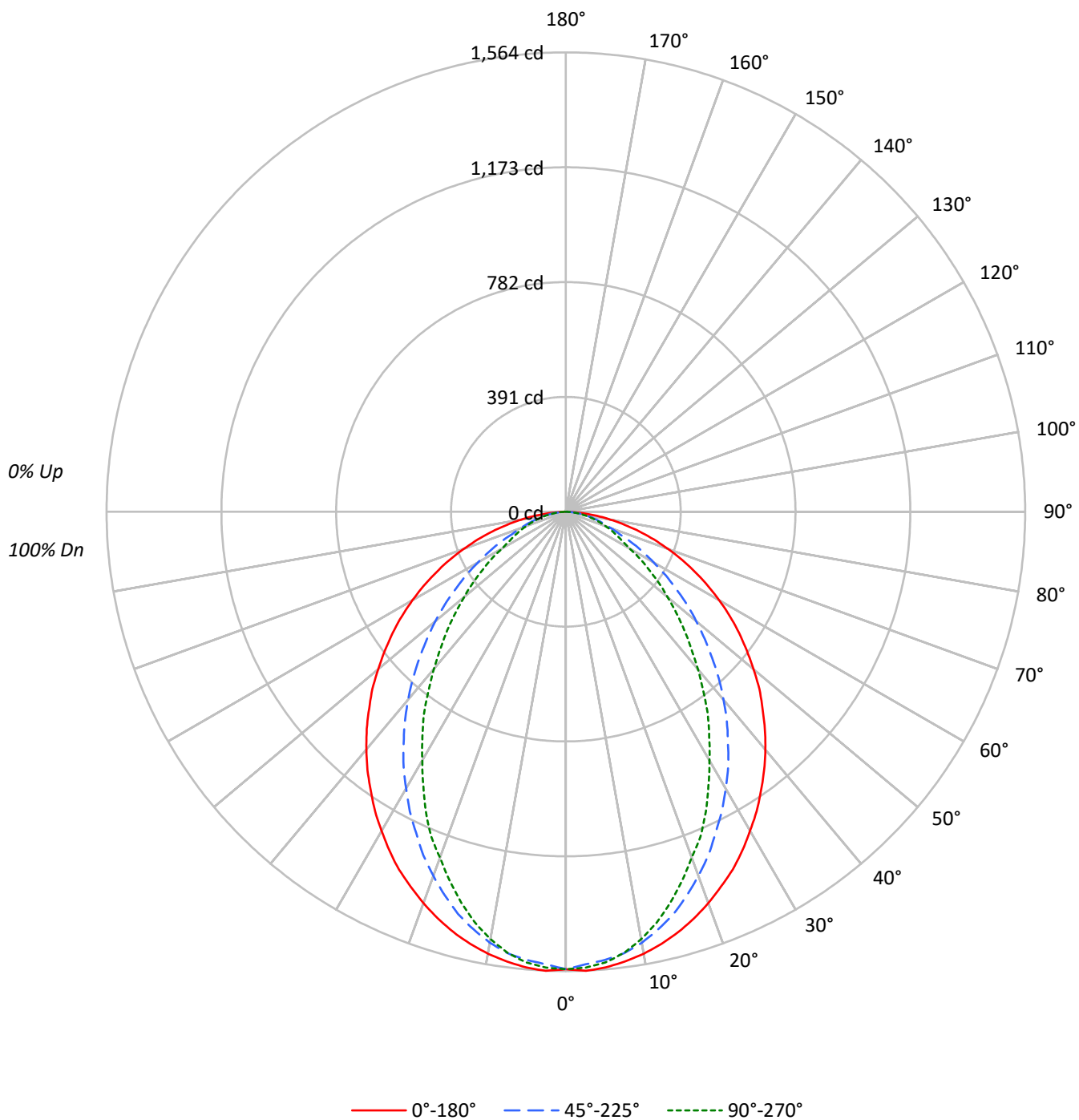
Lumens per Lamp: N/A
Luminaire Lumens: 3202.8 lumens
Efficiency: N/A
Efficacy: 83.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 38.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931264

CATALOG NUMBER: DFN2DS-TR2F0-040DS830-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P931264

CATALOG NUMBER: DFN2DS-TR2F0-040DS830-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3473	3473	3473
5°	3487	3430	3449
10°	3460	3374	3345
15°	3420	3274	3180
20°	3365	3131	2974
25°	3309	2969	2775
30°	3231	2802	2519
35°	3155	2621	2295
40°	3078	2433	2036
45°	2987	2223	1800
50°	2895	2010	1570
55°	2801	1781	1349
60°	2691	1540	1119
65°	2567	1294	1019
70°	2417	1066	937
75°	2234	972	875
80°	1972	867	798
85°	1551	686	686

