

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: P930512

Luminaire Tested: DFN2DS-PN3F0-030DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930512
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-PN3F0-030DS840-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

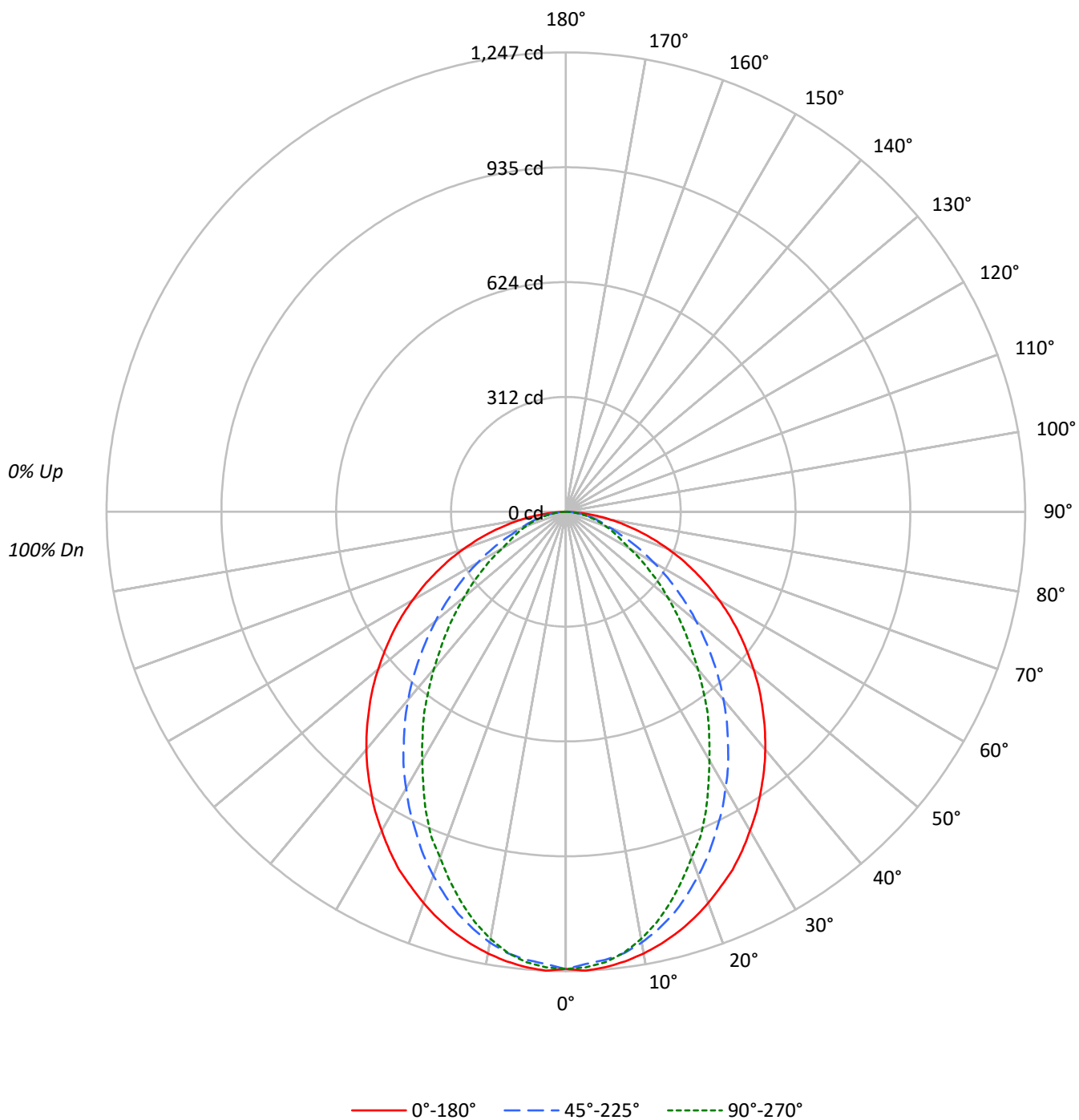
Lumens per Lamp: N/A
Luminaire Lumens: 2552.5 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 28.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
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
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°	1451	1451	1451
5°	1456	1433	1441
10°	1445	1409	1397
15°	1429	1367	1328
20°	1406	1308	1242
25°	1382	1240	1159
30°	1349	1170	1052
35°	1318	1095	959
40°	1286	1016	850
45°	1248	929	752
50°	1209	840	656
55°	1170	744	563
60°	1124	643	468
65°	1072	540	426
70°	1010	445	391
75°	933	406	365
80°	824	363	333
85°	646	286	286

