

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: P930134

Luminaire Tested: DFN2DS-HX3F0-030DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930134
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-HX3F0-030DS840-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

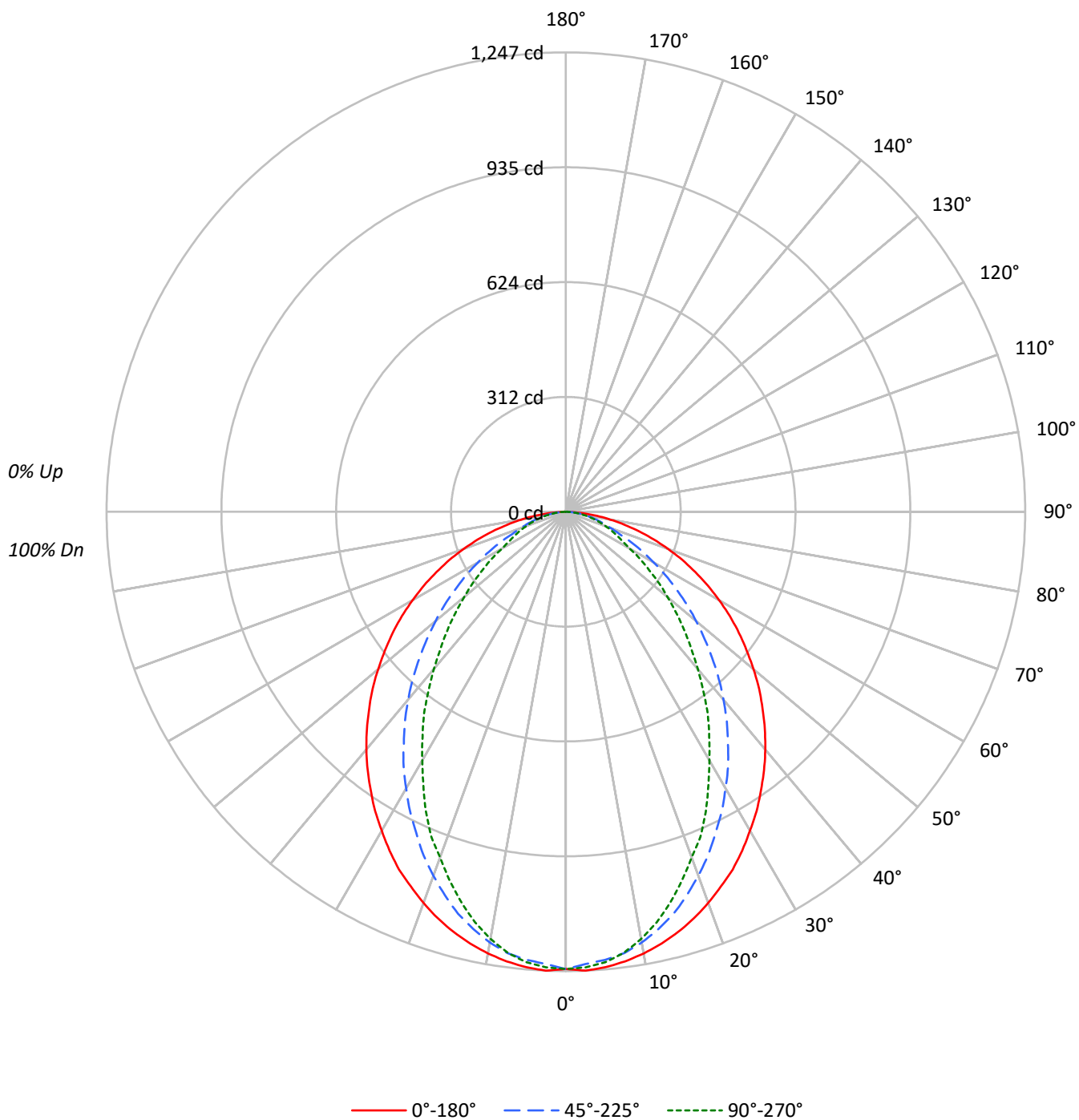
Lumens per Lamp: N/A
Luminaire Lumens: 2552.5 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 28.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
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°	1438	1438	1438
5°	1443	1420	1427
10°	1432	1397	1385
15°	1416	1355	1316
20°	1393	1296	1231
25°	1370	1229	1148
30°	1337	1160	1043
35°	1306	1085	950
40°	1274	1007	843
45°	1237	920	745
50°	1198	832	650
55°	1159	737	558
60°	1114	638	463
65°	1062	536	422
70°	1000	441	388
75°	925	402	362
80°	816	360	330
85°	641	283	283

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1237 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	12.50	14.02	12.86	14.33	14.65	8.46	9.98	8.82	10.29	10.61
	3H	14.26	15.63	14.64	15.95	16.32	9.72	11.09	10.10	11.41	11.78
	4H	14.93	16.21	15.33	16.56	16.93	10.22	11.50	10.62	11.85	12.23
	6H	15.42	16.60	15.83	16.97	17.36	10.60	11.79	11.02	12.15	12.55
	8H	15.58	16.71	16.01	17.10	17.50	10.73	11.85	11.15	12.24	12.65
	12H	15.68	16.76	16.11	17.14	17.57	10.81	11.89	11.24	12.27	12.70
4H	2H	12.60	13.88	13.00	14.23	14.61	9.15	10.43	9.55	10.78	11.16
	3H	14.53	15.60	14.94	16.00	16.40	10.59	11.66	11.01	12.06	12.46
	4H	15.28	16.24	15.71	16.65	17.09	11.19	12.15	11.63	12.57	13.00
	6H	15.87	16.71	16.33	17.15	17.61	11.68	12.51	12.14	12.96	13.42
	8H	16.09	16.87	16.55	17.31	17.78	11.84	12.62	12.31	13.07	13.53
	12H	16.24	16.94	16.72	17.41	17.89	11.96	12.66	12.44	13.13	13.60
8H	4H	15.31	16.08	15.77	16.53	17.00	11.55	12.33	12.01	12.77	13.24
	6H	15.94	16.59	16.44	17.08	17.56	12.13	12.78	12.63	13.27	13.75
	8H	16.19	16.77	16.71	17.28	17.77	12.36	12.93	12.87	13.44	13.93
	12H	16.40	16.91	16.91	17.40	17.96	12.53	13.04	13.04	13.54	14.10
12H	4H	15.29	15.99	15.77	16.46	16.93	11.59	12.29	12.07	12.76	13.24
	6H	15.92	16.50	16.44	17.01	17.50	12.20	12.78	12.71	13.29	13.77
	8H	16.21	16.72	16.72	17.21	17.78	12.47	12.98	12.98	13.47	14.04