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2987 cd/sqm

TEST NUMBER: P931264

CATALOG NUMBER: DFN2DS-TR2F0-040DS830-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.0	4.6
10°-20°	400.7	12.5
20°-30°	562.5	17.6
30°-40°	613.2	19.1
40°-50°	563.6	17.6
50°-60°	442.6	13.8
60°-70°	288.1	9.0
70°-80°	148.3	4.6
80°-90°	37.9	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°	1109.1	34.6
0°-40°	1722.3	53.8
0°-60°	2728.5	85.2
0°-90°	3202.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3202.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1557	1557	1557	1557	1557	
5°	1557	1550	1532	1545	1540	148
15°	1481	1466	1418	1391	1377	417
25°	1344	1299	1206	1149	1127	618
35°	1159	1087	963	874	843	725
45°	947	853	705	605	571	731
55°	720	610	458	374	347	644
65°	486	372	245	197	193	482
75°	259	161	113	103	102	274
85°	61	31	27	27	27	73
90°	0	0	0	0	0	

TEST NUMBER: P931264

CATALOG NUMBER: DFN2DS-TR2F0-040DS830-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1557.3	1557.3	1557.3	1557.3	1557.3
2.5°	1564.4	1557.3	1541.8	1556.0	1553.1
5°	1557.3	1550.2	1531.9	1544.6	1540.5
7.5°	1544.6	1536.2	1516.5	1522.0	1515.0
10°	1527.7	1517.8	1489.7	1485.3	1477.1
12.5°	1506.6	1493.9	1455.8	1447.4	1431.8
15°	1481.2	1465.7	1417.8	1391.1	1377.0
17.5°	1451.6	1429.0	1369.8	1338.9	1316.3
20°	1417.8	1389.5	1319.1	1283.9	1252.9
22.5°	1381.2	1348.8	1266.9	1219.0	1198.0
25°	1344.5	1299.4	1206.3	1148.7	1127.4
27.5°	1300.9	1252.9	1150.0	1083.8	1051.3
30°	1254.4	1200.7	1087.9	1016.1	978.1
32.5°	1209.2	1144.3	1028.9	944.3	908.9
35°	1158.6	1086.6	962.6	873.8	842.7
37.5°	1109.2	1031.6	900.6	803.2	768.1
40°	1057.0	972.5	835.7	735.7	699.1
42.5°	1003.4	913.3	770.9	666.6	631.4
45°	947.1	852.6	704.7	604.6	570.8
47.5°	893.6	793.5	641.3	541.2	510.2
50°	834.3	734.3	579.2	481.9	452.4
52.5°	776.5	670.8	520.1	427.0	400.3
55°	720.2	610.2	458.0	373.5	346.8
57.5°	662.4	549.7	403.1	324.1	301.6
60°	603.2	490.4	345.2	273.5	250.9
62.5°	545.5	432.8	295.9	228.3	217.1
65°	486.3	372.0	245.2	197.3	193.0
67.5°	429.9	315.7	197.3	173.3	169.1
70°	370.7	260.7	163.4	149.4	143.7
72.5°	314.3	210.0	136.7	125.5	122.6
75°	259.2	160.6	112.8	102.9	101.5
77.5°	204.4	114.1	88.8	83.2	80.3
80°	153.5	81.8	67.5	62.1	62.1
82.5°	107.1	55.0	46.5	43.6	43.6
85°	60.6	31.0	26.8	26.8	26.8
87.5°	22.6	11.2	11.2	9.9	9.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931264

CATALOG NUMBER: DFN2DS-TR2F0-040DS830-RLL

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	15.56	17.08	15.93	17.40	17.71	11.52	13.04	11.89	13.36	13.67
	3H	17.33	18.69	17.70	19.02	19.38	12.79	14.15	13.16	14.48	14.84
	4H	17.99	19.27	18.39	19.62	20.00	13.29	14.57	13.69	14.92	15.30
	6H	18.48	19.66	18.89	20.03	20.42	13.67	14.85	14.08	15.22	15.61
	8H	18.65	19.77	19.07	20.16	20.56	13.79	14.92	14.22	15.31	15.71
	12H	18.75	19.83	19.18	20.21	20.64	13.87	14.95	14.30	15.33	15.76
4H	2H	15.67	16.95	16.06	17.29	17.67	12.22	13.50	12.62	13.85	14.22
	3H	17.60	18.66	18.01	19.06	19.46	13.66	14.72	14.07	15.12	15.52
	4H	18.35	19.30	18.78	19.72	20.16	14.26	15.22	14.69	15.63	16.07
	6H	18.94	19.77	19.40	20.21	20.67	14.75	15.58	15.21	16.02	16.48
	8H	19.15	19.93	19.62	20.38	20.84	14.91	15.69	15.37	16.13	16.60
	12H	19.31	20.00	19.79	20.48	20.95	15.03	15.72	15.51	16.20	16.67
8H	4H	18.37	19.15	18.84	19.59	20.06	14.61	15.39	15.08	15.83	16.30
	6H	19.01	19.65	19.51	20.14	20.62	15.20	15.84	15.70	16.33	16.81
	8H	19.26	19.84	19.77	20.35	20.83	15.42	16.00	15.93	16.51	17.00
	12H	19.46	19.97	19.97	20.47	21.03	15.60	16.11	16.11	16.60	17.17
12H	4H	18.36	19.05	18.84	19.53	20.00	14.66	15.35	15.14	15.83	16.30
	6H	18.99	19.57	19.50	20.08	20.57	15.26	15.84	15.78	16.35	16.84
	8H	19.27	19.78	19.78	20.28	20.84	15.54	16.05	16.05	16.54	17.10