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1248 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	4.6
10°-20°	319.3	12.5
20°-30°	448.3	17.6
30°-40°	488.7	19.1
40°-50°	449.2	17.6
50°-60°	352.7	13.8
60°-70°	229.6	9.0
70°-80°	118.2	4.6
80°-90°	30.2	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°	884.0	34.6
0°-40°	1372.7	53.8
0°-60°	2174.6	85.2
0°-90°	2552.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2552.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1241	1236	1221	1231	1228	118
15°	1180	1168	1130	1109	1097	333
25°	1072	1036	962	915	898	493
35°	923	866	767	696	672	578
45°	755	680	562	482	455	583
55°	574	486	365	298	276	513
65°	388	296	195	157	154	384
75°	207	128	90	82	81	219
85°	48	25	21	21	21	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.1	1241.1	1241.1	1241.1	1241.1
2.5°	1246.7	1241.1	1228.7	1240.0	1237.8
5°	1241.1	1235.5	1220.9	1231.0	1227.6
7.5°	1231.0	1224.3	1208.6	1213.0	1207.4
10°	1217.5	1209.7	1187.3	1183.8	1177.2
12.5°	1200.7	1190.6	1160.3	1153.6	1141.1
15°	1180.5	1168.1	1129.9	1108.6	1097.4
17.5°	1156.9	1138.9	1091.7	1067.1	1049.0
20°	1129.9	1107.4	1051.3	1023.3	998.5
22.5°	1100.8	1074.9	1009.7	971.6	954.8
25°	1071.6	1035.5	961.5	915.4	898.5
27.5°	1036.7	998.5	916.5	863.8	837.8
30°	999.7	957.0	867.1	809.9	779.5
32.5°	963.7	912.0	820.0	752.6	724.4
35°	923.3	866.0	767.2	696.4	671.7
37.5°	884.0	822.1	717.7	640.1	612.2
40°	842.4	775.1	666.1	586.3	557.2
42.5°	799.7	727.9	614.4	531.2	503.2
45°	754.9	679.5	561.7	481.8	454.9
47.5°	712.1	632.4	511.1	431.2	406.6
50°	665.0	585.2	461.7	384.1	360.6
52.5°	618.8	534.6	414.5	340.3	319.0
55°	573.9	486.3	365.0	297.7	276.4
57.5°	527.9	438.0	321.3	258.4	240.3
60°	480.7	390.9	275.2	217.9	200.0
62.5°	434.7	344.8	235.8	182.0	173.1
65°	387.5	296.5	195.4	157.3	153.9
67.5°	342.6	251.6	157.3	138.1	134.7
70°	295.4	207.8	130.2	119.0	114.5
72.5°	250.5	167.3	108.9	100.0	97.7
75°	206.6	128.0	89.9	82.0	80.9
77.5°	162.9	90.9	70.8	66.3	64.0
80°	122.4	65.2	53.9	49.4	49.4
82.5°	85.3	43.8	37.0	34.8	34.8
85°	48.2	24.6	21.3	21.3	21.3
87.5°	18.0	8.9	8.9	7.9	7.9
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	12.53	14.05	12.89	14.36	14.68	8.49	10.01	8.85	10.32	10.64
	3H	14.29	15.66	14.67	15.99	16.35	9.75	11.12	10.13	11.45	11.81
	4H	14.96	16.24	15.36	16.59	16.97	10.25	11.54	10.65	11.88	12.26
	6H	15.45	16.63	15.86	17.00	17.39	10.64	11.82	11.05	12.19	12.58
	8H	15.61	16.74	16.04	17.13	17.53	10.76	11.89	11.19	12.28	12.68
	12H	15.72	16.79	16.15	17.18	17.61	10.84	11.92	11.27	12.30	12.73
4H	2H	12.63	13.91	13.03	14.26	14.64	9.18	10.46	9.58	10.81	11.19
	3H	14.56	15.63	14.98	16.03	16.43	10.63	11.69	11.04	12.09	12.49
	4H	15.31	16.27	15.75	16.69	17.12	11.23	12.18	11.66	12.60	13.04
	6H	15.91	16.74	16.36	17.18	17.64	11.71	12.55	12.17	12.99	13.45
	8H	16.12	16.90	16.58	17.34	17.81	11.88	12.65	12.34	13.10	13.56
	12H	16.27	16.97	16.76	17.45	17.92	11.99	12.69	12.47	13.17	13.64
8H	4H	15.34	16.12	15.80	16.56	17.03	11.58	12.36	12.04	12.80	13.27
	6H	15.98	16.62	16.47	17.11	17.59	12.17	12.81	12.66	13.30	13.78
	8H	16.23	16.80	16.74	17.31	17.80	12.39	12.96	12.90	13.47	13.96
	12H	16.43	16.94	16.94	17.43	18.00	12.57	13.08	13.08	13.57	14.13
12H	4H	15.32	16.02	15.80	16.50	16.97	11.62	12.32	12.11	12.80	13.27
	6H	15.96	16.53	16.47	17.04	17.53	12.23	12.81	12.74	13.32	13.80
	8H	16.24	16.75	16.75	17.24	17.81	12.50	13.01	13.01	13.50	14.07